Lancaster Laboratories

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Analysis Report

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437201
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6804 SDG#: DE268-04FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/kg		ng/kg	ng/kg	ng/kg	
11622	N-Nitrosodimethylamine	62-75-9	18.4	U	18.4	36.9		1
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	180	U	180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180		1
04688	4-Chloroaniline	106-47-8	74	U	74	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	74	U	74	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	37	U	37	180		1
04688	4-Methylphenol	106-44-5	37	U	37	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	37	U	37	180		1
04688	4-Nitroaniline	100-01-6	74	U	74	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1

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E6804 SDG#: DE268-04FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9		1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9		1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9		1
10138	Benzo(a)anthracene	56-55-3	8.7		0.75	1.9		1
10138	Benzo(a)pyrene	50-32-8	14		0.75	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	18		0.75	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	9.0		0.75	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	6.6		0.75	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20		1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20		1
10138	Chrysene	218-01-9	10		0.37	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	2.2		0.75	1.9		1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20		1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	28		6.7	20		1
10138	Fluoranthene	206-44-0	8.7		0.75	1.9		1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	8.3		0.75	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9		1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20		1
10138	Phenanthrene	85-01-8	1.0	J	0.75	1.9		1
10138	Pyrene	129-00-0	8.9		0.75	1.9		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1		24.08
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	4-Amino-2,6-Dinitrotoluene	19406-51-0	67	U	67	130	10000000	1

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E6804 SDG#: DE268-04FD

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Explosives	**SW-846 8330A**		ug/kg		ug/kg	ug/kg	ug/kg	
10132	2-Amino-4,6-Dinitrotoluene	35572-78-2	45	U	45	130	10000000	1
10132	2,6-Diamino-4-nitrotoluene	59229-75-3	90	U	90	270	10000000	1
10132	2,4-Diamino-6-nitrotoluene	6629-29-4	90	U	90	270	10000000	1
10132	1,3-Dinitrobenzene	99-65-0	45	U	45	130	10000000	1
10132	2,4-Dinitrotoluene	121-14-2	45	U	45	130	10000000	1
10132	2,6-Dinitrotoluene	606-20-2	45	U	45	130	10000000	1
10132	HMX	2691-41-0	110	U	110	340	10000000	1
10132	Nitrobenzene	98-95-3	45	U	45	130	10000000	1
10132	Nitroglycerin	55-63-0	900	U	900	2,700	10000000	1
10132	2-Nitrotoluene	88-72-2	90	U	90	130	10000000	1
10132	3-Nitrotoluene	99-08-1	110	U	110	130	10000000	1
10132	4-Nitrotoluene	99-99-0	90	U	90	130	10000000	1
10132	PETN	78-11-5	900	U	900	2,700	10000000	1
10132	RDX	121-82-4	56	U	56	130	10000000	1
10132	Tetryl	479-45-8	69	U	69	130	10000000	1
10132	1,3,5-Trinitrobenzene	99-35-4	45	U	45	130	10000000	1
10132	2,4,6-Trinitrotoluene	118-96-7	45	U	45	130	10000000	1
HPLC Organics	**SW-846 8315A**		ug/kg		ug/kg	ug/kg	ug/kg	
04173	20a Formaldehyde 8315A	50-00-0	670	U	670	1,700		1
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7		1
10225	Aroclor 5460	11126-42-4	14		1.1	3.7		1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9		1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9		1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9		1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9		1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9		1
10225	PCB-1254	11097-69-1	1.5	J	0.37	1.9		1
10225	PCB-1260	11096-82-5	0.90	J	0.44	1.9		1

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Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9		1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9		1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.							
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	560		1
10501	Isopropanol	67-63-0	110	U	110	560		1
10501	Methanol	67-56-1	110	U	110	560		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.6	U	5.6	11		1
08283	Ethylene glycol	107-21-1	5.6	U	5.6	11		1
08283	Propylene glycol	57-55-6	5.6	U	5.6	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.7	U	1.7	3.9		1
10318	o-Terphenyl	84-15-1	1.7	U	1.7	3.9		1
10318	p-Terphenyl	92-94-4	1.7	U	1.7	3.9		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.45	U	0.45	1.3		1
10199	EFH (C15-C20)	n.a.	0.63	J	0.45	1.3		1
10199	EFH (C21-C30)	n.a.	2.3		0.45	1.3		1
10199	EFH (C30 - C40)	n.a.	6.4		0.45	1.3		1
10199	EFH (C8-C11)	n.a.	0.45	U	0.45	1.3		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,800		6.58	21.8		1
07914	Boron	7440-42-8	1.17	J	0.392	5.44		1
01650	Calcium	7440-70-2	3,810		2.72	21.8		1
01654	Iron	7439-89-6	22,600		2.84	21.8		1
01656	Lithium	7439-93-2	28.7		0.67	2.2		1
01657	Magnesium	7439-95-4	6,610		0.479	10.9		1
06958	Manganese	7439-96-5	320		0.0392	0.544		1
10145	Phosphorus	7723-14-0	447		0.381	10.9		1
01662	Potassium	7440-09-7	2,440		12.2	53.9		1
01667	Sodium	7440-23-5	116		6.41	108		1

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Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07968	Strontium	7440-24-6	13.3	0.0272	0.544		1
06969	Tin	7440-31-5	2.56 J	0.348	10.9		1
06970	Titanium	7440-32-6	1,300	0.0773	1.09		1
10146	Zirconium	7440-67-7	0.813 J	0.501	5.44		1
	SW-846 6020		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0805 U	0.0805	0.218		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.70	0.0871	0.435		2
06126	Barium	7440-39-3	100	0.115	0.435		2
06127	Beryllium	7440-41-7	0.650	0.0174	0.109		2
06128	Cadmium	7440-43-9	0.0996 J	0.0479	0.109		2
06131	Chromium	7440-47-3	22.6	0.131	0.435		2
06132	Cobalt	7440-48-4	7.69	0.0218	0.109		2
06133	Copper	7440-50-8	10.7	0.0871	0.435		2
06135	Lead	7439-92-1	6.46	0.0111	0.218		2
06138	Molybdenum	7439-98-7	0.383	0.0544	0.109		2
06139	Nickel	7440-02-0	14.9	0.109	0.435		2
06141	Selenium	7782-49-2	0.191 J	0.0631	0.435		2
06142	Silver	7440-22-4	0.0387 J	0.0155	0.109		2
06145	Thallium	7440-28-0	0.301	0.0327	0.109		2
06148	Vanadium	7440-62-2	45.1	0.0239	0.109		2
06149	Zinc	7440-66-6	68.3	0.610	3.27		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0078 U	0.0078	0.111		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.3	0.88	1.1		1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	4.3	0.88	1.7		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1 U	10.1	33.6		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22 U	0.22	1.1		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.20 U	0.20	0.56		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.83	0.0100	0.0100		1

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Wet Chemistry	**EPA 160.3 modified**		%	%	%	%	
11624	Moisture Content by 160.3	n.a.	10.8	0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11291SLG026	11/02/2011 00:58	Matthew S Woods	1
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11290SLF026	10/20/2011 04:44	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11298SLA026	10/28/2011 11:13	Joseph M Gambler	1
11630	NDMA Soil Microwave	SW-846 3546	1	11291SLG026	10/19/2011 06:50	Katheryne V Sponheimer	1
10479	BNA Soil Extraction SIM	SW-846 3550B	2	11298SLA026	10/25/2011 18:20	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11290SLF026	10/18/2011 10:00	Kerrie A Freeburn	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11293A16A	10/21/2011 05:47	Laura M Krieger	24.08
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201128725853	10/14/2011 16:26	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201128725853	10/14/2011 16:27	Christopher D Meeks	n.a.
10132	15a Energetics by 8330A	SW-846 8330A	1	112880015A	10/21/2011 09:37	James H Place	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	112910003A	10/19/2011 22:16	James H Place	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112910025A	10/21/2011 11:31	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112910025A	10/19/2011 12:00	Olivia I Santiago	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	112910003A	10/18/2011 16:00	Wanda F Oswald	1
11137	Energetics Extraction	SW-846 8330	1	112880015A	10/17/2011 17:00	Kelli M Barto	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112900028A	10/18/2011 21:45	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/25/2011 23:16	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 18:40	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 04:27	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112900028A	10/18/2011 17:00	Elizabeth J Marin	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437201
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6804 SDG#: DE268-04FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011 20:09	John P Hook	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011 10:49	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011 10:49	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011 03:00	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011 07:51	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 07:51	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 07:51	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 07:51	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 09:55	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11298495201A	10/25/2011 18:21	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11298495201A	10/25/2011 18:21	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201A	10/20/2011 14:27	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201A	10/20/2011 16:52	Elyse P Brunstetter	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437201
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6804 SDG#: DE268-04FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:15	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11298495201A	10/25/2011 01:45	James S Mathiot	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201A	10/20/2011 06:30	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402B	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: **EB-SA7-SB-101311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437202
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:30

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6805 SDG#: DE268-05EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	4.61	0.486	0.972		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of 1.33 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11290WAA026	11/01/2011 17:22	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11290WAA026	10/17/2011 13:55	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101311 Water
SSFL Area IV Collocated Soil Sampling
TB-101311

LLI Sample # WW 6437203
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 08:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6807 SDG#: DE268-06TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	1.23	0.501	1.00		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of 1.33 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11290WAA026	11/01/2011 17:41	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11290WAA026	10/17/2011 13:55	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101311 Sand
SSFL Area IV Collocated Soil Sampling
TB-101311

LLI Sample # SW 6437204
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 08:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6808 SDG#: DE268-07TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	16.6	U	16.6	33.2		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11291SLG026	11/02/2011 01:17	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11291SLG026	10/19/2011 06:50	Katheryne V Sponheimer	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11291162401B	10/18/2011 21:20	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101311 Water
SSFL Area IV Collocated Soil Sampling
TB-101311

LLI Sample # WW 6437205
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 08:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6809 SDG#: DE268-08TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11290B20A	10/18/2011 00:42	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11290B20A	10/18/2011 00:42	Marie D John	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l		ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	4.50		0.524	1.05		1
	N-Nitrosodimethylamine was detected in the method blank at a concentration of 1.33 ng/l. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and N-Nitrosodimethylamine was again detected in the re-analysis of the sample. The data reported here is from the initial extraction of the sample.							
GC/MS Semivolatiles SW-846 8270C			ug/l		ug/l	ug/l	ug/l	
04678	Aniline	62-53-3	1	U	1	5		1
04678	Benzidine	92-87-5	19	U	19	57		1
04678	Benzoic acid	65-85-0	6	U	6	14		1
04678	Benzyl alcohol	100-51-6	5	U	5	14		1
04678	4-Bromophenyl-phenylether	101-55-3	1	U	1	5		1
04678	2-butoxy-Ethanol	111-76-2	48	U	48	48		1
04678	Carbazole	86-74-8	1	U	1	5		1
04678	4-Chloro-3-methylphenol	59-50-7	1	U	1	5		1
04678	4-Chloroaniline	106-47-8	1	U	1	5		1
04678	bis(2-Chloroethoxy)methane	111-91-1	1	U	1	5		1
04678	bis(2-Chloroethyl)ether	111-44-4	1	U	1	5		1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	1	U	1	5		1
04678	2-Chloronaphthalene	91-58-7	2	U	2	5		1
04678	2-Chlorophenol	95-57-8	1	U	1	5		1
04678	4-Chlorophenyl-phenylether	7005-72-3	2	U	2	5		1
04678	Dibenzofuran	132-64-9	1	U	1	5		1
04678	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
04678	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
04678	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
04678	3,3'-Dichlorobenzidine	91-94-1	2	U	2	5		1
04678	2,4-Dichlorophenol	120-83-2	1	U	1	5		1
04678	2,4-Dimethylphenol	105-67-9	3	U	3	10		1
04678	3,5-Dimethylphenol	108-68-9	3	U	3	10		1
04678	4,6-Dinitro-2-methylphenol	534-52-1	5	U	5	14		1
04678	2,4-Dinitrophenol	51-28-5	10	U	10	29		1
04678	2,4-Dinitrotoluene	121-14-2	1	U	1	5		1
04678	2,6-Dinitrotoluene	606-20-2	1	U	1	5		1
04678	1,2-Diphenylhydrazine	122-66-7	1	U	1	5		1
04678	Hexachlorobenzene	118-74-1	1	U	1	5		1
04678	Hexachlorobutadiene	87-68-3	1	U	1	5		1
04678	Hexachlorocyclopentadiene	77-47-4	5	U	5	14		1
04678	Hexachloroethane	67-72-1	1	U	1	5		1
04678	Isophorone	78-59-1	1	U	1	5		1
04678	2-Methylphenol	95-48-7	1	U	1	5		1
04678	4-Methylphenol	106-44-5	2	U	2	5		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04678	2-Nitroaniline	88-74-4	1	U	1	5		1
04678	3-Nitroaniline	99-09-2	1	U	1	5		1
04678	4-Nitroaniline	100-01-6	1	U	1	5		1
04678	Nitrobenzene	98-95-3	1	U	1	5		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04678	2-Nitrophenol	88-75-5	1	U	1	5		1
04678	4-Nitrophenol	100-02-7	10	U	10	29		1
04678	N-Nitroso-di-n-propylamine	621-64-7	1	U	1	5		1
04678	N-Nitrosodiphenylamine	86-30-6	2	U	2	5		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04678	Pentachlorophenol	87-86-5	3	U	3	14		1
04678	Phenol	108-95-2	1	U	1	5		1
04678	2-phenoxy-Ethanol	122-99-6	48	U	48	48		1
04678	Tetralin	119-64-2	5	U	5	5		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
04678	2,4,5-Trichlorophenol	95-95-4	1	U	1	5		1
04678	2,4,6-Trichlorophenol	88-06-2	1	U	1	5		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10137	Acenaphthene	83-32-9	0.0098	U	0.0098	0.049		1
10137	Acenaphthylene	208-96-8	0.0098	U	0.0098	0.049		1
10137	Anthracene	120-12-7	0.0098	U	0.0098	0.049		1
10137	Benzo(a)anthracene	56-55-3	0.0098	U	0.0098	0.049		1
10137	Benzo(a)pyrene	50-32-8	0.0098	U	0.0098	0.049		1
10137	Benzo(b)fluoranthene	205-99-2	0.0098	U	0.0098	0.049		1
10137	Benzo(g,h,i)perylene	191-24-2	0.0098	U	0.0098	0.049		1
10137	Benzo(k)fluoranthene	207-08-9	0.0098	U	0.0098	0.049		1
10137	Butylbenzylphthalate	85-68-7	0.049	U	0.049	0.98		1
10137	Di-n-butylphthalate	84-74-2	0.19	J	0.049	0.98		1
10137	Chrysene	218-01-9	0.0098	U	0.0098	0.049		1
10137	Dibenz(a,h)anthracene	53-70-3	0.0098	U	0.0098	0.049		1
10137	Diethylphthalate	84-66-2	0.11	J	0.049	0.98		1
10137	Dimethylphthalate	131-11-3	0.049	U	0.049	0.98		1
10137	Bis(2-Ethylhexyl)phthalate	117-81-7	0.049	U	0.049	0.98		1
10137	Fluoranthene	206-44-0	0.0098	U	0.0098	0.049		1
10137	Fluorene	86-73-7	0.0098	U	0.0098	0.049		1
10137	Indeno(1,2,3-cd)pyrene	193-39-5	0.0098	U	0.0098	0.049		1
10137	1-Methylnaphthalene	90-12-0	0.0098	U	0.0098	0.049		1
10137	2-Methylnaphthalene	91-57-6	0.0098	U	0.0098	0.049		1
10137	Naphthalene	91-20-3	0.060		0.029	0.049		1
10137	N-Nitrosodimethylamine	62-75-9	0.0098	U	0.0098	0.049		1
10137	Di-n-octylphthalate	117-84-0	0.049	U	0.049	0.98		1
10137	Phenanthrene	85-01-8	0.029	U	0.029	0.049		1
10137	Pyrene	129-00-0	0.0098	U	0.0098	0.049		1
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1
Explosives	**SW-846 8330A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	

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Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		ug/l		ug/l	ug/l	ug/l	
10131	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.30	U	0.30	0.60	10000000	1
10131	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Diamino-4-nitrotoluene	59229-75-3	0.20	U	0.20	0.60	10000000	1
10131	2,4-Diamino-6-nitrotoluene	6629-29-4	0.20	U	0.20	0.60	10000000	1
10131	1,3-Dinitrobenzene	99-65-0	0.20	U	0.20	0.60	10000000	1
10131	2,4-Dinitrotoluene	121-14-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Dinitrotoluene	606-20-2	0.20	U	0.20	0.60	10000000	1
10131	HMX	2691-41-0	0.65	U	0.65	2.0	10000000	1
10131	Nitrobenzene	98-95-3	0.20	U	0.20	0.60	10000000	1
10131	Nitroglycerin	55-63-0	5.2	U	5.2	15	10000000	1
10131	2-Nitrotoluene	88-72-2	0.20	U	0.20	0.60	10000000	1
10131	3-Nitrotoluene	99-08-1	0.40	U	0.40	1.2	10000000	1
10131	4-Nitrotoluene	99-99-0	0.60	U	0.60	1.2	10000000	1
10131	PETN	78-11-5	6.0	U	6.0	18	10000000	1
10131	RDX	121-82-4	1.7		0.20	0.60	10000000	1
10131	Tetryl	479-45-8	0.40	U	0.40	0.60	10000000	1
10131	1,3,5-Trinitrobenzene	99-35-4	0.20	U	0.20	0.60	10000000	1
10131	2,4,6-Trinitrotoluene	118-96-7	0.20	U	0.20	0.60	10000000	1
HPLC Organics	**SW-846 8315A**		ug/l		ug/l	ug/l	ug/l	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50		1
Pesticides/PCBs	**SW-846 8082**		ug/l		ug/l	ug/l	ug/l	
10227	Aroclor 5432	63496-31-1	0.10	U	0.10	0.50		1
10227	Aroclor 5442	12642-23-8	0.10	U	0.10	0.50		1
10227	Aroclor 5460	11126-42-4	0.10	U	0.10	0.50		1
10227	PCB-1016	12674-11-2	0.10	U	0.10	0.50		1
10227	PCB-1221	11104-28-2	0.10	U	0.10	0.50		1
10227	PCB-1232	11141-16-5	0.20	U	0.20	0.50		1
10227	PCB-1242	53469-21-9	0.10	U	0.10	0.50		1
10227	PCB-1248	12672-29-6	0.10	U	0.10	0.50		1

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Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

CAT No.	Analysis Name		CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs		**SW-846 8082**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10227	PCB-1254		11097-69-1	0.10	U	0.10	0.50		1
10227	PCB-1260		11096-82-5	0.15	U	0.15	0.50		1
10227	PCB-1262		37324-23-5	0.20	U	0.20	0.50		1
10227	PCB-1268		11100-14-4	0.16	U	0.16	0.50		1
GC Miscellaneous		**SW-846 8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06624	Ethanol		64-17-5	200	U	200	1,000		1
06624	Isopropanol		67-63-0	200	U	200	1,000		1
06624	Methanol		67-56-1	200	U	200	1,000		1
GC Miscellaneous		**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
08278	Diethylene glycol		111-46-6	20	U	20	200		1
08278	Ethylene glycol		107-21-1	20	U	20	200		1
08278	Propylene glycol		57-55-6	20	U	20	200		1
GC Petroleum Hydrocarbons		**SW-846 8015B**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10319	m-Terphenyl		92-06-8	0.081	U	0.081	0.25		1
10319	o-Terphenyl		84-15-1	0.081	U	0.081	0.25		1
10319	p-Terphenyl		92-94-4	0.081	U	0.081	0.25		1
GC Petroleum Hydrocarbons		**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10365	EFH (C12-C14)		n.a.	0.10	U	0.10	0.61		1
10365	EFH (C15-C20)		n.a.	0.10	U	0.10	0.61		1
10365	EFH (C21-C30)		n.a.	0.10	U	0.10	0.61		1
10365	EFH (C30 - C40)		n.a.	0.10	U	0.10	0.61		1
10365	EFH (C8-C11)		n.a.	0.10	U	0.10	0.61		1
Metals		**SW-846 6010B**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum		7429-90-5	0.0801	U	0.0801	0.200		1
08014	Boron		7440-42-8	0.0068	J	0.0022	0.0500		1
01750	Calcium		7440-70-2	0.0705	U	0.0705	0.200		1
01754	Iron		7439-89-6	0.0141	U	0.0141	0.200		1
01756	Lithium		7439-93-2	0.0076	U	0.0076	0.0200		1
01757	Magnesium		7439-95-4	0.0067	U	0.0067	0.100		1
07058	Manganese		7439-96-5	0.00044	U	0.00044	0.0050		1
10143	Phosphorus		7723-14-0	0.0047	U	0.0047	0.100		1
01762	Potassium		7440-09-7	0.0874	U	0.0874	0.500		1
01767	Sodium		7440-23-5	0.0647	U	0.0647	1.00		1
08068	Strontium		7440-24-6	0.00051	J	0.00022	0.0050		1
07069	Tin		7440-31-5	0.0043	U	0.0043	0.0200		1
07070	Titanium		7440-32-6	0.00046	U	0.00046	0.0100		1
10144	Zirconium		7440-67-7	0.0042	U	0.0042	0.0500		1
		SW-846 6020		**mg/l**		**mg/l**	**mg/l**	**mg/l**	

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06024	Antimony	7440-36-0	0.00042 U	0.00042	0.0010		1
06025	Arsenic	7440-38-2	0.00095 U	0.00095	0.0020		1
06026	Barium	7440-39-3	0.00069 U	0.00069	0.0020		1
06027	Beryllium	7440-41-7	0.00013 U	0.00013	0.00050		1
06028	Cadmium	7440-43-9	0.00020 U	0.00020	0.00050		1
06031	Chromium	7440-47-3	0.00060 U	0.00060	0.0020		1
06032	Cobalt	7440-48-4	0.00010 U	0.00010	0.00050		1
06033	Copper	7440-50-8	0.00038 U	0.00038	0.0020		1
06035	Lead	7439-92-1	0.000089 J	0.000080	0.0010		1
06038	Molybdenum	7439-98-7	0.00025 U	0.00025	0.00050		1
06039	Nickel	7440-02-0	0.00050 U	0.00050	0.0020		1
06041	Selenium	7782-49-2	0.00027 U	0.00027	0.0020		1
06042	Silver	7440-22-4	0.000098 U	0.000098	0.00050		1
06045	Thallium	7440-28-0	0.00015 U	0.00015	0.00050		1
06048	Vanadium	7440-62-2	0.00018 U	0.00018	0.00050		1
06049	Zinc	7440-66-6	0.0056 J	0.0040	0.0150		1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000026 U	0.000026	0.00020		1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
01504	11b Anions by 300.0 - Fluoride	16984-48-8	0.080 U	0.080	0.10		1
00368	11b Anions by 300.0 - Nitrate	14797-55-8	0.050 U	0.050	0.10		1
	EPA 314.0		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06019	7b Perchlorate EPA 314.0	14797-73-0	0.70 U	0.70	2.0		1
	SW-846 7199		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06467	3b Cr VI by EPA 7199	18540-29-9	5.0 U	5.0	10.0		1
	SW-846 9012B		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
08255	16b Cyanide by 9012B	57-12-5	0.0050 U	0.0050	0.010		1
	SW-846 9040B		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00200	17b pH by 9040B	n.a.	5.5	0.010	0.010		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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Sample Description: **EB-SA7-SB-101311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11290WAA026	11/01/2011 18:00	Matthew S Woods	1
04678	5b Semivolatiles by 8270C	SW-846 8270C	1	11290WAB026	10/18/2011 08:08	Brian K Graham	1
10137	4b Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11290WAJ026	10/21/2011 12:26	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	11290WAB026	10/17/2011 17:30	Nicholas W Shroyer	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	11290WAJ026	10/18/2011 12:00	Olivia I Santiago	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11290WAA026	10/17/2011 13:55	Wanda F Oswald	1
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11290B20A	10/18/2011 01:04	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11290B20A	10/18/2011 01:04	Marie D John	1
10131	15b Energetics by 8330A	SW-846 8330A	1	112900016A	10/20/2011 08:09	James H Place	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	112880004A	10/17/2011 14:57	James H Place	1
10227	8b PCBs/PCTs by 8082	SW-846 8082	1	112900011A	10/20/2011 15:10	Jessica L Miller	1
11117	PCB Waters Extraction	SW-846 3510C	1	112900011A	10/18/2011 02:30	Sherry L Morrow	1
01013	Formaldehyde Extraction	SW-846 8315A	1	112880004A	10/16/2011 08:30	Olivia Arosemena	1
11122	Energetics Extraction	SW-846 8330	1	112900016A	10/18/2011 16:45	Kelli M Barto	1
06624	18b Alcohols by 8015B	SW-846 8015B	1	112870020A	10/14/2011 21:07	Elizabeth J Marin	1
08278	19b Glycols by 8015B	SW-846 8015B modified	1	112910030A	10/18/2011 21:45	Tyler O Griffin	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	112880013A	10/21/2011 13:30	Robert Brown	1
10365	9b TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112900022A	10/20/2011 19:15	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	112900022A	10/18/2011 08:45	Catherine R Wiker	1
10304	Terphenyls water prep	SW-846 3510C	1	112880013A	10/17/2011 10:00	Catherine R Wiker	1
01743	Aluminum	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
08014	Boron	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01756	Lithium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
10143	Phosphorus	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
08068	Strontium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
07069	Tin	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
07070	Titanium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
10144	Zirconium	SW-846 6010B	1	112901848006	10/21/2011 07:57	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06025	Arsenic	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06026	Barium	SW-846 6020	1	112906050003D	10/20/2011 04:35	Choon Y Tian	1
06027	Beryllium	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06028	Cadmium	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06031	Chromium	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06032	Cobalt	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06033	Copper	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06035	Lead	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06038	Molybdenum	SW-846 6020	1	112906050003C	10/20/2011 04:35	Choon Y Tian	1
06039	Nickel	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1

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Sample Description: **EB-SA7-SB-101311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437206
LLI Group # 1271284
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 11/18/2011 09:28

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6810 SDG#: DE268-09EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06041	Selenium	SW-846 6020	1	112906050003B	10/20/2011 04:35	Choon Y Tian	1
06042	Silver	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06045	Thallium	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06048	Vanadium	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
06049	Zinc	SW-846 6020	1	112906050003A	10/20/2011 04:35	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	112915713004	10/19/2011 09:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	112901848006	10/18/2011 12:00	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	112906050003	10/18/2011 12:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	112915713004	10/18/2011 14:32	Nelli S Markaryan	1
01504	11b Anions by 300.0 - Fluoride	EPA 300.0	1	11287196902B	10/14/2011 22:24	Ashley M Adams	1
00368	11b Anions by 300.0 - Nitrate	EPA 300.0	1	11287196902B	10/14/2011 22:24	Ashley M Adams	1
06019	7b Perchlorate EPA 314.0	EPA 314.0	2	11288281101A	10/18/2011 16:56	Elyse P Brunstetter	1
06467	3b Cr VI by EPA 7199	SW-846 7199	1	11287281401A	10/14/2011 11:59	Elyse P Brunstetter	1
08255	16b Cyanide by 9012B	SW-846 9012B	1	11294117101B	10/23/2011 11:06	Joseph E McKenzie	1
08256	Cyanide Water Distillation	SW-846 9012B	1	11294117101B	10/21/2011 15:55	Carolyn M Mastropietro	1
00200	17b pH by 9040B	SW-846 9040B	1	11287020001A	10/14/2011 21:00	Luz M Groff	1

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11290SLF026	Sample number(s): 6437193-6437197,6437201									
Acenaphthene	17	U	17.	170	ug/kg	95		76-111		
Acenaphthylene	17	U	17.	170	ug/kg	102		75-122		
Aniline	170 U		170.	500	ug/kg	84		20-115		
Anthracene	17	U	17.	170	ug/kg	98		76-112		
Benzidine	1,200 U		1,200.	3,300	ug/kg	49		15-121		
Benzo(a)anthracene	17	U	17.	170	ug/kg	103		73-112		
Benzo(a)pyrene	17	U	17.	170	ug/kg	102		65-124		
Benzo(b)fluoranthene	17	U	17.	170	ug/kg	103		61-127		
Benzo(g,h,i)perylene	17	U	17.	170	ug/kg	98		60-125		
Benzo(k)fluoranthene	17	U	17.	170	ug/kg	98		67-125		
Benzoic acid	170 U		170.	500	ug/kg	93		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	100		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	103		73-114		
Butylbenzylphthalate	17	U	17.	170	ug/kg	95		75-115		
Di-n-butylphthalate	17	U	17.	170	ug/kg	96		79-112		
Carbazole	17	U	17.	170	ug/kg	94		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	106		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	57		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	105		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	101		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	100		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	74		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	101		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	100		74-115		
Chrysene	17	U	17.	170	ug/kg	98		76-113		
Dibenz(a,h)anthracene	17	U	17.	170	ug/kg	105		61-126		
Dibenzofuran	17	U	17.	170	ug/kg	95		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	86		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	86		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	87		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	56		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	104		75-111		
Diethylphthalate	17	U	17.	170	ug/kg	96		76-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	106		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	116		83-120		
Dimethylphthalate	17	U	17.	170	ug/kg	98		77-109		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	83		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	63		18-133		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	104		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	103		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	106		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	99		75-117		
Fluoranthene	17	U	17.	170	ug/kg	101		78-116		
Fluorene	17	U	17.	170	ug/kg	98		75-116		
Hexachlorobenzene	17	U	17.	170	ug/kg	102		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	98		65-117		
Hexachlorocyclopentadiene	170	U	170.	500	ug/kg	102		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	89		61-109		
Indeno(1,2,3-cd)pyrene	17	U	17.	170	ug/kg	103		64-119		
Isophorone	17	U	17.	170	ug/kg	108		69-110		
1-Methylnaphthalene	17	U	17.	170	ug/kg	94		74-105		
2-Methylnaphthalene	17	U	17.	170	ug/kg	96		69-109		
2-Methylphenol	33	U	33.	170	ug/kg	103		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	102		66-117		
Naphthalene	17	U	17.	170	ug/kg	95		73-106		
2-Nitroaniline	17	U	17.	170	ug/kg	102		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	96		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	73		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	107		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	103		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	87		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	98		63-107		
N-Nitrosodimethylamine	33	U	33.	170	ug/kg	97		60-106		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	99		67-141		
Di-n-octylphthalate	17	U	17.	170	ug/kg	102		62-137		
Pentachlorophenol	170	U	170.	500	ug/kg	95		51-117		
Phenanthrene	17	U	17.	170	ug/kg	94		77-113		
Phenol	17	U	17.	170	ug/kg	106		58-112		
Pyrene	17	U	17.	170	ug/kg	96		75-115		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	96		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	104		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	105		78-111		
Batch number: 11290WAA026	Sample number(s): 6437202-6437203,6437206									
N-Nitrosodimethylamine	1.33		0.500	1.00	ng/l	101	107	70-130	6	30
Batch number: 11290WAB026	Sample number(s): 6437206									
Aniline	1	U	1.	5	ug/l	77	83	38-116	8	30
Benzidine	20	U	20.	60	ug/l	62	62	34-117	0	30
Benzoic acid	6	U	6.	15	ug/l	24	21	10-69	11	30
Benzyl alcohol	5	U	5.	15	ug/l	79	91	66-97	14	30
4-Bromophenyl-phenylether	1	U	1.	5	ug/l	101	103	75-115	2	30
2-butoxy-Ethanol	50	U	50.	50	ug/l					
Carbazole	1	U	1.	5	ug/l	99	103	75-120	4	30
4-Chloro-3-methylphenol	1	U	1.	5	ug/l	103	109	70-123	6	30
4-Chloroaniline	1	U	1.	5	ug/l	67	70	24-128	5	30
bis(2-Chloroethoxy)methane	1	U	1.	5	ug/l	104	109	74-124	5	30
bis(2-Chloroethyl)ether	1	U	1.	5	ug/l	101	108	77-108	7	30
bis(2-Chloroisopropyl)ether	1	U	1.	5	ug/l	98	106	62-127	8	30
2-Chloronaphthalene	2	U	2.	5	ug/l	73	81	54-132	11	30
2-Chlorophenol	1	U	1.	5	ug/l	94	100	71-114	7	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	2	U	2.	5	ug/l	101	106	77-114	5	30
Dibenzofuran	1	U	1.	5	ug/l	96	101	75-117	4	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	87	97	55-118	10	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	88	97	61-111	9	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	88	96	53-119	9	30
3,3'-Dichlorobenzidine	2	U	2.	5	ug/l	70	72	37-117	2	30
2,4-Dichlorophenol	1	U	1.	5	ug/l	102	109	77-117	7	30
2,4-Dimethylphenol	3	U	3.	10	ug/l	102	107	72-110	4	30
3,5-Dimethylphenol	3	U	3.	10	ug/l	108	113	70-130	5	30
4,6-Dinitro-2-methylphenol	5	U	5.	15	ug/l	98	102	65-126	4	30
2,4-Dinitrophenol	10	U	10.	30	ug/l	93	99	52-131	6	30
2,4-Dinitrotoluene	1	U	1.	5	ug/l	108	113	76-119	5	30
2,6-Dinitrotoluene	1	U	1.	5	ug/l	104	111	76-118	6	30
1,2-Diphenylhydrazine	1	U	1.	5	ug/l	100	103	68-127	4	30
Hexachlorobenzene	1	U	1.	5	ug/l	105	107	75-119	2	30
Hexachlorobutadiene	1	U	1.	5	ug/l	96	104	57-124	8	30
Hexachlorocyclopentadiene	5	U	5.	15	ug/l	84	90	36-118	6	30
Hexachloroethane	1	U	1.	5	ug/l	86	95	52-113	10	30
Isophorone	1	U	1.	5	ug/l	107	113	74-117	6	30
2-Methylphenol	1	U	1.	5	ug/l	86	94	58-110	9	30
4-Methylphenol	2	U	2.	5	ug/l	77	85	49-108	10	30
2-Nitroaniline	1	U	1.	5	ug/l	104	111	75-120	7	30
3-Nitroaniline	1	U	1.	5	ug/l	99	104	74-113	5	30
4-Nitroaniline	1	U	1.	5	ug/l	84	89	59-100	5	30
Nitrobenzene	1	U	1.	5	ug/l	108	114*	75-109	5	30
2-Nitrophenol	1	U	1.	5	ug/l	106	111	76-118	4	30
4-Nitrophenol	10	U	10.	30	ug/l	40	46	16-78	14	30
N-Nitroso-di-n-propylamine	1	U	1.	5	ug/l	100	108	69-110	8	30
N-Nitrosodiphenylamine	2	U	2.	5	ug/l	94	97	67-136	3	30
Pentachlorophenol	3	U	3.	15	ug/l	107	112*	53-110	5	30
Phenol	1	U	1.	5	ug/l	38	49	21-67	25	30
2-phenoxy-Ethanol	50	U	50.	50	ug/l					
Tetralin	5	U	5.	5	ug/l					
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	96	103	71-112	7	30
2,4,5-Trichlorophenol	1	U	1.	5	ug/l	103	109*	79-107	6	30
2,4,6-Trichlorophenol	1	U	1.	5	ug/l	103	110	76-120	7	30
Batch number: 11290WAJ026	Sample number(s): 6437206									
Acenaphthene	0.010	U	0.010	0.050	ug/l	98	97	74-109	2	30
Acenaphthylene	0.010	U	0.010	0.050	ug/l	97	95	70-110	2	30
Anthracene	0.010	U	0.010	0.050	ug/l	99	100	66-111	1	30
Benzo(a)anthracene	0.010	U	0.010	0.050	ug/l	101	102	72-114	0	30
Benzo(a)pyrene	0.010	U	0.010	0.050	ug/l	95	95	60-127	0	30
Benzo(b)fluoranthene	0.010	U	0.010	0.050	ug/l	98	99	58-151	1	30
Benzo(g,h,i)perylene	0.010	U	0.010	0.050	ug/l	108	108	57-131	0	30
Benzo(k)fluoranthene	0.010	U	0.010	0.050	ug/l	99	99	59-130	0	30
Butylbenzylphthalate	0.050	U	0.050	1.0	ug/l	77	78	40-138	1	30
Di-n-butylphthalate	0.050	U	0.050	1.0	ug/l	84	85	56-148	1	30
Chrysene	0.010	U	0.010	0.050	ug/l	105	105	76-116	0	30
Dibenz(a,h)anthracene	0.010	U	0.010	0.050	ug/l	109	110	55-134	0	30
Diethylphthalate	0.050	U	0.050	1.0	ug/l	91	92	37-148	1	30
Dimethylphthalate	0.050	U	0.050	1.0	ug/l	86	86	40-119	0	30
Bis(2-Ethylhexyl)phthalate	0.050	U	0.050	1.0	ug/l	102	102	57-154	0	30
Fluoranthene	0.010	U	0.010	0.050	ug/l	104	106	75-116	2	30
Fluorene	0.010	U	0.010	0.050	ug/l	105	103	75-114	2	30
Indeno(1,2,3-cd)pyrene	0.010	U	0.010	0.050	ug/l	108	108	53-158	0	30
1-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	93	94	71-117	0	30
2-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	92	92	75-115	0	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Naphthalene	0.030	U	0.030	0.050	ug/l	95	95	72-109	0	30
N-Nitrosodimethylamine	0.010	U	0.010	0.050	ug/l	70	65	36-89	8	30
Di-n-octylphthalate	0.050	U	0.050	1.0	ug/l	87	87	57-145	1	30
Phenanthrene	0.030	U	0.030	0.050	ug/l	98	99	76-111	1	30
Pyrene	0.010	U	0.010	0.050	ug/l	92	91	69-118	0	30
Batch number: 11291SLG026	Sample number(s): 6437193-6437197,6437201,6437204									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	105		70-130		
Batch number: 11298SLA026	Sample number(s): 6437193-6437197,6437201									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	102		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	94		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	100		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	99		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	98		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	104		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	100		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	103		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	110		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	124		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	101		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	104		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	110		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	105		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	129		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	102		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	103		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	102		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	93		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	91		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	95		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	94		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	110		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	96		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	99		72-119		
Batch number: 11290B20A	Sample number(s): 6437205-6437206									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	100	91	75-135	10	30
Batch number: 11293A16A	Sample number(s): 6437193-6437197,6437201									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	76		67-119		
Batch number: 112880015A	Sample number(s): 6437193-6437197,6437199-6437201									
4-Amino-2,6-Dinitrotoluene	60	U	60.	120	ug/kg	109		80-120		
2-Amino-4,6-Dinitrotoluene	40	U	40.	120	ug/kg	106		80-120		
2,6-Diamino-4-nitrotoluene	80	U	80.	240	ug/kg	87	90	54-134	4	30
2,4-Diamino-6-nitrotoluene	80	U	80.	240	ug/kg	86	90	54-134	4	30
1,3-Dinitrobenzene	40	U	40.	120	ug/kg	110		51-171		
2,4-Dinitrotoluene	40	U	40.	120	ug/kg	101		72-135		
2,6-Dinitrotoluene	40	U	40.	120	ug/kg	106		80-120		
HMX	100 U		100.	300	ug/kg	93		74-130		
Nitrobenzene	40	U	40.	120	ug/kg	106		80-120		
Nitroglycerin	800 U		800.	2,400	ug/kg	90		80-120		
2-Nitrotoluene	80	U	80.	120	ug/kg	101		78-128		
3-Nitrotoluene	100 U		100.	120	ug/kg	108		73-127		

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Quality Control Summary

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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Nitrotoluene	80	U	80.	120	ug/kg	101		80-120		
PETN	800 U		800.	2,400	ug/kg	104		80-120		
RDX	50	U	50.	120	ug/kg	102		75-131		
Tetryl	61	U	61.	120	ug/kg	96		70-168		
1,3,5-Trinitrobenzene	40	U	40.	120	ug/kg	104		77-137		
2,4,6-Trinitrotoluene	40	U	40.	120	ug/kg	108		80-120		
Batch number: 112900016A	Sample number(s): 6437206									
4-Amino-2,6-Dinitrotoluene	0.30	U	0.30	0.60	ug/l	99	93	80-120	6	30
2-Amino-4,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	94	88	80-120	7	30
2,6-Diamino-4-nitrotoluene	0.20	U	0.20	0.60	ug/l	80	83	50-122	4	30
2,4-Diamino-6-nitrotoluene	0.20	U	0.20	0.60	ug/l	80	83	50-122	4	30
1,3-Dinitrobenzene	0.20	U	0.20	0.60	ug/l	100	96	72-117	4	30
2,4-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	93	89	80-120	4	30
2,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	100	97	80-120	3	30
HMX	0.65	U	0.65	2.0	ug/l	87	82	65-125	6	30
Nitrobenzene	0.20	U	0.20	0.60	ug/l	92	88	75-121	4	30
Nitroglycerin	5.2	U	5.2	15	ug/l	92	88	80-120	5	30
2-Nitrotoluene	0.20	U	0.20	0.60	ug/l	93	88	74-120	6	30
3-Nitrotoluene	0.40	U	0.40	1.2	ug/l	98	94	69-107	4	30
4-Nitrotoluene	0.60	U	0.60	1.2	ug/l	93	88	80-120	6	30
PETN	6.0	U	6.0	18	ug/l	96	96	80-120	0	30
RDX	0.20	U	0.20	0.60	ug/l	88	82	70-125	7	30
Tetryl	0.40	U	0.40	0.60	ug/l	92	86	31-148	7	30
1,3,5-Trinitrobenzene	0.20	U	0.20	0.60	ug/l	88	82	53-129	7	30
2,4,6-Trinitrotoluene	0.20	U	0.20	0.60	ug/l	98	93	76-109	5	30
Batch number: 112880004A	Sample number(s): 6437206									
20b Formaldehyde 8315A	10	U	10.	50	ug/l	96	104	69-130	8	30
Batch number: 112910003A	Sample number(s): 6437193-6437197,6437199-6437201									
20a Formaldehyde 8315A	600 U		600.	1,500	ug/kg	91		80-126		
Batch number: 112900011A	Sample number(s): 6437206									
Aroclor 5432	0.10	U	0.10	0.50	ug/l					
Aroclor 5442	0.10	U	0.10	0.50	ug/l	76	74	35-84	3	30
Aroclor 5460	0.10	U	0.10	0.50	ug/l					
PCB-1016	0.10	U	0.10	0.50	ug/l	84	90	51-128	7	30
PCB-1221	0.10	U	0.10	0.50	ug/l					
PCB-1232	0.20	U	0.20	0.50	ug/l					
PCB-1242	0.10	U	0.10	0.50	ug/l					
PCB-1248	0.10	U	0.10	0.50	ug/l					
PCB-1254	0.10	U	0.10	0.50	ug/l					
PCB-1260	0.15	U	0.15	0.50	ug/l	94	102	56-135	8	30
PCB-1262	0.20	U	0.20	0.50	ug/l					
PCB-1268	0.16	U	0.16	0.50	ug/l					
Batch number: 112910025A	Sample number(s): 6437193-6437197,6437199-6437201									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	69	66	36-106	4	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	67*		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	85		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112870020A	Sample number(s): 6437206									
Ethanol	200 U		200.	1,000	ug/l	96		78-116		
Isopropanol	200 U		200.	1,000	ug/l	96		75-125		
Methanol	200 U		200.	1,000	ug/l	96		76-122		
Batch number: 112900028A	Sample number(s): 6437193-6437197,6437199-6437201									
Ethanol	100 U		100.	500	ug/kg	89		71-129		
Isopropanol	100 U		100.	500	ug/kg	86		75-125		
Methanol	100 U		100.	500	ug/kg	90		68-129		
Batch number: 112910030A	Sample number(s): 6437206									
Diethylene glycol	20	U	20.	200	mg/l	120		67-126		
Ethylene glycol	20	U	20.	200	mg/l	137*		78-136		
Propylene glycol	20	U	20.	200	mg/l	140*		65-132		
Batch number: 112980042A	Sample number(s): 6437193-6437197,6437201									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	106		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	99		67-131		
Batch number: 112880013A	Sample number(s): 6437206									
m-Terphenyl	0.080	U	0.080	0.25	mg/l	98	102	61-108	4	20
o-Terphenyl	0.080	U	0.080	0.25	mg/l	102	104	75-125	2	20
p-Terphenyl	0.080	U	0.080	0.25	mg/l	98	102	63-110	4	20
Batch number: 112900022A	Sample number(s): 6437206									
EFH (C12-C14)	0.10	U	0.10	0.60	mg/l	88	86	63-121	2	30
EFH (C15-C20)	0.10	U	0.10	0.60	mg/l	93	95	72-124	1	30
EFH (C21-C30)	0.10	U	0.10	0.60	mg/l	92	73	64-123	23	30
EFH (C30 - C40)	0.10	U	0.10	0.60	mg/l	73	80	73-124	9	30
EFH (C8-C11)	0.10	U	0.10	0.60	mg/l	76	74	43-107	3	30
Batch number: 112920027A	Sample number(s): 6437193-6437197,6437199-6437201									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	94		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	96		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	97		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	85		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	83		49-107		
Batch number: 112920028A	Sample number(s): 6437193-6437197,6437199-6437201									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	100		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	105		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		69-109		
Batch number: 112901026001A	Sample number(s): 6437193-6437198,6437201									
Antimony	0.0740	U	0.0740	0.200	mg/kg	134		40-227		
Arsenic	0.0800	U	0.0800	0.400	mg/kg	101		83-111		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Beryllium	0.0160 U	0.0160	0.100	mg/kg	102		84-112		
Cadmium	0.0440 U	0.0440	0.100	mg/kg	105		83-111		
Chromium	0.120 U	0.120	0.400	mg/kg	111		77-123		
Cobalt	0.0200 U	0.0200	0.100	mg/kg	108		85-114		
Copper	0.0800 U	0.0800	0.400	mg/kg	104		81-110		
Lead	0.0102 U	0.0102	0.200	mg/kg	104		84-112		
Nickel	0.100 U	0.100	0.400	mg/kg	104		81-110		
Silver	0.0142 U	0.0142	0.100	mg/kg	102		83-112		
Thallium	0.0300 U	0.0300	0.100	mg/kg	103		82-112		
Vanadium	0.0220 U	0.0220	0.100	mg/kg	103		76-110		
Zinc	0.560 U	0.560	3.00	mg/kg	101		82-110		
Batch number: 112901026001B	Sample number(s): 6437193-6437198,6437201								
Selenium	0.0580 U	0.0580	0.400	mg/kg	102		79-110		
Batch number: 112901026001C	Sample number(s): 6437193-6437198,6437201								
Molybdenum	0.0500 U	0.0500	0.100	mg/kg	105		80-110		
Batch number: 112901026001D	Sample number(s): 6437193-6437198,6437201								
Barium	0.106 U	0.106	0.400	mg/kg	102		83-110		
Batch number: 112901848006	Sample number(s): 6437206								
Aluminum	0.0801 U	0.0801	0.200	mg/l	102	102	90-112	0	20
Boron	0.0046 J	0.0022	0.0500	mg/l	92	96	89-110	4	20
Calcium	0.0705 U	0.0705	0.200	mg/l	101	100	90-110	1	20
Iron	0.0141 U	0.0141	0.200	mg/l	102	101	90-112	1	20
Lithium	0.0076 U	0.0076	0.0200	mg/l	96	97	90-110	2	20
Magnesium	0.0067 U	0.0067	0.100	mg/l	100	98	90-110	1	20
Manganese	0.00044 U	0.00044	0.0050	mg/l	102	101	90-110	1	20
Phosphorus	0.0047 U	0.0047	0.100	mg/l	101	100	90-110	1	20
Potassium	0.0874 U	0.0874	0.500	mg/l	96	93	85-115	3	20
Sodium	0.0647 U	0.0647	1.00	mg/l	96	95	87-114	0	20
Strontium	0.00022 U	0.00022	0.0050	mg/l	99	99	90-110	0	20
Tin	0.0043 U	0.0043	0.0200	mg/l	102	102	90-110	0	20
Titanium	0.00046 U	0.00046	0.0100	mg/l	102	102	90-113	0	20
Zirconium	0.0093 J	0.0042	0.0500	mg/l	101	103	90-110	3	20
Batch number: 112905708002	Sample number(s): 6437193-6437198,6437201								
Aluminum	6.05 U	6.05	20.0	mg/kg	99		40-127		
Boron	0.360 U	0.360	5.00	mg/kg	103		83-110		
Calcium	6.41 J	2.50	20.0	mg/kg	106		81-110		
Iron	2.61 U	2.61	20.0	mg/kg	101		47-129		
Lithium	0.62 U	0.62	2.0	mg/kg	102		80-120		
Magnesium	0.440 U	0.440	10.0	mg/kg	102		63-116		
Manganese	0.0360 U	0.0360	0.500	mg/kg	104		85-116		
Phosphorus	1.73 J	0.350	10.0	mg/kg	107		80-120		
Strontium	0.0510 J	0.0250	0.500	mg/kg	107		84-110		
Tin	1.44 J	0.320	10.0	mg/kg	104		86-120		
Titanium	0.0710 U	0.0710	1.00	mg/kg	93		80-120		
Zirconium	0.460 U	0.460	5.00	mg/kg	104		80-120		
Batch number: 112905711002	Sample number(s): 6437193-6437198,6437201								
Mercury	0.0070 U	0.0070	0.100	mg/kg	105		83-119		
Batch number: 112906050003A	Sample number(s): 6437206								
Antimony	0.00042 U	0.00042	0.0010	mg/l	110	106	87-110	4	20
Arsenic	0.00095 U	0.00095	0.0020	mg/l	108	101	86-111	7	20
Beryllium	0.00013 U	0.00013	0.00050	mg/l	103	102	90-113	1	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	0.00020 U	0.00020	0.00050	mg/l	109	102	90-114	7	20
Chromium	0.00060 U	0.00060	0.0020	mg/l	99	102	90-118	2	20
Cobalt	0.00010 U	0.00010	0.00050	mg/l	101	102	87-113	1	20
Copper	0.00038 U	0.00038	0.0020	mg/l	102	103	90-113	1	20
Lead	0.000080 U	0.00008 0	0.0010	mg/l	100	101	90-115	1	20
Nickel	0.00050 U	0.00050	0.0020	mg/l	99	104	90-113	5	20
Silver	0.000098 U	0.00009 8	0.00050	mg/l	101	102	90-115	2	20
Thallium	0.00015 U	0.00015	0.00050	mg/l	94	98	89-116	4	20
Vanadium	0.00018 U	0.00018	0.00050	mg/l	99	99	89-116	0	20
Zinc	0.0040 U	0.0040	0.0150	mg/l	102	101	90-116	1	20
Batch number: 112906050003B	Sample number(s): 6437206								
Selenium	0.00027 U	0.00027	0.0020	mg/l	107	102	85-114	4	20
Batch number: 112906050003C	Sample number(s): 6437206								
Molybdenum	0.00025 U	0.00025	0.00050	mg/l	98	99	89-115	1	20
Batch number: 112906050003D	Sample number(s): 6437206								
Barium	0.00069 U	0.00069	0.0020	mg/l	99	98	88-113	1	20
Batch number: 112915713004	Sample number(s): 6437206								
Mercury	0.000026 U	0.00002 6	0.00020	mg/l	101	104	80-120	3	20
Batch number: 112985708002	Sample number(s): 6437193-6437198,6437201								
Potassium	11.3 U	11.3	50.0	mg/kg	100		71-110		
Sodium	5.95 U	5.95	100	mg/kg	101		76-110		
Batch number: 11287196902B	Sample number(s): 6437206								
11b Anions by 300.0 - Fluoride	0.080 U	0.080	0.10	mg/l	96	96	90-110	0	20
11b Anions by 300.0 - Nitrate	0.050 U	0.050	0.10	mg/l	98	97	90-110	1	20
Batch number: 11287281401A	Sample number(s): 6437206								
3b Cr VI by EPA 7199	5.0 U	5.0	10.0	ug/l	109	101	90-110	7	20
Batch number: 11288281101A	Sample number(s): 6437206								
7b Perchlorate EPA 314.0	0.70 U	0.70	2.0	ug/l	98	103	85-115	5	20
Batch number: 11291243201A	Sample number(s): 6437193-6437194								
3a Cr VI by EPA 7199	0.20 U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11292243201A	Sample number(s): 6437195-6437196,6437198,6437201								
3a Cr VI by EPA 7199	0.20 U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11293102201A	Sample number(s): 6437193-6437194								
16a Cyanide by 9012B	0.18 U	0.18	0.50	mg/kg	85		80-120		
Batch number: 11293102201B	Sample number(s): 6437195-6437196,6437198,6437201								
16a Cyanide by 9012B	0.18 U	0.18	0.50	mg/kg	85		80-120		
Batch number: 11293621201A	Sample number(s): 6437193-6437196,6437198,6437201								
7a Perchlorate EPA 314.0	9.0 U	9.0	30.0	ug/kg	108		85-115		
Batch number: 11294117101B	Sample number(s): 6437206								
16b Cyanide by 9012B	0.0050 U	0.0050	0.010	mg/l	91	90	90-110	1	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11298495201A	Sample number(s): 6437193-6437196,6437198,6437201									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	101		90-110		
11a Anions by 300.0 - Nitrate	0.80	U	0.80	1.5	mg/kg	102		90-110		
Batch number: 11287020001A	Sample number(s): 6437206									
17b pH by 9040B						100	100	90-110	0	3
Batch number: 11299039402B	Sample number(s): 6437193-6437195,6437198,6437201									
17a pH by 9045C						100		95-105		
Batch number: 11291162401B	Sample number(s): 6437204									
Moisture Content by 160.3						100		80-120		
Batch number: 11298162401B	Sample number(s): 6437193-6437199,6437201									
28a Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11290SLF026	Sample number(s): 6437193-6437197,6437201 UNSPK: 6437195								
Acenaphthene	101	103	75-115	2	30				
Acenaphthylene	107	110	81-110	2	30				
Aniline	88	84	18-116	4	30				
Anthracene	101	103	75-115	1	30				
Benzidine	47	41	35-141	15	30				
Benzo(a)anthracene	99	100	65-122	1	30				
Benzo(a)pyrene	104	105	57-126	1	30				
Benzo(b)fluoranthene	112	111	59-125	1	30				
Benzo(g,h,i)perylene	106	105	59-127	1	30				
Benzo(k)fluoranthene	94	95	56-132	1	30				
Benzoic acid	64	39	10-173	49*	30				
Benzyl alcohol	104	105	67-115	1	30				
4-Bromophenyl-phenylether	106	110	67-129	3	30				
Butylbenzylphthalate	100	100	73-134	0	30				
Di-n-butylphthalate	98	99	67-123	1	30				
Carbazole	97	98	64-120	1	30				
4-Chloro-3-methylphenol	107	103	62-122	4	30				
4-Chloroaniline	70	70	13-107	0	30				
bis(2-Chloroethoxy)methane	108*	109*	75-104	0	30				
bis(2-Chloroethyl)ether	106	106	60-116	0	30				
bis(2-Chloroisopropyl)ether	105	105	55-142	0	30				
2-Chloronaphthalene	79	79	50-141	0	30				
2-Chlorophenol	103	105	73-121	1	30				
4-Chlorophenyl-phenylether	104	107	80-109	3	30				
Chrysene	97	98	62-128	1	30				
Dibenz(a,h)anthracene	111	111	65-125	1	30				
Dibenzofuran	99	101	71-112	1	30				
1,2-Dichlorobenzene	89	88	66-108	1	30				

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Quality Control Summary

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,3-Dichlorobenzene	88	85	63-109	3	30				
1,4-Dichlorobenzene	88	87	58-108	2	30				
3,3'-Dichlorobenzidine	75	72	28-109	5	30				
2,4-Dichlorophenol	106	106	66-123	0	30				
Diethylphthalate	97	98	66-118	1	30				
2,4-Dimethylphenol	107	107	68-118	0	30				
3,5-Dimethylphenol	0*	0*	71-127	0	30				
Dimethylphthalate	100	102	64-118	2	30				
4,6-Dinitro-2-methylphenol	35	21	11-126	49*	30				
2,4-Dinitrophenol	31	32	20-143	1	30				
2,4-Dinitrotoluene	99	99	56-129	0	30				
2,6-Dinitrotoluene	102	106	69-123	3	30				
1,2-Diphenylhydrazine	112	115	71-129	3	30				
bis(2-Ethylhexyl)phthalate	104	104	63-122	0	30				
Fluoranthene	102	103	73-112	0	30				
Fluorene	101	102	63-121	1	30				
Hexachlorobenzene	107	109	77-114	2	30				
Hexachlorobutadiene	101	100	62-120	1	30				
Hexachlorocyclopentadiene	50	68	10-153	30	30				
Hexachloroethane	88	87	57-109	1	30				
Indeno(1,2,3-cd)pyrene	108	108	61-126	0	30				
Isophorone	109*	110*	73-102	1	30				
1-Methylnaphthalene	95	95	64-122	1	30				
2-Methylnaphthalene	99	98	76-114	2	30				
2-Methylphenol	105	106	75-111	1	30				
4-Methylphenol	105	105	59-123	0	30				
Naphthalene	99	98	72-116	1	30				
2-Nitroaniline	109	111	67-125	1	30				
3-Nitroaniline	99	98	59-122	1	30				
4-Nitroaniline	81	80	41-109	1	30				
Nitrobenzene	111	111	57-125	0	30				
2-Nitrophenol	105	102	56-127	3	30				
4-Nitrophenol	84	80	37-129	5	30				
N-Nitroso-di-n-propylamine	102	104	60-116	1	30				
N-Nitrosodimethylamine	110	114	47-116	4	30				
N-Nitrosodiphenylamine	103	105	71-122	2	30				
Di-n-octylphthalate	114	113	56-126	0	30				
Pentachlorophenol	78	58	28-127	31*	30				
Phenanthrene	97	98	65-125	1	30				
Phenol	103	105	58-126	2	30				
Pyrene	98	100	74-126	2	30				
1,2,4-Trichlorobenzene	100	99	72-115	1	30				
2,4,5-Trichlorophenol	105	106	58-129	0	30				
2,4,6-Trichlorophenol	109	108	56-134	2	30				
Batch number: 11291SLG026	Sample number(s): 6437193-6437197,6437201,6437204 UNSPK: 6437195								
N-Nitrosodimethylamine	97	95	70-130	2	30				
Batch number: 11298SLA026	Sample number(s): 6437193-6437197,6437201 UNSPK: 6437195								
Acenaphthene	93	100	63-105	7	30				
Acenaphthylene	90	97	67-114	7	30				
Anthracene	94	102	73-115	8	30				
Benzo(a)anthracene	95	101	59-128	6	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzo(a)pyrene	93	99	58-142	6	30				
Benzo(b)fluoranthene	98	105	54-163	7	30				
Benzo(g,h,i)perylene	78	85	33-141	9	30				
Benzo(k)fluoranthene	97	103	57-153	5	30				
Butylbenzylphthalate	107	120	57-173	11	30				
Di-n-butylphthalate	112	159*	65-148	34*	30				
Chrysene	94	101	67-123	7	30				
Dibenz(a,h)anthracene	85	94	22-133	10	30				
Diethylphthalate	102	126	70-136	21	30				
Dimethylphthalate	100	107	74-118	7	30				
Bis(2-Ethylhexyl)phthalate	119	100	39-167	13	30				
Fluoranthene	97	104	51-149	7	30				
Fluorene	97	104	66-122	7	30				
Indeno(1,2,3-cd)pyrene	84	92	21-143	9	30				
1-Methylnaphthalene	87	94	72-123	8	30				
2-Methylnaphthalene	85	92	64-103	7	30				
Naphthalene	90	95	61-102	5	30				
N-Nitrosodimethylamine	88	94	48-113	7	30				
Di-n-octylphthalate	139	113	40-192	21	30				
Phenanthrene	90	98	62-122	8	30				
Pyrene	94	100	51-131	6	30				
Batch number: 11293A16A	Sample number(s): 6437193-6437197,6437201 UNSPK: 6437195								
9a TPH by EPA 8015B Gas C5-C12	77	76	39-118	9	30				
Batch number: 112880015A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
4-Amino-2,6-Dinitrotoluene	107	110	80-127	3	50				
2-Amino-4,6-Dinitrotoluene	104	107	80-137	2	50				
1,3-Dinitrobenzene	108	110	38-166	2	50				
2,4-Dinitrotoluene	98	102	80-131	3	50				
2,6-Dinitrotoluene	104	108	80-127	3	50				
HMX	92	93	63-128	1	50				
Nitrobenzene	102	105	80-125	4	50				
Nitroglycerin	99	99	80-120	0	50				
2-Nitrotoluene	99	103	80-122	4	50				
3-Nitrotoluene	105	109	72-119	3	50				
4-Nitrotoluene	99	102	80-125	3	50				
PETN	106	108	80-121	2	50				
RDX	98	99	75-129	1	50				
Tetryl	89	86	55-174	4	50				
1,3,5-Trinitrobenzene	99	101	82-126	2	50				
2,4,6-Trinitrotoluene	104	107	82-130	3	50				
Batch number: 112910003A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
20a Formaldehyde 8315A	98	104	80-120	6	50				
Batch number: 112910025A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
PCB-1016	65	65	29-146	0	50				
PCB-1260	79	84	39-149	7	50				
Batch number: 112870020A	Sample number(s): 6437206 UNSPK: P434238								
Ethanol	94	98	62-145	4	20				
Isopropanol	100	100	73-131	0	20				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Methanol	80	96	52-159	16	20				
Batch number: 112900028A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
Ethanol	75	73	48-130	2	20				
Isopropanol	72	71	12-149	1	20				
Methanol	75	72	43-138	3	20				
Batch number: 112910030A	Sample number(s): 6437206 UNSPK: P435702								
Diethylene glycol	120	125	83-130	4	20				
Ethylene glycol	137*	137*	89-125	0	20				
Propylene glycol	135*	135*	91-128	0	20				
Batch number: 112980042A	Sample number(s): 6437193-6437197,6437201 UNSPK: 6437195								
Diethylene glycol	47*	48*	59-109	3	20				
Ethylene glycol	75	75	63-107	1	20				
Propylene glycol	77	78	63-107	0	20				
Batch number: 112920027A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
EFH (C12-C14)	82	89	49-123	8	20				
EFH (C15-C20)	81	98	49-123	13	20				
EFH (C21-C30)	102	117	49-123	7	20				
EFH (C30 - C40)	110	138*	49-123	8	20				
EFH (C8-C11)	0*	5*	49-123	10	20				
Batch number: 112920028A	Sample number(s): 6437193-6437197,6437199-6437201 UNSPK: 6437195								
m-Terphenyl	97	98	75-125	2	20				
o-Terphenyl	102	103	75-125	1	20				
p-Terphenyl	95	97	75-125	2	20				
Batch number: 112901026001A	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Antimony	39*	43*	75-125	8	20	0.135 J	0.126 J	7 (1)	20
Arsenic	101	108	75-125	3	20	3.78	3.79	0	20
Beryllium	91	102	75-125	8	20	0.484	0.538	11 (1)	20
Cadmium	111	108	75-125	2	20	0.0714 J	0.0880 J	21* (1)	20
Chromium	95	120	75-125	9	20	17.3	20.5	17	20
Cobalt	105	108	75-125	3	20	5.76	6.25	8	20
Copper	107	116	75-125	5	20	8.35	10.0	18	20
Lead	119	146*	75-125	10	20	4.54	5.21	14	20
Nickel	112	117	75-125	3	20	11.5	13.8	18	20
Silver	103	110	75-125	7	20	0.0337 J	0.0284 J	17 (1)	20
Thallium	104	122	75-125	11	20	0.244	0.284	15 (1)	20
Vanadium	99	137*	75-125	8	20	34.2	40.9	18	20
Zinc	111 (2)	145 (2)	75-125	5	20	55.0	64.0	15	20
Batch number: 112901026001B	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Selenium	103	118	75-125	13	20	0.162 J	0.153 J	6 (1)	20
Batch number: 112901026001C	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Molybdenum	104	111	75-125	7	20	0.266	0.289	8 (1)	20
Batch number: 112901026001D	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Barium	138 (2)	141 (2)	75-125	0	20	85.0	93.7	10	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Sample Matrix Quality Control

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Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 112905708002	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Aluminum	2054 (2)	1557 (2)	75-125	6	20	12,500	12,700	2	20
Boron	103	102	84-115	0	20	1.03 J	0.806 J	25* (1)	20
Calcium	156 (2)	118 (2)	75-125	4	20	3,410	3,450	1	20
Iron	2305 (2)	15740 (2)	75-125	45*	20	20,200	20,700	2	20
Lithium	101	98	82-114	2	20	27.6	28.3	3	20
Magnesium	398 (2)	211 (2)	75-125	5	20	6,060	6,060	0	20
Manganese	45 (2)	74 (2)	75-125	4	20	299	276	8	20
Phosphorus	86 (2)	91 (2)	75-125	1	20	435	405	7	20
Strontium	100	98	75-115	1	20	12.6	12.1	4	20
Tin	90	89	80-110	0	20	2.61 J	2.45 J	6 (1)	20
Titanium	307 (2)	281 (2)	75-125	2	20	1,210	1,180	2	20
Zirconium	97	97	81-110	1	20	0.897 J	1.34 J	40* (1)	20
Batch number: 112905711002	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Mercury	101	99	65-135	4	20	0.0068 J	0.0069 U	200* (1)	20
Batch number: 112985708002	Sample number(s): 6437193-6437198,6437201 UNSPK: 6437195 BKG: 6437195								
Potassium	128*	119	75-125	3	20	2,360	2,410	2	20
Sodium	99	97	75-125	4	20	118	115	3 (1)	20
Batch number: 11291243201A	Sample number(s): 6437193-6437194 UNSPK: P435690 BKG: P435690								
3a Cr VI by EPA 7199	91		75-125			0.20 U	0.20 U	0 (1)	20
Batch number: 11292243201A	Sample number(s): 6437195-6437196,6437198,6437201 UNSPK: 6437195 BKG: 6437195								
3a Cr VI by EPA 7199	89		75-125			0.20 U	1.3	200* (1)	20
Batch number: 11293102201A	Sample number(s): 6437193-6437194 UNSPK: P435690 BKG: P435690								
16a Cyanide by 9012B	88		75-125			0.18 U	0.17 U	0 (1)	20
Batch number: 11293102201B	Sample number(s): 6437195-6437196,6437198,6437201 UNSPK: 6437195 BKG: 6437195								
16a Cyanide by 9012B	99		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11293621201A	Sample number(s): 6437193-6437196,6437198,6437201 UNSPK: 6437195 BKG: 6437195								
7a Perchlorate EPA 314.0	113		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11298495201A	Sample number(s): 6437193-6437196,6437198,6437201 UNSPK: 6437195 BKG: 6437195								
11a Anions by 300.0 - Fluoride	70*		80-120			2.2	2.6	17 (1)	20
11a Anions by 300.0 - Nitrate	88		80-120			3.8	3.7	1 (1)	20
Batch number: 11299039402B	Sample number(s): 6437193-6437195,6437198,6437201 BKG: 6437195								
17a pH by 9045C						7.86	7.90	1	3
Batch number: 11291162401B	Sample number(s): 6437204 BKG: P431141								
Moisture Content by 160.3						4.4	4.3	2	20
Batch number: 11298162401B	Sample number(s): 6437193-6437199,6437201 BKG: 6437195								
28a Moisture Content by 160.3						11.8	11.7	1	20
Moisture Content by 160.3						11.8	11.7	1	20
Moisture Content by 160.3						11.8	11.7	1	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11290SLF026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6437193	96	96	89	97	89	87
6437194	98	99	85	97	90	86
6437195	99	101	88	100	92	89
6437196	101	104	97	103	94	88
6437197	101	104	92	103	95	87
6437201	100	101	80	98	88	86
Blank	96	97	99	98	88	87
LCS	98	98	103	99	89	85
MS	101	104	97	103	94	88
MSD	101	104	92	103	95	87
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11290WAA026

	N-Nitrosodimethylamine-d6
6437202	115
6437203	113
6437206	117
Blank	102
LCS	101
LCSD	98
Limits:	50-150

Analysis Name: 5b Semivolatiles by EPA 8270C
Batch number: 11290WAB026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6437206	59	36	113	104	93	91
Blank	55	33	111	100	91	91
LCS	56	34	106	97	86	85
LCSD	65	40	113	106	93	88
Limits:	20-130	20-120	30-130	40-130	45-130	45-135

Analysis Name: 4b Select SVOC EPA 8270SIM
Batch number: 11290WAJ026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6437206	100	87	83
Blank	95	87	84
LCS	109	97	86
LCSD	110	94	85

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

Limits: 40-130 45-130 45-135

Analysis Name: 21a NDMA by 1625C
Batch number: 11291SLG026

	N-Nitrosodimethylamine-d6
6437193	94
6437194	99
6437195	88
6437196	94
6437197	77
6437201	77
6437204	83
Blank	124
LCS	120
MS	94
MSD	77

Limits: 50-150

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11298SLA026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6437193	101	93	83
6437194	91	59	79
6437195	92	85	92
6437196	94	86	91
6437197	100	91	97
6437201	97	88	81
Blank	105	101	110
LCS	100	91	97
MS	94	86	91
MSD	100	91	97

Limits: 40-130 45-130 45-135

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11290B20A

	Trifluorotoluene-F
6437205	86
6437206	87
Blank	84
LCS	109
LCSD	113

Limits: 63-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11293A16A

	Trifluorotoluene-F
6437193	79
6437194	73
6437195	84

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Quality Control Summary

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Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

6437196	90
6437197	76
6437201	87
Blank	92
LCS	93
MS	90
MSD	76
Limits:	61-122

Analysis Name: 20b Formaldehyde 8315A
Batch number: 112880004A

	Butyraldehyde
6437206	99
Blank	86
LCS	92
LCSD	96
Limits:	45-145

Analysis Name: 15a Energetics by 8330A
Batch number: 112880015A

	2-Nitro-m-xylene
6437193	118
6437194	117
6437195	116
6437196	108
6437197	113
6437199	118
6437200	117
6437201	115
Blank	125
LCS	114
LCSD	113
MS	108
MSD	113
Limits:	80-146

Analysis Name: 8b PCBs/PCTs by 8082
Batch number: 112900011A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6437206	97	109
Blank	94	78
LCS	90	90
LCSD	91	112
Limits:	30-150	45-120

Analysis Name: 15b Energetics by 8330A
Batch number: 112900016A

	2-Nitro-m-xylene
6437206	92

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

Blank	98
LCS	97
LCSD	90
Limits:	50-134

Analysis Name: 20a Formaldehyde 8315A
Batch number: 112910003A

	Butyraldehyde
6437193	80
6437194	95
6437195	91
6437196	80
6437197	84
6437199	77
6437200	90
6437201	73
Blank	87
LCS	86
MS	80
MSD	84
Limits:	64-126

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112910025A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6437193	74	92
6437194	72	85
6437195	62	88
6437196	74	84
6437197	61	89
6437199	72	87
6437200	77	92
6437201	71	81
Blank	82	93
LCS	73	89
LCSD	76	99
MS	74	84
MSD	61	89
Limits:	53-139	53-142

Analysis Name: 18b Alcohols by 8015B
Batch number: 112870020A

	Acetone
6437206	91
Blank	89
LCS	89
MS	99
MSD	102
Limits:	54-147

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

Analysis Name: 22b Terphenyls by 8015B
Batch number: 112880013A

	n-Triacontane-d62
6437206	77
Blank	73
LCS	67
LCSD	69
Limits:	17-138

Analysis Name: 9b TPH by EPA 8015B Oil/Diesel
Batch number: 112900022A

	Chlorobenzene	Orthoterphenyl
6437206	82	83
Blank	79	79
LCS	86	91
LCSD	84	92
Limits:	28-152	52-131

Analysis Name: 18a Alcohols by 8015B
Batch number: 112900028A

	Acetone
6437193	72
6437194	67
6437195	67
6437196	69
6437197	66
6437199	65
6437200	82
6437201	62
Blank	83
LCS	82
MS	69
MSD	66
Limits:	42-138

Analysis Name: 19b Glycols by 8015B
Batch number: 112910030A

	Tetramethylene glycol
6437206	108
Blank	126
LCS	134
MS	124
MSD	129
Limits:	29-157

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 112920027A

	Chlorobenzene	Orthoterphenyl

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271284
Reported: 11/18/11 at 09:28 AM

Surrogate Quality Control

6437193	52	81
6437194	52	79
6437195	65	85
6437196	77	86
6437197	80	90
6437199	73	86
6437200	87	90
6437201	75	86
Blank	82	88
LCS	88	92
MS	77	86
MSD	80	90
Limits:	37-125	47-145

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112920028A

	n-Triacontane-d62
6437193	76
6437194	75
6437195	79
6437196	79
6437197	79
6437199	78
6437200	76
6437201	76
Blank	80
LCS	79
MS	79
MSD	79
Limits:	19-152

Analysis Name: 19a Glycols by 8015B
Batch number: 112980042A

	Tetramethylene glycol
6437193	90
6437194	88
6437195	85
6437196	88
6437197	87
6437201	87
Blank	100
LCS	99
MS	88
MSD	87
Limits:	29-137

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acct#13013 Cap#1271284 Sample# G437193-06

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dewonal EPA 8270	Other Instructions and Notes
SL-005-SA3-SB-4.5	10.13.11	1204	SOIL	NONE	2-Encores										X										
SL-005-SA3-SB-4.0-5.0	10.13.11	1209	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
SL-005-SA3-SB-8.0	10.13.11	1127	SOIL	NONE	2-Encores										X										
SL-005-SA3-SB-7.5-8.5	10.13.11	1134	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
SL-089-SA7-SB-4.0MS	10.13.11	1230	SOIL	NONE	6-Encores										X										MS/MSD
SL-089-SA7-SB-3.5-4.5MS	10.13.11	1235	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	MS/MSD
DUP09-SA7-QC-101311	10.13.11	1240	SOIL	NONE	2-Encores										X										
DUP09-SA7-QC-101311	10.13.11	1240	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
EB-SA7-SB-101311	10.13.11	1430	WATER	NONE	1 1L Amber														X						HGL ASTM II WATER-HA crew
SL-096-SA7-SB-2.5	10.12.11	1145	SOIL	NONE	2-Encores										X										sampled 10.12.11
TB-101311	10.13.11	0800	WATER	NONE	1-1 L Amber														X						
TB-101311	10.13.11	0800	SOIL	NONE	1-4 oz Jar														X						
TB-101311	10.13.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/13/2011 / 1630		Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9857 5154,5132,5143	Suzette Lehman 10/14/11 0915

SL-096-SA7-SB-2.5 encores were logged in as additional volume for LLI#6435696(DE267) per PH. NM 10/18/11

acct#13013 Gp#1271284 sample# G437193-06

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8016B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonol EPA 8270	Other Instructions and Notes
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X	EB collected for HA crew
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	1-500 mL poly		X				X	X	X													
EB-SA7-SB-101311	10.13.11	1400	WATER	HNO3	1-500 mL poly	X																				
EB-SA7-SB-101311	10.13.11	1400	WATER	NaOH	1-500 mL poly																X					
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	1-250 mL glass													X								
EB-SA7-SB-101311	10.13.11	1400	WATER	HCL	11-40 mL vials										X									X		
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	4-40 mL vials												X						X			

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/13/2011 / 1630		Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9857 5154,5132,5143	Suzette Luhman 10/14/11 0915

Nicole Maljovec

From: Hartman, Pamela [HartmanPM@cdm.com]
Sent: Thursday, October 13, 2011 2:42 PM
To: Nicole Maljovec
Subject: RE: SSFL COC 10/12/11- SL-096-SA7-SB-2.0-3.0 Soil empty encores

Yes, I found them! I need to really check those encores, you would think I would be able to feel the difference between an emtpy pouch and a full one!

I'll send them today!

Pamela Hartman
CDM
523 W 6th St #400
Los Angeles, CA 90014
Cell 714-900-0916
Direct 818-466-8007

From: Nicole Maljovec [nmaljovec@lancasterlabs.com]
Sent: Thursday, October 13, 2011 11:35 AM
To: Hartman, Pamela
Subject: FW: SSFL COC 10/12/11- SL-096-SA7-SB-2.0-3.0 Soil empty encores

Hi Pam,
The encores for SL-096-SA7-SB-2.5 were empty. Do you think the full encores are still in CA? if so, as long as we get them tomorrow, we'll still be able to prep within the holding time.

Thanks!
Nicole

-----Original Message-----
From: Hartman, Pamela [mailto:HartmanPM@cdm.com]
Sent: Wednesday, October 12, 2011 7:29 PM
To: Bloisa, Peggy; Burgesser, Todd; Cortes, Vidal A.; 'Laura Rainey'; SA Env Entry; TWallbom@dtsc.ca.gov; Nicole Maljovec; Zakowski, Cherie
Subject: SSFL COC 10/12/11

Subsurface sampling continued with two crews in SA3 and SA7. It was a hot one out there today!

Please see attached COC.

Thanks,

Pam

Pamela Hartman
CDM
523 W 6th St #400
Los Angeles, CA 90014
Cell 714-900-0916
Direct 818-466-8007

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

October 31, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/14/2011
Group Number: 1271287
SDG: DX150
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-005-SA3-SB-4.0-5.0 Soil	6437218
SL-005-SA3-SB-7.5-8.5 Soil	6437219
SL-089-SA7-SB-3.5-4.5 Soil	6437220
SL-089-SA7-SB-3.5-4.5MS Soil	6437221
SL-089-SA7-SB-3.5-4.5MSD Soil	6437222
DUP09-SA7-QC-101311 Soil	6437223
EB-SA7-SB-101311 Water	6437224

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-4.0-5.0

LLI Sample # SW 6437218
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:09

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5001 SDG#: DX150-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-005-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-4.0-5.0

LLI Sample # SW 6437218
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:09

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5001 SDG#: DX150-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0380 U	0.0380	1.06	1
11031	12378-PeCDD	40321-76-4	0.0330 JBQ	0.0324	5.30	1
11031	123478-HxCDD	39227-28-6	0.0237 U	0.0237	5.30	1
11031	123678-HxCDD	57653-85-7	0.0467 JBQ	0.0239	5.30	1
11031	123789-HxCDD	19408-74-3	0.0620 JBQ	0.0241	5.30	1
11031	1234678-HpCDD	35822-46-9	0.646 JB	0.0317	5.30	1
11031	OCDD	3268-87-9	4.27 JB	0.0337	10.6	1
11031	2378-TCDF	51207-31-9	0.0292 U	0.0292	1.06	1
11031	12378-PeCDF	57117-41-6	0.0490 JBQ	0.0169	5.30	1
11031	23478-PeCDF	57117-31-4	0.0572 JBQ	0.0164	5.30	1
11031	123478-HxCDF	70648-26-9	0.0405 JQ	0.0171	5.30	1
11031	123678-HxCDF	57117-44-9	0.0484 JBQ	0.0152	5.30	1
11031	123789-HxCDF	72918-21-9	0.0179 U	0.0179	5.30	1
11031	234678-HxCDF	60851-34-5	0.0386 JBQ	0.0149	5.30	1
11031	1234678-HpCDF	67562-39-4	0.207 JB	0.0149	5.30	1
11031	1234789-HpCDF	55673-89-7	0.0417 JB	0.0234	5.30	1
11031	OCDF	39001-02-0	0.392 JBQ	0.0494	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	68	25 - 164
13C12-12378-PeCDD	69	25 - 181
13C12-123478-HxCDD	74	32 - 141
13C12-123678-HxCDD	77	28 - 130
13C12-123789-HxCDD	74	28 - 130
13C12-1234678-HpCDD	77	23 - 140
13C12-OCDD	75	17 - 157
13C12-2378-TCDF	66	24 - 169
13C12-12378-PeCDF	70	24 - 185
13C12-23478-PeCDF	65	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	70	26 - 123
13C12-234678-HxCDF	69	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	80	28 - 143
13C12-1234789-HpCDF	62	26 - 138
13C12-OCDF	60	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-4.0-5.0

LLI Sample # SW 6437218
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:09

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5001 SDG#: DX150-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-4.0-5.0

LLI Sample # SW 6437218
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:09

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5001 SDG#: DX150-01

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 13:26	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-7.5-8.5

LLI Sample # SW 6437219
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 11:34

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5002 SDG#: DX150-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	16.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-005-SA3-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-7.5-8.5

LLI Sample # SW 6437219
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 11:34

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5002 SDG#: DX150-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0358 U	0.0358	1.16	1
11031	12378-PeCDD	40321-76-4	0.0472 JBQ	0.0304	5.80	1
11031	123478-HxCDD	39227-28-6	0.0240 JBQ	0.0197	5.80	1
11031	123678-HxCDD	57653-85-7	0.0412 JB	0.0200	5.80	1
11031	123789-HxCDD	19408-74-3	0.0215 JBQ	0.0205	5.80	1
11031	1234678-HpCDD	35822-46-9	0.266 JBQ	0.0244	5.80	1
11031	OCDD	3268-87-9	0.630 JB	0.0266	11.6	1
11031	2378-TCDF	51207-31-9	0.0285 JQ	0.0261	1.16	1
11031	12378-PeCDF	57117-41-6	0.0147 U	0.0147	5.80	1
11031	23478-PeCDF	57117-31-4	0.0682 JBQ	0.0149	5.80	1
11031	123478-HxCDF	70648-26-9	0.0469 J	0.0153	5.80	1
11031	123678-HxCDF	57117-44-9	0.0195 JBQ	0.0120	5.80	1
11031	123789-HxCDF	72918-21-9	0.0322 JBQ	0.0163	5.80	1
11031	234678-HxCDF	60851-34-5	0.0460 JBQ	0.0132	5.80	1
11031	1234678-HpCDF	67562-39-4	0.115 JBQ	0.0113	5.80	1
11031	1234789-HpCDF	55673-89-7	0.0359 JBQ	0.0198	5.80	1
11031	OCDF	39001-02-0	0.159 JBQ	0.0472	11.6	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	82	32 - 141
13C12-123678-HxCDD	82	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	80	23 - 140
13C12-OCDD	75	17 - 157
13C12-2378-TCDF	66	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	66	21 - 178
13C12-123478-HxCDF	61	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	70	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	86	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	55	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-7.5-8.5

LLI Sample # SW 6437219
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 11:34

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5002 SDG#: DX150-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-005-SA3-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-005-SA3-SB-7.5-8.5

LLI Sample # SW 6437219
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 11:34

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5002 SDG#: DX150-02

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 14:23	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437220
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-089-SA7-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437220
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0332 U	0.0332	1.12	1
11031	12378-PeCDD	40321-76-4	0.0421 JBQ	0.0282	5.60	1
11031	123478-HxCDD	39227-28-6	0.0699 JB	0.0303	5.60	1
11031	123678-HxCDD	57653-85-7	0.253 JB	0.0300	5.60	1
11031	123789-HxCDD	19408-74-3	0.119 JBQ	0.0283	5.60	1
11031	1234678-HpCDD	35822-46-9	4.64 JB	0.0430	5.60	1
11031	OCDD	3268-87-9	44.4 B	0.0426	11.2	1
11031	2378-TCDF	51207-31-9	0.0780 JQ	0.0325	1.12	1
11031	12378-PeCDF	57117-41-6	0.0524 JBQ	0.0194	5.60	1
11031	23478-PeCDF	57117-31-4	0.196 JBQ	0.0212	5.60	1
11031	123478-HxCDF	70648-26-9	0.328 J	0.0264	5.60	1
11031	123678-HxCDF	57117-44-9	0.0847 JB	0.0212	5.60	1
11031	123789-HxCDF	72918-21-9	0.0800 JB	0.0294	5.60	1
11031	234678-HxCDF	60851-34-5	0.146 JBQ	0.0220	5.60	1
11031	1234678-HpCDF	67562-39-4	0.936 JB	0.0189	5.60	1
11031	1234789-HpCDF	55673-89-7	0.0695 JBQ	0.0400	5.60	1
11031	OCDF	39001-02-0	2.37 JB	0.0520	11.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	84	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	81	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	82	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	60	26 - 152
13C12-123678-HxCDF	75	26 - 123
13C12-234678-HxCDF	70	28 - 136
13C12-123789-HxCDF	62	29 - 147
13C12-1234678-HpCDF	90	28 - 143
13C12-1234789-HpCDF	54	26 - 138
13C12-OCDF	49	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437220
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437220
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03BKG

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 15:19	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5MS Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437221
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-089-SA7-SB-3.5-4.5MS Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437221
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
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Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	23.1		0.0413	1.13	1
11031	12378-PeCDD	40321-76-4	114	B	0.0536	5.64	1
11031	123478-HxCDD	39227-28-6	111	B	0.0465	5.64	1
11031	123678-HxCDD	57653-85-7	104	B	0.0498	5.64	1
11031	123789-HxCDD	19408-74-3	113	B	0.0507	5.64	1
11031	1234678-HpCDD	35822-46-9	113	B	0.0695	5.64	1
11031	OCDD	3268-87-9	257	B	0.0707	11.3	1
11031	2378-TCDF	51207-31-9	22.2		0.0491	1.13	1
11031	12378-PeCDF	57117-41-6	112	B	0.0320	5.64	1
11031	23478-PeCDF	57117-31-4	107	B	0.0328	5.64	1
11031	123478-HxCDF	70648-26-9	109		0.0593	5.64	1
11031	123678-HxCDF	57117-44-9	109	B	0.0535	5.64	1
11031	123789-HxCDF	72918-21-9	111	B	0.0698	5.64	1
11031	234678-HxCDF	60851-34-5	107	B	0.0546	5.64	1
11031	1234678-HpCDF	67562-39-4	101	B	0.0464	5.64	1
11031	1234789-HpCDF	55673-89-7	108	B	0.0759	5.64	1
11031	OCDF	39001-02-0	220	B	0.0825	11.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	79	25 - 181
13C12-123478-HxCDD	90	32 - 141
13C12-123678-HxCDD	92	28 - 130
13C12-123789-HxCDD	89	28 - 130
13C12-1234678-HpCDD	88	23 - 140
13C12-OCDD	88	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	82	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	81	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	73	29 - 147
13C12-1234678-HpCDF	95	28 - 143
13C12-1234789-HpCDF	68	26 - 138
13C12-OCDF	68	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-089-SA7-SB-3.5-4.5MS Soil**
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437221
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5MS Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437221
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MS

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 16:16	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437222
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-089-SA7-SB-3.5-4.5MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437222
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	23.6		0.0478	1.09	1
11031	12378-PeCDD	40321-76-4	111	B	0.0447	5.44	1
11031	123478-HxCDD	39227-28-6	105	B	0.0562	5.44	1
11031	123678-HxCDD	57653-85-7	101	B	0.0582	5.44	1
11031	123789-HxCDD	19408-74-3	110	B	0.0568	5.44	1
11031	1234678-HpCDD	35822-46-9	111	B	0.0766	5.44	1
11031	OCDD	3268-87-9	251	B	0.0676	10.9	1
11031	2378-TCDF	51207-31-9	20.6		0.0490	1.09	1
11031	12378-PeCDF	57117-41-6	109	B	0.0336	5.44	1
11031	23478-PeCDF	57117-31-4	102	B	0.0327	5.44	1
11031	123478-HxCDF	70648-26-9	105		0.0710	5.44	1
11031	123678-HxCDF	57117-44-9	106	B	0.0628	5.44	1
11031	123789-HxCDF	72918-21-9	107	B	0.0774	5.44	1
11031	234678-HxCDF	60851-34-5	104	B	0.0622	5.44	1
11031	1234678-HpCDF	67562-39-4	97.6	B	0.0525	5.44	1
11031	1234789-HpCDF	55673-89-7	103	B	0.0947	5.44	1
11031	OCDF	39001-02-0	209	B	0.0802	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	71	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	82	32 - 141
13C12-123678-HxCDD	81	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	69	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	58	26 - 138
13C12-OCDF	52	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437222
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-089-SA7-SB-3.5-4.5MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-089-SA7-SB-3.5-4.5

LLI Sample # SW 6437222
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:35

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5003 SDG#: DX150-03MSD

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 17:12	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437223
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5004 SDG#: DX150-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437223
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5004 SDG#: DX150-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0366 J	0.0332	1.12	1
11031	12378-PeCDD	40321-76-4	0.0835 JBQ	0.0298	5.59	1
11031	123478-HxCDD	39227-28-6	0.0729 JBQ	0.0306	5.59	1
11031	123678-HxCDD	57653-85-7	0.188 JBQ	0.0309	5.59	1
11031	123789-HxCDD	19408-74-3	0.150 JBQ	0.0293	5.59	1
11031	1234678-HpCDD	35822-46-9	4.45 JB	0.0370	5.59	1
11031	OCDD	3268-87-9	39.5 B	0.0509	11.2	1
11031	2378-TCDF	51207-31-9	0.0570 JQ	0.0293	1.12	1
11031	12378-PeCDF	57117-41-6	0.0785 JBQ	0.0201	5.59	1
11031	23478-PeCDF	57117-31-4	0.128 JBQ	0.0202	5.59	1
11031	123478-HxCDF	70648-26-9	0.244 JQ	0.0247	5.59	1
11031	123678-HxCDF	57117-44-9	0.0971 JB	0.0226	5.59	1
11031	123789-HxCDF	72918-21-9	0.0436 JB	0.0268	5.59	1
11031	234678-HxCDF	60851-34-5	0.153 JBQ	0.0212	5.59	1
11031	1234678-HpCDF	67562-39-4	0.789 JB	0.0183	5.59	1
11031	1234789-HpCDF	55673-89-7	0.111 JB	0.0305	5.59	1
11031	OCDF	39001-02-0	2.24 JB	0.0450	11.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	79	32 - 141
13C12-123678-HxCDD	79	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	78	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	76	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	66	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	82	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	57	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437223
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5004 SDG#: DX150-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: DUP09-SA7-QC-101311 Soil
SSFL Area IV Collocated Soil Sampling
DUP09-SA7-QC-101311

LLI Sample # SW 6437223
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 12:40

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5004 SDG#: DX150-04FD

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 18:09	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-101311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437224
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5005 SDG#: DX150-05EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.335	U	0.335	2.00	1
10915	12378-PeCDD	40321-76-4	0.261	U	0.261	9.99	1
10915	123478-HxCDD	39227-28-6	0.227	U	0.227	9.99	1
10915	123678-HxCDD	57653-85-7	0.265	JQ	0.224	9.99	1
10915	123789-HxCDD	19408-74-3	0.225	U	0.225	9.99	1
10915	1234678-HpCDD	35822-46-9	3.09	JB	0.265	9.99	1
10915	OCDD	3268-87-9	6.33	JB	0.232	20.0	1
10915	2378-TCDF	51207-31-9	0.228	U	0.228	2.00	1
10915	12378-PeCDF	57117-41-6	0.147	U	0.147	9.99	1
10915	23478-PeCDF	57117-31-4	0.419	JBQ	0.128	9.99	1
10915	123478-HxCDF	70648-26-9	0.423	JB	0.143	9.99	1
10915	123678-HxCDF	57117-44-9	0.458	JBQ	0.145	9.99	1
10915	123789-HxCDF	72918-21-9	0.144	U	0.144	9.99	1
10915	234678-HxCDF	60851-34-5	0.416	JB	0.124	9.99	1
10915	1234678-HpCDF	67562-39-4	2.11	JB	0.110	9.99	1
10915	1234789-HpCDF	55673-89-7	0.292	JBQ	0.120	9.99	1
10915	OCDF	39001-02-0	1.70	JB	0.276	20.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	71	25 - 181
13C12-123478-HxCDD	72	32 - 141
13C12-123678-HxCDD	73	28 - 130
13C12-123789-HxCDD	71	28 - 130
13C12-1234678-HpCDD	75	23 - 140
13C12-OCDD	75	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	70	24 - 185
13C12-23478-PeCDF	73	21 - 178
13C12-123478-HxCDF	65	26 - 152
13C12-123678-HxCDF	65	26 - 123
13C12-234678-HxCDF	70	28 - 136
13C12-123789-HxCDF	71	29 - 147
13C12-1234678-HpCDF	68	28 - 143
13C12-1234789-HpCDF	73	26 - 138
13C12-OCDF	73	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **EB-SA7-SB-101311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101311

LLI Sample # WW 6437224
LLI Group # 1271287
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:00

Submitted: 10/14/2011 09:15
Reported: 10/31/2011 15:51

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5005 SDG#: DX150-05EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11292001	10/21/2011 22:11	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11292001	10/19/2011 06:40	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271287
Reported: 10/31/11 at 03:51 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11298162401B	Sample number(s): 6437218-6437223									
Moisture Content by 160.3						100		80-120		

Analysis Name	Blank Result		Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11292001	Sample number(s): 6437224									
2378-TCDD	0.360	U	0.360	2.00	pg/l	103		67-158		
12378-PeCDD	0.541	J	0.280	10.0	pg/l	100		70-142		
123478-HxCDD	0.226	U	0.226	10.0	pg/l	97		70-164		
123678-HxCDD	0.230	U	0.230	10.0	pg/l	94		76-134		
123789-HxCDD	0.623	J	0.222	10.0	pg/l	100		64-162		
1234678-HpCDD	2.75	J	0.205	10.0	pg/l	99		70-140		
OCDD	5.09	J	0.237	20.0	pg/l	98		78-144		
2378-TCDF	0.242	U	0.242	2.00	pg/l	90		75-158		
12378-PeCDF	0.414	J	0.162	10.0	pg/l	100		80-134		
23478-PeCDF	0.934	J	0.145	10.0	pg/l	90		68-160		
123478-HxCDF	0.536	J	0.145	10.0	pg/l	98		72-134		
123678-HxCDF	0.592	J	0.145	10.0	pg/l	97		84-130		
123789-HxCDF	0.484	J	0.164	10.0	pg/l	97		78-130		
234678-HxCDF	0.606	J	0.139	10.0	pg/l	94		70-156		
1234678-HpCDF	2.04	J	0.125	10.0	pg/l	90		82-122		
1234789-HpCDF	0.351	J	0.138	10.0	pg/l	96		78-138		
OCDF	1.52	J	0.243	20.0	pg/l	98		63-170		
Batch number: 11300001	Sample number(s): 6437218-6437223									
2378-TCDD	0.0422	U	0.0422	1.00	ng/kg	107		67-158		
12378-PeCDD	0.0804	J	0.0346	5.00	ng/kg	105		70-142		
123478-HxCDD	0.0345	J	0.0262	5.00	ng/kg	97		70-164		
123678-HxCDD	0.0438	J	0.0267	5.00	ng/kg	94		76-134		
123789-HxCDD	0.0427	J	0.0259	5.00	ng/kg	101		64-162		
1234678-HpCDD	0.295	J	0.0295	5.00	ng/kg	97		70-140		
OCDD	0.493	J	0.0380	10.0	ng/kg	96		78-144		
2378-TCDF	0.0353	U	0.0353	1.00	ng/kg	103		75-158		
12378-PeCDF	0.0458	J	0.0185	5.00	ng/kg	101		80-134		
23478-PeCDF	0.0744	J	0.0187	5.00	ng/kg	96		68-160		
123478-HxCDF	0.0234	U	0.0234	5.00	ng/kg	96		72-134		
123678-HxCDF	0.0512	J	0.0189	5.00	ng/kg	97		84-130		
123789-HxCDF	0.0857	J	0.0250	5.00	ng/kg	99		78-130		
234678-HxCDF	0.0555	J	0.0210	5.00	ng/kg	94		70-156		
1234678-HpCDF	0.128	J	0.0153	5.00	ng/kg	90		82-122		
1234789-HpCDF	0.0489	J	0.0291	5.00	ng/kg	96		78-138		
OCDF	0.188	J	0.0680	10.0	ng/kg	96		63-170		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271287
Reported: 10/31/11 at 03:51 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11298162401B	Sample number(s): 6437218-6437223					BKG: P437195			
Moisture Content by 160.3						11.8	11.7	1	20
Batch number: 11300001	Sample number(s): 6437218-6437223 UNSPK: 6437220								
2378-TCDD	103	109	67-158	2	25				
12378-PeCDD	101	102	70-142	3	25				
123478-HxCDD	99	96	70-164	6	25				
123678-HxCDD	92	93	76-134	3	25				
123789-HxCDD	101	101	64-162	3	25				
1234678-HpCDD	96	98	70-140	2	25				
OCDD	94	95	78-144	2	25				
2378-TCDF	98	94	75-158	8	25				
12378-PeCDF	99	100	80-134	2	25				
23478-PeCDF	95	94	68-160	5	25				
123478-HxCDF	97	96	72-134	4	25				
123678-HxCDF	96	97	84-130	3	25				
123789-HxCDF	99	99	78-130	4	25				
234678-HxCDF	95	96	70-156	3	25				
1234678-HpCDF	89	89	82-122	3	25				
1234789-HpCDF	95	94	78-138	5	25				
OCDF	96	95	63-170	5	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10b Dioxin/Furan by EPA 1613B
Batch number: 11292001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6437224	72	73	65	65	70	71
Blank	66	73	67	67	70	72
OPR	71	69	68	69	70	79
Limits:	25-164	21-178	26-152	26-123	28-136	29-147
	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6437224	68	73	73	71	72	73
Blank	75	82	89	71	73	75
OPR	74	76	77	69	72	75
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271287
Reported: 10/31/11 at 03:51 PM

Surrogate Quality Control

6437224	71	75	75	74	70
Blank	74	83	92	72	71
OPR	74	79	81	72	68
Limits:	28-130	23-140	17-157	24-169	24-185

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11300001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6437218	68	65	64	70	69	69
6437219	72	66	61	72	70	67
6437220	78	69	60	75	70	62
6437221	78	72	72	81	81	73
6437222	71	67	64	72	72	67
6437223	74	70	66	73	72	68
Blank	58	52	46	57	53	52
MS	78	72	72	81	81	73
MSD	71	67	64	72	72	67
OPR	63	57	56	65	59	59
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6437218	80	62	60	69	74	77
6437219	86	60	55	73	82	82
6437220	90	54	49	78	83	84
6437221	95	68	68	79	90	92
6437222	84	58	52	73	82	81
6437223	82	60	57	73	79	79
Blank	69	45	42	59	62	65
MS	95	68	68	79	90	92
MSD	84	58	52	73	82	81
OPR	80	53	51	65	72	72
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6437218	74	77	75	66	70
6437219	80	80	75	66	75
6437220	83	81	77	72	82
6437221	89	88	88	74	82
6437222	80	79	76	69	75
6437223	79	78	77	72	76
Blank	63	65	62	52	59
MS	89	88	88	74	82
MSD	80	79	76	69	75
OPR	71	74	70	56	65
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Qp# 1271257 Sample# 6437213-24

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS									SECONDARY FOR ALL LOCATIONS										Other Instructions and Notes
						*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	*TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
SL-005-SA3-SB-4.5	10.13.11	1204	SOIL	NONE	2-Encores										X										
SL-005-SA3-SB-4.0-5.0	10.13.11	1209	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
SL-005-SA3-SB-8.0	10.13.11	1127	SOIL	NONE	2-Encores										X										
SL-005-SA3-SB-7.5-8.5	10.13.11	1134	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
SL-089-SA7-SB-4.0MS	10.13.11	1230	SOIL	NONE	6-Encores										X										MS/MSD
SL-089-SA7-SB-3.5-4.5MS	10.13.11	1235	SOIL	NONE	4-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	MS/MSD
DUP09-SA7-QC-101311	10.13.11	1240	SOIL	NONE	2-Encores										X										
DUP09-SA7-QC-101311	10.13.11	1240	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
EB-SA7-SB-101311	10.13.11	1430	WATER	NONE	[illegible]														X						HGL ASTM II WATER-HA crew
SL-096-SA7-SB-2.5	10.12.11	1145	SOIL	NONE	2-Encores										X										sampled 10.12.11
TB-101311	10.13.11	0800	WATER	NONE	1-1 L Amber														X						
TB-101311	10.13.11	0800	SOIL	NONE	1-4 oz Jar														X						
TB-101311	10.13.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/13/2011 / 1630		Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8767 9857 5154,5132,5143	Suzette Lehman 10/14/11 0915

acct# 13013 Gp# 1271257 sample# 6437218-24

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetratin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS										SECONDARY FOR ALL LOCATIONS									Other Instructions and Notes
						*Metals EPA 6010/6020/B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alconols EPA 8015B	**Dowonal EPA 8270	
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X	EB collected for HA crew
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	1-500 mL poly		X				X	X	X													
EB-SA7-SB-101311	10.13.11	1400	WATER	HNO3	1-500 mL poly	X																				
EB-SA7-SB-101311	10.13.11	1400	WATER	NaOH	1-500 mL poly																X					
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	1-250 mL glass													X								
EB-SA7-SB-101311	10.13.11	1400	WATER	HCL	11-40 mL vials										X									X		
EB-SA7-SB-101311	10.13.11	1400	WATER	NONE	4-40 mL vials												X						X			

Relinquished by: (*Signature*) — **Date/Time** 10/13/2011 / 1630 — **Received for Laboratory by: (*Signature*)** — **Laboratory:** Lancaster Laboratories, Inc.

Received by: (*Signature*) — **Date/Time** — **Airbill No.(s)** 8767 9857 5154,5132,5143

Suzette Lehman 10/14/11 0915

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 09, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/15/2011
Group Number: 1271484
SDG: DE269
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-006-SA3-SB-4.0-5.0 Soil	6438618
SL-006-SA3-SB-9.0-10.0 Soil	6438619
SL-036-SA5DS-SB-4.0-5.0 Soil	6438620
SL-036-SA5DS-SB-9.0-10.0 Soil	6438621
SL-037-SA5DS-SB-4.0-5.0 Soil	6438622
SL-037-SA5DS-SB-9.0-10.0 Soil	6438623
SL-038-SA5DS-SB-4.0-5.0 Soil	6438624
SL-038-SA5DS-SB-9.0-10.0 Soil	6438625
SL-164-SA7-SB-0.5-1.5 Soil	6438626
EB-SA3-SB-101411 Water	6438627
TB-101411 Water	6438628
TB-101411 Sand	6438629

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438618
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6901 SDG#: DE269-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	180	U	180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180		1
04688	4-Chloroaniline	106-47-8	73	U	73	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	37	U	37	180		1
04688	4-Methylphenol	106-44-5	37	U	37	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	37	U	37	180		1
04688	4-Nitroaniline	100-01-6	73	U	73	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1
04688	Phenol	108-95-2	18	U	18	180		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438618
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6901 SDG#: DE269-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.73	U	0.73	1.8		1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.8		1
10138	Anthracene	120-12-7	0.37	U	0.37	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.73	U	0.73	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.73	U	0.73	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.73	U	0.73	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.73	U	0.73	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.73	U	0.73	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.6	U	6.6	20		1
10138	Di-n-butylphthalate	84-74-2	6.6	U	6.6	20		1
10138	Chrysene	218-01-9	0.37	U	0.37	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.73	U	0.73	1.8		1
10138	Diethylphthalate	84-66-2	6.6	U	6.6	20		1
10138	Dimethylphthalate	131-11-3	6.6	U	6.6	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.6	U	6.6	20		1
10138	Fluoranthene	206-44-0	0.73	U	0.73	1.8		1
10138	Fluorene	86-73-7	0.73	U	0.73	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	U	0.73	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.73	U	0.73	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.73	U	0.73	1.8		1
10138	Naphthalene	91-20-3	0.73	U	0.73	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.73	U	0.73	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.6	U	6.6	20		1
10138	Phenanthrene	85-01-8	0.73	U	0.73	1.8		1
10138	Pyrene	129-00-0	0.73	U	0.73	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9		1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438618
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6901 SDG#: DE269-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
	acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.							
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	21,500		6.48	21.4		1
07914	Boron	7440-42-8	0.385	U	0.385	5.35		1
01650	Calcium	7440-70-2	1,400		2.68	21.4		1
01654	Iron	7439-89-6	18,300		2.79	21.4		1
01656	Lithium	7439-93-2	21.2		0.66	2.1		1
01657	Magnesium	7439-95-4	3,340		0.471	10.7		1
06958	Manganese	7439-96-5	176		0.0385	0.535		1
10145	Phosphorus	7723-14-0	119		0.375	10.7		1
01662	Potassium	7440-09-7	2,230		12.0	53.0		1
01667	Sodium	7440-23-5	86.7	J	6.31	106		1
07968	Strontium	7440-24-6	20.1		0.0268	0.535		1
06969	Tin	7440-31-5	2.71	J	0.343	10.7		1
06970	Titanium	7440-32-6	1,080		0.0760	1.07		1
10146	Zirconium	7440-67-7	1.24	J	0.492	5.35		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0784	U	0.0784	0.212		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	4.53		0.0848	0.424		2
06126	Barium	7440-39-3	74.4		0.112	0.424		2
06127	Beryllium	7440-41-7	0.768		0.0170	0.106		2
06128	Cadmium	7440-43-9	0.0492	J	0.0466	0.106		2
06131	Chromium	7440-47-3	12.6		0.127	0.424		2
06132	Cobalt	7440-48-4	5.35		0.0212	0.106		2
06133	Copper	7440-50-8	4.36		0.0848	0.424		2
06135	Lead	7439-92-1	5.91		0.0108	0.212		2
06138	Molybdenum	7439-98-7	0.821		0.0530	0.106		2
06139	Nickel	7440-02-0	7.96		0.106	0.424		2
06141	Selenium	7782-49-2	0.131	J	0.0615	0.424		2
06142	Silver	7440-22-4	0.0498	J	0.0151	0.106		2
06145	Thallium	7440-28-0	0.258		0.0318	0.106		2
06148	Vanadium	7440-62-2	29.0		0.0233	0.106		2
06149	Zinc	7440-66-6	50.0		0.594	3.18		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0075	U	0.0075	0.106		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.7		0.86	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	33.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438618
LLI Group # 1271484
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Project Name: SSFL Area IV Collocated Soil Sampling

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6901 SDG#: DE269-01

CAT No.	Analysis Name		CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry		**SW-846 7199**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199		18540-29-9	0.77	J	0.22	1.1		1
		SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C		n.a.	7.03		0.0100	0.0100		1
Wet Chemistry		**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3		n.a.	9.3		0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	06:41	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/21/2011	12:59	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112910025A	10/21/2011	11:49	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112910025A	10/19/2011	12:00	Olivia I Santiago	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	10:52	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	10:52	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:04	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	07:54	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	07:54	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438618
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6901 SDG#: DE269-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011 07:54	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 07:54	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 07:54	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 07:54	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 09:56	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 12:01	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 14:50	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201A	10/20/2011 17:07	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438619
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6902 SDG#: DE269-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	570		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800		1
04688	Benzoic acid	65-85-0	190	U	190	570		1
04688	Benzyl alcohol	100-51-6	190	U	190	570		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190		1
04688	4-Chloroaniline	106-47-8	76	U	76	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190		1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570		1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	38	U	38	190		1
04688	4-Methylphenol	106-44-5	38	U	38	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	38	U	38	190		1
04688	4-Nitroaniline	100-01-6	76	U	76	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	570		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	570		1
04688	Phenol	108-95-2	19	U	19	190		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438619
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6902 SDG#: DE269-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190		1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9		1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9		1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20		1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20		1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9		1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20		1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	28		6.7	20		1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9		1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9		1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20		1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9		1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7		1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9		1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9		1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9		1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9		1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9		1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9		1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9		1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9		1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9		1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438619
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6902 SDG#: DE269-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
	acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.							
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	17,500		6.72	22.2		1
07914	Boron	7440-42-8	0.400	U	0.400	5.55		1
01650	Calcium	7440-70-2	1,170		2.78	22.2		1
01654	Iron	7439-89-6	18,700		2.90	22.2		1
01656	Lithium	7439-93-2	18.9		0.69	2.2		1
01657	Magnesium	7439-95-4	3,550		0.489	11.1		1
06958	Manganese	7439-96-5	168		0.0400	0.555		1
10145	Phosphorus	7723-14-0	96.4		0.389	11.1		1
01662	Potassium	7440-09-7	1,560		12.4	55.0		1
01667	Sodium	7440-23-5	145		6.54	110		1
07968	Strontium	7440-24-6	16.4		0.0278	0.555		1
06969	Tin	7440-31-5	2.92	J	0.355	11.1		1
06970	Titanium	7440-32-6	1,080		0.0788	1.11		1
10146	Zirconium	7440-67-7	1.23	J	0.511	5.55		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.161	J	0.0830	0.224		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.31		0.0897	0.449		2
06126	Barium	7440-39-3	74.3		0.119	0.449		2
06127	Beryllium	7440-41-7	1.07		0.0179	0.112		2
06128	Cadmium	7440-43-9	0.0493	U	0.0493	0.112		2
06131	Chromium	7440-47-3	15.3		0.135	0.449		2
06132	Cobalt	7440-48-4	5.76		0.0224	0.112		2
06133	Copper	7440-50-8	6.28		0.0897	0.449		2
06135	Lead	7439-92-1	7.77		0.0114	0.224		2
06138	Molybdenum	7439-98-7	0.773		0.0561	0.112		2
06139	Nickel	7440-02-0	7.43		0.112	0.449		2
06141	Selenium	7782-49-2	0.114	J	0.0650	0.449		2
06142	Silver	7440-22-4	0.0453	J	0.0159	0.112		2
06145	Thallium	7440-28-0	0.270		0.0336	0.112		2
06148	Vanadium	7440-62-2	38.3		0.0247	0.112		2
06149	Zinc	7440-66-6	59.2		0.628	3.36		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0078	U	0.0078	0.111		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.1		0.91	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.2	U	10.2	34.0		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438619
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6902 SDG#: DE269-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23 U	0.23	1.1		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.65	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	11.7	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 07:06	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/21/2011 14:38	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011 21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112910025A	10/21/2011 12:08	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112910025A	10/19/2011 12:00	Olivia I Santiago	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011 10:56	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011 10:56	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011 03:09	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438619
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6902 SDG#: DE269-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011 07:57	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 07:57	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 07:57	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 07:57	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 09:57	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 12:16	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 15:59	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201A	10/20/2011 17:28	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

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Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438620
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6903 SDG#: DE269-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	570		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800		1
04688	Benzoic acid	65-85-0	190	U	190	570		1
04688	Benzyl alcohol	100-51-6	190	U	190	570		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190		1
04688	4-Chloroaniline	106-47-8	76	U	76	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190		1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570		1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	38	U	38	190		1
04688	4-Methylphenol	106-44-5	38	U	38	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	38	U	38	190		1
04688	4-Nitroaniline	100-01-6	76	U	76	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	570		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	570		1
04688	Phenol	108-95-2	19	U	19	190		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438620
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6903 SDG#: DE269-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190		1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.76	U	0.76	1.9		1
10138	Acenaphthylene	208-96-8	0.38	U	0.38	1.9		1
10138	Anthracene	120-12-7	0.38	U	0.38	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.76	U	0.76	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.76	U	0.76	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.76	U	0.76	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.76	U	0.76	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.76	U	0.76	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.8	U	6.8	20		1
10138	Di-n-butylphthalate	84-74-2	6.8	U	6.8	20		1
10138	Chrysene	218-01-9	0.38	U	0.38	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.76	U	0.76	1.9		1
10138	Diethylphthalate	84-66-2	6.8	U	6.8	20		1
10138	Dimethylphthalate	131-11-3	6.8	U	6.8	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	9.3	J	6.8	20		1
10138	Fluoranthene	206-44-0	0.76	U	0.76	1.9		1
10138	Fluorene	86-73-7	0.76	U	0.76	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.76	U	0.76	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.76	U	0.76	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.76	U	0.76	1.9		1
10138	Naphthalene	91-20-3	0.76	U	0.76	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.76	U	0.76	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.8	U	6.8	20		1
10138	Phenanthrene	85-01-8	0.76	U	0.76	1.9		1
10138	Pyrene	129-00-0	0.76	U	0.76	1.9		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.8		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.8		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.8		1
10225	PCB-1016	12674-11-2	0.38	U	0.38	1.9		1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9		1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9		1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9		1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9		1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9		1
10225	PCB-1260	11096-82-5	0.45	U	0.45	1.9		1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9		1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	27,200		6.73	22.2		1
07914	Boron	7440-42-8	0.400	U	0.400	5.56		1
01650	Calcium	7440-70-2	7,650		2.78	22.2		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438620
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6903 SDG#: DE269-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	33,700	5.81	44.5		2
01656	Lithium	7439-93-2	32.7	0.69	2.2		1
01657	Magnesium	7439-95-4	8,690	0.489	11.1		1
06958	Manganese	7439-96-5	352	0.0400	0.556		1
10145	Phosphorus	7723-14-0	635	0.389	11.1		1
01662	Potassium	7440-09-7	3,350	12.7	56.2		1
01667	Sodium	7440-23-5	166	6.68	112		1
07968	Strontium	7440-24-6	59.3	0.0278	0.556		1
06969	Tin	7440-31-5	2.64 J	0.356	11.1		1
06970	Titanium	7440-32-6	1,650	0.0790	1.11		1
10146	Zirconium	7440-67-7	8.51	0.512	5.56		1
	SW-846 6020		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.276	0.0831	0.225		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	10.4	0.0898	0.449		2
06126	Barium	7440-39-3	112	0.119	0.449		2
06127	Beryllium	7440-41-7	1.04	0.0180	0.112		2
06128	Cadmium	7440-43-9	0.0551 J	0.0494	0.112		2
06131	Chromium	7440-47-3	28.3	0.135	0.449		2
06132	Cobalt	7440-48-4	13.0	0.0225	0.112		2
06133	Copper	7440-50-8	32.6	0.0898	0.449		2
06135	Lead	7439-92-1	17.3	0.0115	0.225		2
06138	Molybdenum	7439-98-7	0.376	0.0562	0.112		2
06139	Nickel	7440-02-0	20.8	0.112	0.449		2
06141	Selenium	7782-49-2	0.110 J	0.0651	0.449		2
06142	Silver	7440-22-4	0.0159 U	0.0159	0.112		2
06145	Thallium	7440-28-0	0.451	0.0337	0.112		2
06148	Vanadium	7440-62-2	74.7	0.0247	0.112		2
06149	Zinc	7440-66-6	101	0.629	3.37		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0194 J	0.0079	0.112		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.3	0.93	1.2		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.3 U	10.3	34.4		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23 U	0.23	1.2		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438620
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6903 SDG#: DE269-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.39	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	%	
11624	Moisture Content by 160.3	n.a.	12.7	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	07:31	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/21/2011	15:11	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	04:44	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	20:13	John P Hook	2
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	11:00	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	11:00	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:13	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	08:00	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	08:00	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011	08:00	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011	08:00	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011	08:00	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438620
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6903 SDG#: DE269-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:00	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:00	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:00	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 09:58	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 12:31	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 16:22	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201A	10/20/2011 17:43	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438621
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6904 SDG#: DE269-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	570		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800		1
04688	Benzoic acid	65-85-0	190	U	190	570		1
04688	Benzyl alcohol	100-51-6	190	U	190	570		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190		1
04688	4-Chloroaniline	106-47-8	76	U	76	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190		1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570		1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	38	U	38	190		1
04688	4-Methylphenol	106-44-5	38	U	38	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	38	U	38	190		1
04688	4-Nitroaniline	100-01-6	76	U	76	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	570		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	570		1
04688	Phenol	108-95-2	19	U	19	190		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438621
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6904 SDG#: DE269-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190		1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.76	U	0.76	1.9		1
10138	Acenaphthylene	208-96-8	0.38	U	0.38	1.9		1
10138	Anthracene	120-12-7	0.38	U	0.38	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.76	U	0.76	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.76	U	0.76	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.76	U	0.76	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.76	U	0.76	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.76	U	0.76	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.9	U	6.9	21		1
10138	Di-n-butylphthalate	84-74-2	6.9	U	6.9	21		1
10138	Chrysene	218-01-9	0.38	U	0.38	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.76	U	0.76	1.9		1
10138	Diethylphthalate	84-66-2	6.9	U	6.9	21		1
10138	Dimethylphthalate	131-11-3	6.9	U	6.9	21		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.9	U	6.9	21		1
10138	Fluoranthene	206-44-0	0.76	U	0.76	1.9		1
10138	Fluorene	86-73-7	0.76	U	0.76	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.76	U	0.76	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.76	U	0.76	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.76	U	0.76	1.9		1
10138	Naphthalene	91-20-3	0.76	U	0.76	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.76	U	0.76	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.9	U	6.9	21		1
10138	Phenanthrene	85-01-8	0.76	U	0.76	1.9		1
10138	Pyrene	129-00-0	0.76	U	0.76	1.9		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.2	U	1.2	3.8		1
10225	Aroclor 5442	12642-23-8	1.2	U	1.2	3.8		1
10225	Aroclor 5460	11126-42-4	1.2	U	1.2	3.8		1
10225	PCB-1016	12674-11-2	0.38	U	0.38	2.0		1
10225	PCB-1221	11104-28-2	0.38	U	0.38	2.0		1
10225	PCB-1232	11141-16-5	0.38	U	0.38	2.0		1
10225	PCB-1242	53469-21-9	0.38	U	0.38	2.0		1
10225	PCB-1248	12672-29-6	0.38	U	0.38	2.0		1
10225	PCB-1254	11097-69-1	0.38	U	0.38	2.0		1
10225	PCB-1260	11096-82-5	0.45	U	0.45	2.0		1
10225	PCB-1262	37324-23-5	0.38	U	0.38	2.0		1
10225	PCB-1268	11100-14-4	0.38	U	0.38	2.0		1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and surrogate recoveries are within the QC

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438621
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6904 SDG#: DE269-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
	acceptance limits. Since the hold time had expired prior to the second extraction all results are reported from the original extract. Similar results were obtained in both extracts.							
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both trials with the exception of:							
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	31,400		6.69	22.1		1
07914	Boron	7440-42-8	0.398	U	0.398	5.53		1
01650	Calcium	7440-70-2	18,600		2.77	22.1		1
01654	Iron	7439-89-6	32,600		5.78	44.3		2
01656	Lithium	7439-93-2	30.9		0.69	2.2		1
01657	Magnesium	7439-95-4	6,960		0.487	11.1		1
06958	Manganese	7439-96-5	366		0.0398	0.553		1
10145	Phosphorus	7723-14-0	192		0.387	11.1		1
01662	Potassium	7440-09-7	3,050		12.7	56.4		1
01667	Sodium	7440-23-5	130		6.71	113		1
07968	Strontium	7440-24-6	51.6		0.0277	0.553		1
06969	Tin	7440-31-5	2.81	J	0.354	11.1		1
06970	Titanium	7440-32-6	1,650		0.0786	1.11		1
10146	Zirconium	7440-67-7	5.63		0.509	5.53		1
		SW-846 6020	**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.201	J	0.0835	0.226		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	7.22		0.0903	0.451		2
06126	Barium	7440-39-3	150		0.120	0.451		2
06127	Beryllium	7440-41-7	0.929		0.0181	0.113		2
06128	Cadmium	7440-43-9	0.172		0.0496	0.113		2
06131	Chromium	7440-47-3	36.9		0.135	0.451		2
06132	Cobalt	7440-48-4	13.4		0.0226	0.113		2
06133	Copper	7440-50-8	16.7		0.0903	0.451		2
06135	Lead	7439-92-1	10.6		0.0115	0.226		2
06138	Molybdenum	7439-98-7	0.517		0.0564	0.113		2
06139	Nickel	7440-02-0	20.5		0.113	0.451		2
06141	Selenium	7782-49-2	0.175	J	0.0654	0.451		2
06142	Silver	7440-22-4	0.0257	J	0.0160	0.113		2
06145	Thallium	7440-28-0	0.398		0.0338	0.113		2
06148	Vanadium	7440-62-2	77.1		0.0248	0.113		2
06149	Zinc	7440-66-6	77.1		0.632	3.38		2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438621
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6904 SDG#: DE269-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 7471A**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0077 U	0.0077	0.109		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.9	0.93	1.2		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.4 U	10.4	34.5		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22 U	0.22	1.1		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.39	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3 "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.	n.a.	13.1	0.50	0.50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 07:56	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/21/2011 15:43	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011 21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112910025A	10/21/2011 12:46	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112910025A	10/19/2011 12:00	Olivia I Santiago	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011 20:17	John P Hook	2
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438621
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6904 SDG#: DE269-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011 11:04	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011 11:04	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011 03:17	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011 08:03	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:03	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:03	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:03	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:03	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 12:46	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 16:45	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201A	10/20/2011 17:57	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438622
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6905 SDG#: DE269-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	570		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800		1
04688	Benzoic acid	65-85-0	190	U	190	570		1
04688	Benzyl alcohol	100-51-6	190	U	190	570		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190		1
04688	4-Chloroaniline	106-47-8	76	U	76	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190		1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570		1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	38	U	38	190		1
04688	4-Methylphenol	106-44-5	38	U	38	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	38	U	38	190		1
04688	4-Nitroaniline	100-01-6	76	U	76	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	570		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	570		1
04688	Phenol	108-95-2	19	U	19	190		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438622
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6905 SDG#: DE269-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190		1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.76	U	0.76	1.9		1
10138	Acenaphthylene	208-96-8	0.38	U	0.38	1.9		1
10138	Anthracene	120-12-7	0.38	U	0.38	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.76	U	0.76	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.76	U	0.76	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.76	U	0.76	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.76	U	0.76	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.76	U	0.76	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.8	U	6.8	21		1
10138	Di-n-butylphthalate	84-74-2	6.8	U	6.8	21		1
10138	Chrysene	218-01-9	0.38	U	0.38	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.76	U	0.76	1.9		1
10138	Diethylphthalate	84-66-2	6.8	U	6.8	21		1
10138	Dimethylphthalate	131-11-3	6.8	U	6.8	21		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.8	U	6.8	21		1
10138	Fluoranthene	206-44-0	0.76	U	0.76	1.9		1
10138	Fluorene	86-73-7	0.76	U	0.76	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.76	U	0.76	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.76	U	0.76	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.76	U	0.76	1.9		1
10138	Naphthalene	91-20-3	0.76	U	0.76	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.76	U	0.76	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.8	U	6.8	21		1
10138	Phenanthrene	85-01-8	0.76	U	0.76	1.9		1
10138	Pyrene	129-00-0	0.76	U	0.76	1.9		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.2	U	1.2	3.8		1
10225	Aroclor 5442	12642-23-8	1.2	U	1.2	3.8		1
10225	Aroclor 5460	11126-42-4	1.2	U	1.2	3.8		1
10225	PCB-1016	12674-11-2	0.38	U	0.38	2.0		1
10225	PCB-1221	11104-28-2	0.38	U	0.38	2.0		1
10225	PCB-1232	11141-16-5	0.38	U	0.38	2.0		1
10225	PCB-1242	53469-21-9	0.38	U	0.38	2.0		1
10225	PCB-1248	12672-29-6	0.38	U	0.38	2.0		1
10225	PCB-1254	11097-69-1	0.38	U	0.38	2.0		1
10225	PCB-1260	11096-82-5	0.45	U	0.45	2.0		1
10225	PCB-1262	37324-23-5	0.38	U	0.38	2.0		1
10225	PCB-1268	11100-14-4	0.38	U	0.38	2.0		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	36,300		6.89	22.8		1
07914	Boron	7440-42-8	5.93		0.410	5.70		1
01650	Calcium	7440-70-2	14,200		2.85	22.8		1

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Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438622
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6905 SDG#: DE269-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	35,200		5.95	45.6		2
01656	Lithium	7439-93-2	31.4		0.71	2.3		1
01657	Magnesium	7439-95-4	8,110		0.501	11.4		1
06958	Manganese	7439-96-5	468		0.0410	0.570		1
10145	Phosphorus	7723-14-0	152		0.399	11.4		1
01662	Potassium	7440-09-7	3,700		12.7	56.4		1
01667	Sodium	7440-23-5	166		6.71	113		1
07968	Strontium	7440-24-6	66.2		0.0285	0.570		1
06969	Tin	7440-31-5	2.87	J	0.365	11.4		1
06970	Titanium	7440-32-6	1,620		0.0809	1.14		1
10146	Zirconium	7440-67-7	4.87	J	0.524	5.70		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.308		0.0835	0.226		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.69		0.0903	0.451		2
06126	Barium	7440-39-3	179		0.120	0.451		2
06127	Beryllium	7440-41-7	1.01		0.0181	0.113		2
06128	Cadmium	7440-43-9	0.155		0.0496	0.113		2
06131	Chromium	7440-47-3	38.9		0.135	0.451		2
06132	Cobalt	7440-48-4	12.8		0.0226	0.113		2
06133	Copper	7440-50-8	17.2		0.0903	0.451		2
06135	Lead	7439-92-1	11.3		0.0115	0.226		2
06138	Molybdenum	7439-98-7	0.524		0.0564	0.113		2
06139	Nickel	7440-02-0	23.4		0.113	0.451		2
06141	Selenium	7782-49-2	0.142	J	0.0654	0.451		2
06142	Silver	7440-22-4	0.0479	J	0.0160	0.113		2
06145	Thallium	7440-28-0	0.482		0.0338	0.113		2
06148	Vanadium	7440-62-2	77.7		0.0248	0.113		2
06149	Zinc	7440-66-6	84.3		0.632	3.38		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0079	U	0.0079	0.112		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.7		0.92	1.2		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.4	U	10.4	34.5		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.31	J	0.23	1.2		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438622
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6905 SDG#: DE269-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.29	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	13.1	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	08:21	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/22/2011	00:11	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	05:02	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	20:29	John P Hook	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	20:33	John P Hook	2
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	11:07	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	11:07	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:21	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	08:06	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	08:06	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011	08:06	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011	08:06	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438622
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6905 SDG#: DE269-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:06	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:06	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:06	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:04	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 13:32	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 17:08	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201A	10/20/2011 18:19	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438623
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6906 SDG#: DE269-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	580		1
04688	Benzidine	92-87-5	1,400	U	1,400	3,900		1
04688	Benzoic acid	65-85-0	190	U	190	580		1
04688	Benzyl alcohol	100-51-6	190	U	190	580		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	39	U	39	190		1
04688	4-Chloroaniline	106-47-8	78	U	78	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	39	U	39	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	120	U	120	390		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	39	U	39	190		1
04688	3,5-Dimethylphenol	108-68-9	39	U	39	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	580		1
04688	2,4-Dinitrophenol	51-28-5	390	U	390	1,200		1
04688	2,4-Dinitrotoluene	121-14-2	39	U	39	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	27	J	19	390		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	78	U	78	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	580		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	39	U	39	190		1
04688	4-Methylphenol	106-44-5	39	U	39	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	39	U	39	190		1
04688	4-Nitroaniline	100-01-6	78	U	78	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	580		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	580		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438623
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6906 SDG#: DE269-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	19	U	19	190		1
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	39	U	39	190		1
04688	2,4,6-Trichlorophenol	88-06-2	39	U	39	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.79	U	0.79	2.0		1
10138	Acenaphthylene	208-96-8	0.39	U	0.39	2.0		1
10138	Anthracene	120-12-7	0.39	U	0.39	2.0		1
10138	Benzo(a)anthracene	56-55-3	0.79	U	0.79	2.0		1
10138	Benzo(a)pyrene	50-32-8	0.79	U	0.79	2.0		1
10138	Benzo(b)fluoranthene	205-99-2	0.79	U	0.79	2.0		1
10138	Benzo(g,h,i)perylene	191-24-2	0.79	U	0.79	2.0		1
10138	Benzo(k)fluoranthene	207-08-9	0.79	U	0.79	2.0		1
10138	Butylbenzylphthalate	85-68-7	7.1	U	7.1	21		1
10138	Di-n-butylphthalate	84-74-2	7.1	U	7.1	21		1
10138	Chrysene	218-01-9	0.39	U	0.39	2.0		1
10138	Dibenz(a,h)anthracene	53-70-3	0.79	U	0.79	2.0		1
10138	Diethylphthalate	84-66-2	7.1	U	7.1	21		1
10138	Dimethylphthalate	131-11-3	7.1	U	7.1	21		1
10138	Fluoranthene	206-44-0	0.79	U	0.79	2.0		1
10138	Fluorene	86-73-7	0.79	U	0.79	2.0		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.79	U	0.79	2.0		1
10138	1-Methylnaphthalene	90-12-0	0.79	U	0.79	2.0		1
10138	2-Methylnaphthalene	91-57-6	0.79	U	0.79	2.0		1
10138	Naphthalene	91-20-3	0.79	U	0.79	2.0		1
10138	N-Nitrosodimethylamine	62-75-9	0.79	U	0.79	2.0		1
10138	Di-n-octylphthalate	117-84-0	7.1	U	7.1	21		1
10138	Phenanthrene	85-01-8	0.79	U	0.79	2.0		1
10138	Pyrene	129-00-0	0.79	U	0.79	2.0		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.2	U	1.2	3.9		1
10225	Aroclor 5442	12642-23-8	1.2	U	1.2	3.9		1
10225	Aroclor 5460	11126-42-4	1.2	U	1.2	3.9		1
10225	PCB-1016	12674-11-2	0.39	U	0.39	2.0		1
10225	PCB-1221	11104-28-2	0.39	U	0.39	2.0		1
10225	PCB-1232	11141-16-5	0.39	U	0.39	2.0		1
10225	PCB-1242	53469-21-9	0.39	U	0.39	2.0		1
10225	PCB-1248	12672-29-6	0.39	U	0.39	2.0		1
10225	PCB-1254	11097-69-1	0.39	U	0.39	2.0		1
10225	PCB-1260	11096-82-5	0.46	U	0.46	2.0		1
10225	PCB-1262	37324-23-5	0.39	U	0.39	2.0		1
10225	PCB-1268	11100-14-4	0.39	U	0.39	2.0		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	40,000		6.94	23.0		1
07914	Boron	7440-42-8	7.06		0.413	5.74		1
01650	Calcium	7440-70-2	8,540		2.87	23.0		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438623
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6906 SDG#: DE269-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	40,800		5.99	45.9		2
01656	Lithium	7439-93-2	37.5		0.71	2.3		1
01657	Magnesium	7439-95-4	10,200		0.505	11.5		1
06958	Manganese	7439-96-5	277		0.0413	0.574		1
10145	Phosphorus	7723-14-0	240		0.402	11.5		1
01662	Potassium	7440-09-7	4,230		13.0	57.4		1
01667	Sodium	7440-23-5	240		6.83	115		1
07968	Strontium	7440-24-6	65.8		0.0287	0.574		1
06969	Tin	7440-31-5	3.17	J	0.367	11.5		1
06970	Titanium	7440-32-6	1,570		0.0815	1.15		1
10146	Zirconium	7440-67-7	4.87	J	0.528	5.74		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.378		0.0858	0.232		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	8.96		0.0927	0.464		2
06126	Barium	7440-39-3	199		0.123	0.464		2
06127	Beryllium	7440-41-7	1.27		0.0185	0.116		2
06128	Cadmium	7440-43-9	0.0708	J	0.0510	0.116		2
06131	Chromium	7440-47-3	47.6		0.139	0.464		2
06132	Cobalt	7440-48-4	17.6		0.0232	0.116		2
06133	Copper	7440-50-8	25.8		0.0927	0.464		2
06135	Lead	7439-92-1	13.9		0.0118	0.232		2
06138	Molybdenum	7439-98-7	0.872		0.0579	0.116		2
06139	Nickel	7440-02-0	30.5		0.116	0.464		2
06141	Selenium	7782-49-2	0.172	J	0.0672	0.464		2
06142	Silver	7440-22-4	0.0232	J	0.0165	0.116		2
06145	Thallium	7440-28-0	0.594		0.0348	0.116		2
06148	Vanadium	7440-62-2	96.5		0.0255	0.116		2
06149	Zinc	7440-66-6	109		0.649	3.48		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0079	U	0.0079	0.112		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	11.8		0.96	1.2		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.6	U	10.6	35.5		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.24	U	0.24	1.2		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438623
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6906 SDG#: DE269-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.30	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	15.4	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	08:47	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/22/2011	00:44	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	05:21	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	20:37	John P Hook	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	20:42	John P Hook	2
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	11:11	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	11:11	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:27	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	08:09	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	08:09	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011	08:09	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011	08:09	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438623
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6906 SDG#: DE269-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:09	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:09	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:09	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:05	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 13:47	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 17:54	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201A	10/20/2011 18:26	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402A	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438624
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6907 SDG#: DE269-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	540		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	U	180	540		1
04688	Benzyl alcohol	100-51-6	180	U	180	540		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	72	U	72	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	72	U	72	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	540		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	540		1
04688	Phenol	108-95-2	18	U	18	180		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438624
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6907 SDG#: DE269-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19		1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8		1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19		1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	7.1	J	6.4	19		1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8		1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8		1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19		1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8		1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9		1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	23,200		6.48	21.4		1
07914	Boron	7440-42-8	0.385	U	0.385	5.35		1
01650	Calcium	7440-70-2	34,600		2.68	21.4		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438624
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6907 SDG#: DE269-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	27,200		2.79	21.4		1
01656	Lithium	7439-93-2	28.9		0.66	2.1		1
01657	Magnesium	7439-95-4	6,980		0.471	10.7		1
06958	Manganese	7439-96-5	328		0.0385	0.535		1
10145	Phosphorus	7723-14-0	573		0.375	10.7		1
01662	Potassium	7440-09-7	3,760		12.2	54.0		1
01667	Sodium	7440-23-5	135		6.43	108		1
07968	Strontium	7440-24-6	60.3		0.0268	0.535		1
06969	Tin	7440-31-5	2.50	J	0.342	10.7		1
06970	Titanium	7440-32-6	1,300		0.0760	1.07		1
10146	Zirconium	7440-67-7	4.26	J	0.492	5.35		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.188	J	0.0808	0.218		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	5.74		0.0873	0.437		2
06126	Barium	7440-39-3	116		0.116	0.437		2
06127	Beryllium	7440-41-7	0.688		0.0175	0.109		2
06128	Cadmium	7440-43-9	0.194		0.0480	0.109		2
06131	Chromium	7440-47-3	33.6		0.131	0.437		2
06132	Cobalt	7440-48-4	10.6		0.0218	0.109		2
06133	Copper	7440-50-8	13.1		0.0873	0.437		2
06135	Lead	7439-92-1	8.01		0.0111	0.218		2
06138	Molybdenum	7439-98-7	0.443		0.0546	0.109		2
06139	Nickel	7440-02-0	17.9		0.109	0.437		2
06141	Selenium	7782-49-2	0.199	J	0.0633	0.437		2
06142	Silver	7440-22-4	0.0220	J	0.0155	0.109		2
06145	Thallium	7440-28-0	0.305		0.0328	0.109		2
06148	Vanadium	7440-62-2	65.0		0.0240	0.109		2
06149	Zinc	7440-66-6	68.8		0.611	3.28		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0074	U	0.0074	0.105		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.6		0.87	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8	U	9.8	32.8		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.24	J	0.22	1.1		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438624
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6907 SDG#: DE269-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.42	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	8.4	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	09:12	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/22/2011	01:17	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	05:40	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	11:15	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	11:15	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:31	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	08:18	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	08:18	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011	08:18	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011	08:18	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438624
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6907 SDG#: DE269-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:18	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:18	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:18	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:06	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 14:02	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 18:17	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201A	10/20/2011 18:48	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402B	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438625
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6908 SDG#: DE269-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	540		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	U	180	540		1
04688	Benzyl alcohol	100-51-6	180	U	180	540		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	72	U	72	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	72	U	72	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	540		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	540		1
04688	Phenol	108-95-2	18	U	18	180		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438625
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6908 SDG#: DE269-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19		1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	19		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8		1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19		1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	9.0	J	6.5	19		1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8		1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8		1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19		1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8		1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8		1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.8		1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	23,500		6.46	21.4		1
07914	Boron	7440-42-8	0.385	U	0.385	5.34		1
01650	Calcium	7440-70-2	7,550		2.67	21.4		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438625
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6908 SDG#: DE269-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	27,100		2.79	21.4		1
01656	Lithium	7439-93-2	23.3		0.66	2.1		1
01657	Magnesium	7439-95-4	5,830		0.470	10.7		1
06958	Manganese	7439-96-5	363		0.0385	0.534		1
10145	Phosphorus	7723-14-0	440		0.374	10.7		1
01662	Potassium	7440-09-7	2,800		11.8	52.4		1
01667	Sodium	7440-23-5	120		6.23	105		1
07968	Strontium	7440-24-6	38.0		0.0267	0.534		1
06969	Tin	7440-31-5	2.73	J	0.342	10.7		1
06970	Titanium	7440-32-6	1,340		0.0758	1.07		1
10146	Zirconium	7440-67-7	6.16		0.491	5.34		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.221		0.0775	0.209		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.82		0.0838	0.419		2
06126	Barium	7440-39-3	117		0.111	0.419		2
06127	Beryllium	7440-41-7	0.794		0.0168	0.105		2
06128	Cadmium	7440-43-9	0.146		0.0461	0.105		2
06131	Chromium	7440-47-3	40.4		0.126	0.419		2
06132	Cobalt	7440-48-4	10.0		0.0209	0.105		2
06133	Copper	7440-50-8	10.6		0.0838	0.419		2
06135	Lead	7439-92-1	8.06		0.0107	0.209		2
06138	Molybdenum	7439-98-7	0.530		0.0524	0.105		2
06139	Nickel	7440-02-0	18.8		0.105	0.419		2
06141	Selenium	7782-49-2	0.122	J	0.0607	0.419		2
06142	Silver	7440-22-4	0.0413	J	0.0149	0.105		2
06145	Thallium	7440-28-0	0.303		0.0314	0.105		2
06148	Vanadium	7440-62-2	72.6		0.0230	0.105		2
06149	Zinc	7440-66-6	64.9		0.587	3.14		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073	U	0.0073	0.104		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.9		0.86	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.4		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23	J	0.21	1.1		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438625
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6908 SDG#: DE269-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.41	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	7.3	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011	09:37	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/22/2011	01:50	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011	21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011	21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	05:59	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011	11:19	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011	11:19	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011	03:36	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011	08:21	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011	08:21	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011	08:21	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011	08:21	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438625
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6908 SDG#: DE269-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:21	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:21	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:21	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:08	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201A	10/27/2011 14:17	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 18:40	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201A	10/20/2011 19:02	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201A	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402B	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/kg		ng/kg	ng/kg	ng/kg	
11622	N-Nitrosodimethylamine	62-75-9	16.9	U	16.9	33.8		1
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	510		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400		1
04688	Benzoic acid	65-85-0	170	U	170	510		1
04688	Benzyl alcohol	100-51-6	170	U	170	510		1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170		1
04688	Carbazole	86-74-8	17	U	17	170		1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170		1
04688	4-Chloroaniline	106-47-8	68	U	68	170		1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170		1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170		1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170		1
04688	2-Chlorophenol	95-57-8	17	U	17	170		1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170		1
04688	Dibenzofuran	132-64-9	17	U	17	170		1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170		1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170		1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170		1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340		1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170		1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170		1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	510		1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000		1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170		1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170		1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170		1
04688	Hexachlorobenzene	118-74-1	17	U	17	170		1
04688	Hexachlorobutadiene	87-68-3	68	U	68	170		1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	510		1
04688	Hexachloroethane	67-72-1	17	U	17	170		1
04688	Isophorone	78-59-1	17	U	17	170		1
04688	2-Methylphenol	95-48-7	34	U	34	170		1
04688	4-Methylphenol	106-44-5	34	U	34	170		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	17	U	17	170		1
04688	3-Nitroaniline	99-09-2	34	U	34	170		1
04688	4-Nitroaniline	100-01-6	68	U	68	170		1
04688	Nitrobenzene	98-95-3	17	U	17	170		1
04688	2-Nitrophenol	88-75-5	17	U	17	170		1
04688	4-Nitrophenol	100-02-7	170	U	170	510		1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170		1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170		1

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Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	170	U	170	510		1
04688	Phenol	108-95-2	17	J	17	170		1
04688	Tetralin	119-64-2	170	U	170	170		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170		1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170		1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.68	U	0.68	1.7		1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7		1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7		1
10138	Benzo(a)anthracene	56-55-3	0.68	U	0.68	1.7		1
10138	Benzo(a)pyrene	50-32-8	0.77	J	0.68	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	1.5	J	0.68	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	0.68	U	0.68	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	4.3		0.68	1.7		1
10138	Butylbenzylphthalate	85-68-7	19		6.1	18		1
10138	Di-n-butylphthalate	84-74-2	6.1	U	6.1	18		1
10138	Chrysene	218-01-9	1.3	J	0.34	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.68	U	0.68	1.7		1
10138	Diethylphthalate	84-66-2	6.1	U	6.1	18		1
10138	Dimethylphthalate	131-11-3	6.1	U	6.1	18		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	75		6.1	18		1
10138	Fluoranthene	206-44-0	2.1		0.68	1.7		1
10138	Fluorene	86-73-7	0.68	U	0.68	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.68	U	0.68	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7		1
10138	Naphthalene	91-20-3	0.68	U	0.68	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.1	U	6.1	18		1
10138	Phenanthrene	85-01-8	0.97	J	0.68	1.7		1
10138	Pyrene	129-00-0	1.6	J	0.68	1.7		1
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	4-Amino-2,6-Dinitrotoluene	19406-51-0	60	U	60	120	10000000	1
10132	2-Amino-4,6-Dinitrotoluene	35572-78-2	40	U	40	120	10000000	1
10132	2,6-Diamino-4-nitrotoluene	59229-75-3	80	U	80	240	10000000	1
10132	2,4-Diamino-6-nitrotoluene	6629-29-4	80	U	80	240	10000000	1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		ug/kg		ug/kg	ug/kg	ug/kg	
10132	1,3-Dinitrobenzene	99-65-0	40	U	40	120	10000000	1
10132	2,4-Dinitrotoluene	121-14-2	40	U	40	120	10000000	1
10132	2,6-Dinitrotoluene	606-20-2	40	U	40	120	10000000	1
10132	HMX	2691-41-0	100	U	100	300	10000000	1
10132	Nitrobenzene	98-95-3	40	U	40	120	10000000	1
10132	Nitroglycerin	55-63-0	800	U	800	2,400	10000000	1
10132	2-Nitrotoluene	88-72-2	80	U	80	120	10000000	1
10132	3-Nitrotoluene	99-08-1	100	U	100	120	10000000	1
10132	4-Nitrotoluene	99-99-0	80	U	80	120	10000000	1
10132	PETN	78-11-5	800	U	800	2,400	10000000	1
10132	RDX	121-82-4	50	U	50	120	10000000	1
10132	Tetryl	479-45-8	61	U	61	120	10000000	1
10132	1,3,5-Trinitrobenzene	99-35-4	40	U	40	120	10000000	1
10132	2,4,6-Trinitrotoluene	118-96-7	40	U	40	120	10000000	1
HPLC Organics	**SW-846 8315A**		ug/kg		ug/kg	ug/kg	ug/kg	
04173	20a Formaldehyde 8315A	50-00-0	610	U	610	1,500		1
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4		1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4		1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4		1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.7		1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.7		1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.7		1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.7		1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.7		1
10225	PCB-1254	11097-69-1	0.80	J	0.34	1.7		1
10225	PCB-1260	11096-82-5	0.40	U	0.40	1.7		1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.7		1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.7		1
GC Miscellaneous	**SW-846 8015B**		ug/kg		ug/kg	ug/kg	ug/kg	
10501	Ethanol	64-17-5	100	U	100	510		1
10501	Isopropanol	67-63-0	100	U	100	510		1

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Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Methanol	67-56-1	100	U	100	510		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.1	U	5.1	10		1
08283	Ethylene glycol	107-21-1	5.1	U	5.1	10		1
08283	Propylene glycol	57-55-6	5.1	U	5.1	10		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.5	U	1.5	3.6		1
10318	o-Terphenyl	84-15-1	1.5	U	1.5	3.6		1
10318	p-Terphenyl	92-94-4	1.5	U	1.5	3.6		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.41	U	0.41	1.2		1
10199	EFH (C15-C20)	n.a.	2.9		0.41	1.2		1
10199	EFH (C21-C30)	n.a.	19		0.41	1.2		1
10199	EFH (C30 - C40)	n.a.	28		0.41	1.2		1
10199	EFH (C8-C11)	n.a.	1.6		0.41	1.2		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	12,600		6.06	20.0		1
07914	Boron	7440-42-8	0.361	U	0.361	5.01		1
01650	Calcium	7440-70-2	3,260		2.50	20.0		1
01654	Iron	7439-89-6	21,200		2.61	20.0		1
01656	Lithium	7439-93-2	20.9		0.62	2.0		1
01657	Magnesium	7439-95-4	5,890		0.441	10.0		1
06958	Manganese	7439-96-5	293		0.0361	0.501		1
10145	Phosphorus	7723-14-0	376		0.350	10.0		1
01662	Potassium	7440-09-7	1,980		11.5	51.1		1
01667	Sodium	7440-23-5	73.0	J	6.08	102		1
07968	Strontium	7440-24-6	14.1		0.0250	0.501		1
06969	Tin	7440-31-5	2.45	J	0.320	10.0		1
06970	Titanium	7440-32-6	1,170		0.0711	1.00		1
10146	Zirconium	7440-67-7	0.552	J	0.461	5.01		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.117	J	0.0741	0.200		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	4.58		0.0801	0.401		2
06126	Barium	7440-39-3	88.2		0.106	0.401		2
06127	Beryllium	7440-41-7	0.573		0.0160	0.100		2
06128	Cadmium	7440-43-9	0.0866	J	0.0441	0.100		2

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06131	Chromium	7440-47-3	22.4	0.120	0.401		2
06132	Cobalt	7440-48-4	6.94	0.0200	0.100		2
06133	Copper	7440-50-8	10.1	0.0801	0.401		2
06135	Lead	7439-92-1	5.70	0.0102	0.200		2
06138	Molybdenum	7439-98-7	0.478	0.0501	0.100		2
06139	Nickel	7440-02-0	16.0	0.100	0.401		2
06141	Selenium	7782-49-2	0.201 J	0.0581	0.401		2
06142	Silver	7440-22-4	0.0314 J	0.0142	0.100		2
06145	Thallium	7440-28-0	0.249	0.0300	0.100		2
06148	Vanadium	7440-62-2	41.3	0.0220	0.100		2
06149	Zinc	7440-66-6	62.3	0.561	3.00		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0107 J	0.0070	0.0992		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.7	0.81	1.0		1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	3.5	0.81	1.5		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.2 U	9.2	30.6		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.27 J	0.20	1.0		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18 U	0.18	0.51		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.47	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	2.1	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11291SLG026	11/02/2011 01:36	Matthew S Woods	1
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 10:02	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11291SLE026	10/22/2011 02:23	Gregory J Drahovsky	1
11630	NDMA Soil Microwave	SW-846 3546	1	11291SLG026	10/19/2011 06:50	Katheryne V Sponheimer	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11291SLE026	10/18/2011 21:35	Karen L Beyer	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10132	15a Energetics by 8330A	SW-846 8330A	1	112880015A	10/21/2011 10:19	James H Place	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	112910003A	10/19/2011 22:25	James H Place	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011 06:18	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113010003A	10/28/2011 18:15	Sally L Appleyard	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	112910003A	10/18/2011 16:00	Wanda F Oswald	1
11137	Energetics Extraction	SW-846 8330	1	112880015A	10/17/2011 17:00	Kelli M Barto	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112900028A	10/18/2011 22:51	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/25/2011 23:29	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 21:15	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 06:26	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112900028A	10/18/2011 17:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	112905708002	10/25/2011 20:46	John P Hook	1
01650	Calcium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	112985708002	10/26/2011 11:22	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112985708002	10/26/2011 11:22	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112905708002	10/25/2011 03:47	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112901026001D	10/18/2011 08:24	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438626
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6909 SDG#: DE269-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06133	Copper	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112901026001C	10/18/2011 08:24	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112901026001B	10/18/2011 08:24	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112901026001A	10/18/2011 08:24	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112905711002	10/18/2011 10:09	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112905708002	10/17/2011 22:40	Annamaria Stipkovits	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	112985708002	10/25/2011 22:27	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112901026001	10/17/2011 22:42	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112905711002	10/18/2011 02:05	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 15:18	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11299621201B	10/27/2011 15:18	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621201B	10/20/2011 19:04	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201A	10/20/2011 19:09	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:16	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621201B	10/20/2011 06:30	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11299039402B	10/26/2011 15:00	Michele L Graham	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **EB-SA3-SB-101411 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA3-SB-101411

LLI Sample # WW 6438627
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6910 SDG#: DE269-10EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	1.20	0.492	0.984		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of 1.33 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11290WAA026	11/01/2011 18:19	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11290WAA026	10/17/2011 13:55	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101411 Water
SSFL Area IV Collocated Soil Sampling
TB-101411

LLI Sample # WW 6438628
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 08:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6911 SDG#: DE269-11TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	3.99	0.533	1.07		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of 1.33 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11290WAA026	11/01/2011 18:38	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11290WAA026	10/17/2011 13:55	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101411 Sand
SSFL Area IV Collocated Soil Sampling
TB-101411

LLI Sample # SW 6438629
LLI Group # 1271484
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 08:00

Submitted: 10/15/2011 09:45
Reported: 11/09/2011 11:09

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E6912 SDG#: DE269-12TB*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	16.7	U	16.7	33.3		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11291SLG026	11/02/2011 01:55	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11291SLG026	10/19/2011 06:50	Katheryne V Sponheimer	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11290WAA026	Sample number(s): 6438627-6438628									
N-Nitrosodimethylamine	1.33		0.500	1.00	ng/l	101	107	70-130	6	30
Batch number: 11291SLD026	Sample number(s): 6438618-6438626									
Aniline	170 U		170.	500	ug/kg	68		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	57		15-121		
Benzoic acid	170 U		170.	500	ug/kg	65		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	91		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	101		73-114		
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	97		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	47		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	94		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	90		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	91		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	94		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	96		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	97		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	94		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	89		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	89		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	89		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	43		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	99		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	97		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	119		83-120		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	47		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	26		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	101		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	102		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	97		75-117		
Hexachlorobenzene	17	U	17.	170	ug/kg	99		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	97		65-117		
Hexachlorocyclopentadiene	170 U		170.	500	ug/kg	86		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	87		61-109		
Isophorone	17	U	17.	170	ug/kg	94		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	95		66-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Methylphenol	33	U	33.	170	ug/kg	90		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	95		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	93		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	72		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	94		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	95		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	91		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	86		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	101		67-141		
Pentachlorophenol	170	U	170.	500	ug/kg	85		51-117		
Phenol	17	U	17.	170	ug/kg	95		58-112		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	93		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	96		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	99		78-111		
Batch number: 11291SLE026	Sample number(s): 6438618-6438626									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	94		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	91		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	96		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	99		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	95		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	96		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	105		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	99		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	87		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	92		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	103		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	107		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	93		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	96		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	106		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	102		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	101		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	105		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	89		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	88		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	91		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	102		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	98		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	94		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	89		72-119		
Batch number: 11291SLG026	Sample number(s): 6438626,6438629									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	105		70-130		
Batch number: 112880015A	Sample number(s): 6438626									
4-Amino-2,6-Dinitrotoluene	60	U	60.	120	ug/kg	109		80-120		
2-Amino-4,6-Dinitrotoluene	40	U	40.	120	ug/kg	106		80-120		
2,6-Diamino-4-nitrotoluene	80	U	80.	240	ug/kg	87	90	54-134	4	30
2,4-Diamino-6-nitrotoluene	80	U	80.	240	ug/kg	86	90	54-134	4	30
1,3-Dinitrobenzene	40	U	40.	120	ug/kg	110		51-171		
2,4-Dinitrotoluene	40	U	40.	120	ug/kg	101		72-135		
2,6-Dinitrotoluene	40	U	40.	120	ug/kg	106		80-120		
HMX	100		100.	300	ug/kg	93		74-130		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrobenzene	40 U	U	40.	120	ug/kg	106		80-120		
Nitroglycerin	800 U		800.	2,400	ug/kg	90		80-120		
2-Nitrotoluene	80 U	U	80.	120	ug/kg	101		78-128		
3-Nitrotoluene	100 U		100.	120	ug/kg	108		73-127		
4-Nitrotoluene	80 U	U	80.	120	ug/kg	101		80-120		
PETN	800 U		800.	2,400	ug/kg	104		80-120		
RDX	50 U	U	50.	120	ug/kg	102		75-131		
Tetryl	61 U	U	61.	120	ug/kg	96		70-168		
1,3,5-Trinitrobenzene	40 U	U	40.	120	ug/kg	104		77-137		
2,4,6-Trinitrotoluene	40 U	U	40.	120	ug/kg	108		80-120		
Batch number: 112910003A	Sample number(s): 6438626									
20a Formaldehyde 8315A	600 U		600.	1,500	ug/kg	91		80-126		
Batch number: 112910025A	Sample number(s): 6438618-6438619,6438621									
Aroclor 5432	1.0 U	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0 U	U	1.0	3.3	ug/kg	69	66	36-106	4	30
Aroclor 5460	1.0 U	U	1.0	3.3	ug/kg					
PCB-1016	0.33 U	U	0.33	1.7	ug/kg	67*		72-120		
PCB-1221	0.33 U	U	0.33	1.7	ug/kg					
PCB-1232	0.33 U	U	0.33	1.7	ug/kg					
PCB-1242	0.33 U	U	0.33	1.7	ug/kg					
PCB-1248	0.33 U	U	0.33	1.7	ug/kg					
PCB-1254	0.33 U	U	0.33	1.7	ug/kg					
PCB-1260	0.39 U	U	0.39	1.7	ug/kg	85		65-137		
PCB-1262	0.33 U	U	0.33	1.7	ug/kg					
PCB-1268	0.33 U	U	0.33	1.7	ug/kg					
Batch number: 113010003A	Sample number(s): 6438620,6438622-6438626									
Aroclor 5432	1.0 U	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0 U	U	1.0	3.3	ug/kg	70	68	36-106	3	30
Aroclor 5460	1.0 U	U	1.0	3.3	ug/kg					
PCB-1016	0.33 U	U	0.33	1.7	ug/kg	80		72-120		
PCB-1221	0.33 U	U	0.33	1.7	ug/kg					
PCB-1232	0.33 U	U	0.33	1.7	ug/kg					
PCB-1242	0.33 U	U	0.33	1.7	ug/kg					
PCB-1248	0.33 U	U	0.33	1.7	ug/kg					
PCB-1254	0.33 U	U	0.33	1.7	ug/kg					
PCB-1260	0.39 U	U	0.39	1.7	ug/kg	95		65-137		
PCB-1262	0.33 U	U	0.33	1.7	ug/kg					
PCB-1268	0.33 U	U	0.33	1.7	ug/kg					
Batch number: 112900028A	Sample number(s): 6438626									
Ethanol	100 U		100.	500	ug/kg	89		71-129		
Isopropanol	100 U		100.	500	ug/kg	86		75-125		
Methanol	100 U		100.	500	ug/kg	90		68-129		
Batch number: 112980042A	Sample number(s): 6438626									
Diethylene glycol	5.0 U	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0 U	U	5.0	10	mg/kg	106		53-149		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Propylene glycol	5.0	U	5.0	10	mg/kg	99		67-131		
Batch number: 112920027A	Sample number(s): 6438626									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	94		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	96		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	97		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	85		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	83		49-107		
Batch number: 112920028A	Sample number(s): 6438626									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	100		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	105		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		69-109		
Batch number: 112901026001A	Sample number(s): 6438618-6438626									
Antimony	0.0740	U	0.0740	0.200	mg/kg	134		40-227		
Arsenic	0.0800	U	0.0800	0.400	mg/kg	101		83-111		
Beryllium	0.0160	U	0.0160	0.100	mg/kg	102		84-112		
Cadmium	0.0440	U	0.0440	0.100	mg/kg	105		83-111		
Chromium	0.120	U	0.120	0.400	mg/kg	111		77-123		
Cobalt	0.0200	U	0.0200	0.100	mg/kg	108		85-114		
Copper	0.0800	U	0.0800	0.400	mg/kg	104		81-110		
Lead	0.0102	U	0.0102	0.200	mg/kg	104		84-112		
Nickel	0.100	U	0.100	0.400	mg/kg	104		81-110		
Silver	0.0142	U	0.0142	0.100	mg/kg	102		83-112		
Thallium	0.0300	U	0.0300	0.100	mg/kg	103		82-112		
Vanadium	0.0220	U	0.0220	0.100	mg/kg	103		76-110		
Zinc	0.560	U	0.560	3.00	mg/kg	101		82-110		
Batch number: 112901026001B	Sample number(s): 6438618-6438626									
Selenium	0.0580	U	0.0580	0.400	mg/kg	102		79-110		
Batch number: 112901026001C	Sample number(s): 6438618-6438626									
Molybdenum	0.0500	U	0.0500	0.100	mg/kg	105		80-110		
Batch number: 112901026001D	Sample number(s): 6438618-6438626									
Barium	0.106	U	0.106	0.400	mg/kg	102		83-110		
Batch number: 112905708002	Sample number(s): 6438618-6438626									
Aluminum	6.05	U	6.05	20.0	mg/kg	99		40-127		
Boron	0.360	U	0.360	5.00	mg/kg	103		83-110		
Calcium	6.41	J	2.50	20.0	mg/kg	106		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	101		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	102		80-120		
Magnesium	0.440	U	0.440	10.0	mg/kg	102		63-116		
Manganese	0.0360	U	0.0360	0.500	mg/kg	104		85-116		
Phosphorus	1.73	J	0.350	10.0	mg/kg	107		80-120		
Strontium	0.0510	J	0.0250	0.500	mg/kg	107		84-110		
Tin	1.44	J	0.320	10.0	mg/kg	104		86-120		
Titanium	0.0710	U	0.0710	1.00	mg/kg	93		80-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	104		80-120		
Batch number: 112905711002	Sample number(s): 6438618-6438626									
Mercury	0.0070	U	0.0070	0.100	mg/kg	105		83-119		
Batch number: 112985708002	Sample number(s): 6438618-6438626									
Potassium	11.3	U	11.3	50.0	mg/kg	100		71-110		
Sodium	5.95	U	5.95	100	mg/kg	101		76-110		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11292243201A	Sample number(s): 6438618-6438626									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11293102201B	Sample number(s): 6438626									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	85		80-120		
Batch number: 11293621201B	Sample number(s): 6438618-6438626									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	108		85-115		
Batch number: 11299621201A	Sample number(s): 6438618-6438625									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11299621201B	Sample number(s): 6438626									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
11a Anions by 300.0 - Nitrate	0.80	U	0.80	1.5	mg/kg	106		90-110		
Batch number: 11299039402A	Sample number(s): 6438618-6438623									
17a pH by 9045C						100		95-105		
Batch number: 11299039402B	Sample number(s): 6438624-6438626									
17a pH by 9045C						100		95-105		
Batch number: 11298162402A	Sample number(s): 6438618-6438626,6438629									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11291SLD026	Sample number(s): 6438618-6438626 UNSPK: P439922								
Aniline	71	71	18-116	0	30				
Benzidine	46	46	35-141	1	30				
Benzoic acid	58	26	10-173	75*	30				
Benzyl alcohol	94	96	67-115	3	30				
4-Bromophenyl-phenylether	100	100	67-129	1	30				
Carbazole	98	97	64-120	0	30				
4-Chloro-3-methylphenol	99	98	62-122	0	30				
4-Chloroaniline	57	64	13-107	13	30				
bis(2-Chloroethoxy)methane	95	96	75-104	2	30				
bis(2-Chloroethyl)ether	90	92	60-116	2	30				
bis(2-Chloroisopropyl)ether	91	91	55-142	1	30				
2-Chloronaphthalene	67	93	50-141	34*	30				
2-Chlorophenol	97	99	73-121	3	30				
4-Chlorophenyl-phenylether	99	99	80-109	1	30				
Dibenzofuran	95	95	71-112	1	30				
1,2-Dichlorobenzene	88	88	66-108	1	30				
1,3-Dichlorobenzene	88	88	63-109	0	30				
1,4-Dichlorobenzene	88	88	58-108	1	30				
3,3'-Dichlorobenzidine	47	52	28-109	11	30				
2,4-Dichlorophenol	102	101	66-123	1	30				

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Quality Control Summary

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Reported: 11/09/11 at 11:09 AM

Sample Matrix Quality Control

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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
2,4-Dimethylphenol	99	98	68-118	0	30				
3,5-Dimethylphenol	111	118	71-127	8	30				
4,6-Dinitro-2-methylphenol	63	18	11-126	112*	30				
2,4-Dinitrophenol	33	12*	20-143	93*	30				
2,4-Dinitrotoluene	98	98	56-129	1	30				
2,6-Dinitrotoluene	101	102	69-123	2	30				
1,2-Diphenylhydrazine	100	100	71-129	1	30				
bis(2-Ethylhexyl)phthalate	98	97	63-122	1	30				
Hexachlorobenzene	98	98	77-114	1	30				
Hexachlorobutadiene	95	96	62-120	2	30				
Hexachlorocyclopentadiene	80	80	10-153	2	30				
Hexachloroethane	87	85	57-109	1	30				
Isophorone	95	95	73-102	1	30				
2-Methylphenol	97	98	75-111	2	30				
4-Methylphenol	93	94	59-123	2	30				
2-Nitroaniline	99	100	67-125	2	30				
3-Nitroaniline	95	95	59-122	1	30				
4-Nitroaniline	76	75	41-109	0	30				
Nitrobenzene	94	95	57-125	2	30				
2-Nitrophenol	95	96	56-127	2	30				
4-Nitrophenol	93	89	37-129	3	30				
N-Nitroso-di-n-propylamine	87	88	60-116	2	30				
N-Nitrosodiphenylamine	101	100	71-122	0	30				
Pentachlorophenol	89	64	28-127	32*	30				
Phenol	94	98	58-126	5	30				
1,2,4-Trichlorobenzene	93	94	72-115	2	30				
2,4,5-Trichlorophenol	100	99	58-129	0	30				
2,4,6-Trichlorophenol	99	99	56-134	1	30				
Batch number: 11291SLE026	Sample number(s): 6438618-6438626 UNSPK: 6438618								
Acenaphthene	99	97	63-105	3	30				
Acenaphthylene	93	93	67-114	0	30				
Anthracene	100	100	73-115	1	30				
Benzo(a)anthracene	105	103	59-128	2	30				
Benzo(a)pyrene	97	96	58-142	0	30				
Benzo(b)fluoranthene	102	103	54-163	1	30				
Benzo(g,h,i)perylene	110	64	33-141	53*	30				
Benzo(k)fluoranthene	97	102	57-153	4	30				
Butylbenzylphthalate	100	97	57-173	3	30				
Di-n-butylphthalate	97	94	65-148	3	30				
Chrysene	107	105	67-123	2	30				
Dibenz(a,h)anthracene	112	74	22-133	41*	30				
Diethylphthalate	96	95	70-136	1	30				
Dimethylphthalate	101	102	74-118	0	30				
Bis(2-Ethylhexyl)phthalate	110	110	39-167	0	30				
Fluoranthene	109	106	51-149	3	30				
Fluorene	101	101	66-122	1	30				
Indeno(1,2,3-cd)pyrene	110	69	21-143	47*	30				
1-Methylnaphthalene	89	91	72-123	1	30				
2-Methylnaphthalene	89	90	64-103	1	30				
Naphthalene	90	92	61-102	1	30				
N-Nitrosodimethylamine	105	105	48-113	0	30				
Di-n-octylphthalate	90	87	40-192	4	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Phenanthrene	98	96	62-122	2	30				
Pyrene	93	90	51-131	4	30				
Batch number: 11291SLG026	Sample number(s): 6438626,6438629 UNSPK: P437195								
N-Nitrosodimethylamine	97	95	70-130	2	30				
Batch number: 112880015A	Sample number(s): 6438626 UNSPK: P437195								
4-Amino-2,6-Dinitrotoluene	107	110	80-127	3	50				
2-Amino-4,6-Dinitrotoluene	104	107	80-137	2	50				
1,3-Dinitrobenzene	108	110	38-166	2	50				
2,4-Dinitrotoluene	98	102	80-131	3	50				
2,6-Dinitrotoluene	104	108	80-127	3	50				
HMX	92	93	63-128	1	50				
Nitrobenzene	102	105	80-125	4	50				
Nitroglycerin	99	99	80-120	0	50				
2-Nitrotoluene	99	103	80-122	4	50				
3-Nitrotoluene	105	109	72-119	3	50				
4-Nitrotoluene	99	102	80-125	3	50				
PETN	106	108	80-121	2	50				
RDX	98	99	75-129	1	50				
Tetryl	89	86	55-174	4	50				
1,3,5-Trinitrobenzene	99	101	82-126	2	50				
2,4,6-Trinitrotoluene	104	107	82-130	3	50				
Batch number: 112910003A	Sample number(s): 6438626 UNSPK: P437195								
20a Formaldehyde 8315A	98	104	80-120	6	50				
Batch number: 112910025A	Sample number(s): 6438618-6438619,6438621 UNSPK: P437195								
PCB-1016	65	65	29-146	0	50				
PCB-1260	79	84	39-149	7	50				
Batch number: 113010003A	Sample number(s): 6438620,6438622-6438626 UNSPK: P437195								
PCB-1016	80	81	29-146	1	50				
PCB-1260	86	87	39-149	1	50				
Batch number: 112900028A	Sample number(s): 6438626 UNSPK: P437195								
Ethanol	75	73	48-130	2	20				
Isopropanol	72	71	12-149	1	20				
Methanol	75	72	43-138	3	20				
Batch number: 112980042A	Sample number(s): 6438626 UNSPK: P437195								
Diethylene glycol	47*	48*	59-109	3	20				
Ethylene glycol	75	75	63-107	1	20				
Propylene glycol	77	78	63-107	0	20				
Batch number: 112920027A	Sample number(s): 6438626 UNSPK: P437195								
EFH (C12-C14)	82	89	49-123	8	20				
EFH (C15-C20)	81	98	49-123	13	20				
EFH (C21-C30)	102	117	49-123	7	20				
EFH (C30 - C40)	110	138*	49-123	8	20				
EFH (C8-C11)	0*	5*	49-123	10	20				
Batch number: 112920028A	Sample number(s): 6438626 UNSPK: P437195								

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
m-Terphenyl	97	98	75-125	2	20				
o-Terphenyl	102	103	75-125	1	20				
p-Terphenyl	95	97	75-125	2	20				
Batch number: 112901026001A	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Antimony	39*	43*	75-125	8	20	0.135 J	0.126 J	7 (1)	20
Arsenic	101	108	75-125	3	20	3.78	3.79	0	20
Beryllium	91	102	75-125	8	20	0.484	0.538	11 (1)	20
Cadmium	111	108	75-125	2	20	0.0714 J	0.0880 J	21* (1)	20
Chromium	95	120	75-125	9	20	17.3	20.5	17	20
Cobalt	105	108	75-125	3	20	5.76	6.25	8	20
Copper	107	116	75-125	5	20	8.35	10.0	18	20
Lead	119	146*	75-125	10	20	4.54	5.21	14	20
Nickel	112	117	75-125	3	20	11.5	13.8	18	20
Silver	103	110	75-125	7	20	0.0337 J	0.0284 J	17 (1)	20
Thallium	104	122	75-125	11	20	0.244	0.284	15 (1)	20
Vanadium	99	137*	75-125	8	20	34.2	40.9	18	20
Zinc	111 (2)	145 (2)	75-125	5	20	55.0	64.0	15	20
Batch number: 112901026001B	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Selenium	103	118	75-125	13	20	0.162 J	0.153 J	6 (1)	20
Batch number: 112901026001C	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Molybdenum	104	111	75-125	7	20	0.266	0.289	8 (1)	20
Batch number: 112901026001D	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Barium	138 (2)	141 (2)	75-125	0	20	85.0	93.7	10	20
Batch number: 112905708002	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Aluminum	2054 (2)	1557 (2)	75-125	6	20	12,500	12,700	2	20
Boron	103	102	84-115	0	20	1.03 J	0.806 J	25* (1)	20
Calcium	156 (2)	118 (2)	75-125	4	20	3,410	3,450	1	20
Iron	2305 (2)	15740 (2)	75-125	45*	20	20,200	20,700	2	20
Lithium	101	98	82-114	2	20	27.6	28.3	3	20
Magnesium	398 (2)	211 (2)	75-125	5	20	6,060	6,060	0	20
Manganese	45 (2)	74 (2)	75-125	4	20	299	276	8	20
Phosphorus	86 (2)	91 (2)	75-125	1	20	435	405	7	20
Strontium	100	98	75-115	1	20	12.6	12.1	4	20
Tin	90	89	80-110	0	20	2.61 J	2.45 J	6 (1)	20
Titanium	307 (2)	281 (2)	75-125	2	20	1,210	1,180	2	20
Zirconium	97	97	81-110	1	20	0.897 J	1.34 J	40* (1)	20
Batch number: 112905711002	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Mercury	101	99	65-135	4	20	0.0068 J	0.0069 U	200* (1)	20
Batch number: 112985708002	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
Potassium	128*	119	75-125	3	20	2,360	2,410	2	20
Sodium	99	97	75-125	4	20	118	115	3 (1)	20
Batch number: 11292243201A	Sample number(s): 6438618-6438626 UNSPK: P437195 BKG: P437195								
3a Cr VI by EPA 7199	89		75-125			0.20 U	1.3	200* (1)	20

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc		DUP Conc		DUP RPD	Dup RPD Max
Batch number: 11293102201B	Sample number(s): 6438626 UNSPK: P437195 BKG: P437195										
16a Cyanide by 9012B	99		75-125			0.18	U	0.18	U	0 (1)	20
Batch number: 11293621201B	Sample number(s): 6438618-6438626 UNSPK: 6438618 BKG: 6438618										
7a Perchlorate EPA 314.0	109		80-120			9.0	U	9.0	U	0 (1)	15
Batch number: 11299621201A	Sample number(s): 6438618-6438625 UNSPK: P435696 BKG: P435696										
11a Anions by 300.0 - Fluoride	38*		80-120			1.5		1.5		2 (1)	20
Batch number: 11299621201B	Sample number(s): 6438626 UNSPK: P439922 BKG: P439922										
11a Anions by 300.0 - Fluoride	62*		80-120			4.3		4.4		1 (1)	20
11a Anions by 300.0 - Nitrate	102		80-120			1.3	J	1.4	J	6 (1)	20
Batch number: 11299039402A	Sample number(s): 6438618-6438623 BKG: P435690										
17a pH by 9045C						8.55		8.53		0	3
Batch number: 11299039402B	Sample number(s): 6438624-6438626 BKG: P437195										
17a pH by 9045C						7.86		7.90		1	3
Batch number: 11298162402A	Sample number(s): 6438618-6438626,6438629 BKG: 6438623										
Moisture Content by 160.3						15.4		15.6		1	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 21b. NDMA in Water
Batch number: 11290WAA026

	N-Nitrosodimethylamine-d6
6438627	117
6438628	149
Blank	102
LCS	101
LCSD	98
Limits:	50-150

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11291SLD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6438618	86	92	80	87	87	84
6438619	89	94	82	91	90	84
6438620	85	90	77	86	83	85
6438621	87	92	70	87	84	82
6438622	82	87	70	83	81	82

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Surrogate Quality Control

6438623	86	91	69	87	84	85
6438624	89	96	72	90	89	86
6438625	90	96	62	87	88	87
6438626	93	96	79	88	89	84
Blank	88	93	84	88	88	84
LCS	89	93	86	88	90	83
MS	91	94	89	89	90	82
MSD	91	95	86	89	89	83
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11291SLE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6438618	108	92	89
6438619	104	90	88
6438620	101	87	86
6438621	97	83	82
6438622	105	90	96
6438623	105	88	96
6438624	103	90	95
6438625	111	94	97
6438626	114	87	86
Blank	103	89	91
LCS	107	92	84
MS	107	91	87
MSD	109	92	85
Limits:	40-130	45-130	45-135

Analysis Name: 21a NDMA by 1625C
Batch number: 11291SLG026

	N-Nitrosodimethylamine-d6
6438626	86
6438629	87
Blank	124
LCS	120
MS	94
MSD	77
Limits:	50-150

Analysis Name: 15a Energetics by 8330A
Batch number: 112880015A

	2-Nitro-m-xylene
6438626	131
Blank	125
LCS	114
LCSD	113
MS	108
MSD	113
Limits:	80-146

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Surrogate Quality Control

Analysis Name: 20a Formaldehyde 8315A
Batch number: 112910003A

	Butyraldehyde
6438626	81
Blank	87
LCS	86
MS	80
MSD	84
Limits:	64-126

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112910025A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6438618	79	93
6438619	63	77
6438621	52*	61
Blank	82	93
LCS	73	89
LCSD	76	99
MS	74	84
MSD	61	89
Limits:	53-139	45-120

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113010003A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6438620	81	89
6438622	80	85
6438623	83	90
6438624	79	92
6438625	88	91
6438626	87	86
Blank	81	94
LCS	84	95
LCSD	90	96
MS	88	86
MSD	90	86
Limits:	53-139	45-120

Analysis Name: 18a Alcohols by 8015B
Batch number: 112900028A

	Acetone
6438626	40*
Blank	83
LCS	82
MS	69
MSD	66
Limits:	42-138

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271484
Reported: 11/09/11 at 11:09 AM

Surrogate Quality Control

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 112920027A

	Chlorobenzene	Orthoterphenyl
6438626	72	80
Blank	82	88
LCS	88	92
MS	77	86
MSD	80	90
Limits:	37-125	47-145

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112920028A

	n-Triacontane-d62
6438626	198*
Blank	80
LCS	79
MS	79
MSD	79
Limits:	19-152

Analysis Name: 19a Glycols by 8015B
Batch number: 112980042A

	Tetramethylene glycol
6438626	82
Blank	100
LCS	99
MS	88
MSD	87
Limits:	29-137

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

acct# 13013 Gp# 1271484 sample# 6433618-29

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-006-SA3-SB-4.0-5.0	10.13.11	1529	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-006-SA3-SB-9.0-10.0	10.13.11	1447	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													Sampled 10.13.11
SL-036-SA5DS-SB-4.0-5.0	10.14.11	1138	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													Sampled 10.13.11
SL-036-SA5DS-SB-9.0-10.0	10.14.11	1134	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-037-SA5DS-SB-4.0-5.0	10.14.11	0947	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-037-SA5DS-SB-9.0-10.0	10.14.11	0905	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-038-SA5DS-SB-4.0-5.0	10.14.11	1100	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-038-SA5DS-SB-9.0-10.0	10.14.11	1027	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-164-SA7-SB-0.5-1.5	10.14.11	1420	SOIL	NONE	1-SS Sleeve			X	X																	
SL-164-SA7-SB-0.5-1.5	10.14.11	1420	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X		
EB-SA3-SB-101411	10.14.11	1400	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-HA crew
TB-101411	10.14.11	0800	WATER	NONE	1-1 L Amber														X							
TB-101411	10.14.11	0800	SOIL	NONE	1-4 oz Jar														X							

Relinquished by: (Signature) — **Date/Time** 10/13/2011 / 1630 — **Received for Laboratory by: (Signature)**

Received by: (Signature) — **Date/Time** 10-13-11 1618 0945 — **Airbill No.(s)** 8767 9858 6806, 6817

JH 10/13/11 (2)

Laboratory: Lancaster Laboratories, Inc.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

October 30, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/15/2011
Group Number: 1271486
SDG: DX149
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-006-SA3-SB-4.0-5.0 Soil	6438634
SL-006-SA3-SB-9.0-10.0 Soil	6438635
SL-036-SA5DS-SB-4.0-5.0 Soil	6438636
SL-036-SA5DS-SB-9.0-10.0 Soil	6438637
SL-037-SA5DS-SB-4.0-5.0 Soil	6438638
SL-037-SA5DS-SB-9.0-10.0 Soil	6438639
SL-038-SA5DS-SB-4.0-5.0 Soil	6438640
SL-038-SA5DS-SB-9.0-10.0 Soil	6438641
SL-164-SA7-SB-0.5-1.5 Soil	6438642

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love
Group Leader

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438634
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4906 SDG#: DX149-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	9.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438634
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4906 SDG#: DX149-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0466 U	0.0466	1.09	1
11031	12378-PeCDD	40321-76-4	0.0450 JBQ	0.0386	5.43	1
11031	123478-HxCDD	39227-28-6	0.0633 JBQ	0.0279	5.43	1
11031	123678-HxCDD	57653-85-7	0.0516 JQ	0.0289	5.43	1
11031	123789-HxCDD	19408-74-3	0.0621 JBQ	0.0298	5.43	1
11031	1234678-HpCDD	35822-46-9	0.276 JB	0.0305	5.43	1
11031	OCDD	3268-87-9	0.641 JBQ	0.0312	10.9	1
11031	2378-TCDF	51207-31-9	0.0372 JQ	0.0286	1.09	1
11031	12378-PeCDF	57117-41-6	0.0445 JBQ	0.0186	5.43	1
11031	23478-PeCDF	57117-31-4	0.0526 JB	0.0175	5.43	1
11031	123478-HxCDF	70648-26-9	0.0431 JBQ	0.0155	5.43	1
11031	123678-HxCDF	57117-44-9	0.0193 JBQ	0.0143	5.43	1
11031	123789-HxCDF	72918-21-9	0.0157 U	0.0157	5.43	1
11031	234678-HxCDF	60851-34-5	0.0589 JBQ	0.0136	5.43	1
11031	1234678-HpCDF	67562-39-4	0.176 JB	0.0142	5.43	1
11031	1234789-HpCDF	55673-89-7	0.0370 JBQ	0.0186	5.43	1
11031	OCDF	39001-02-0	0.158 JB	0.0408	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	92	28 - 130
13C12-123789-HxCDD	88	28 - 130
13C12-1234678-HpCDD	93	23 - 140
13C12-OCDD	103	17 - 157
13C12-2378-TCDF	78	24 - 169
13C12-12378-PeCDF	79	24 - 185
13C12-23478-PeCDF	78	21 - 178
13C12-123478-HxCDF	73	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	87	28 - 136
13C12-123789-HxCDF	86	29 - 147
13C12-1234678-HpCDF	92	28 - 143
13C12-1234789-HpCDF	86	26 - 138
13C12-OCDF	91	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438634
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4906 SDG#: DX149-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-4.0-5.0

LLI Sample # SW 6438634
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 15:29

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4906 SDG#: DX149-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/24/2011 22:20	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438635
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4907 SDG#: DX149-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438635
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4907 SDG#: DX149-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.115	JQ	0.0525	1.13	1
11031	12378-PeCDD	40321-76-4	0.0438	U	0.0438	5.64	1
11031	123478-HxCDD	39227-28-6	0.0297	U	0.0297	5.64	1
11031	123678-HxCDD	57653-85-7	0.0545	JQ	0.0307	5.64	1
11031	123789-HxCDD	19408-74-3	0.0856	JBQ	0.0291	5.64	1
11031	1234678-HpCDD	35822-46-9	0.342	JBQ	0.0307	5.64	1
11031	OCDD	3268-87-9	0.910	JB	0.0262	11.3	1
11031	2378-TCDF	51207-31-9	0.0364	U	0.0364	1.13	1
11031	12378-PeCDF	57117-41-6	0.123	JBQ	0.0223	5.64	1
11031	23478-PeCDF	57117-31-4	0.118	JBQ	0.0197	5.64	1
11031	123478-HxCDF	70648-26-9	0.126	JBQ	0.0225	5.64	1
11031	123678-HxCDF	57117-44-9	0.0975	JBQ	0.0211	5.64	1
11031	123789-HxCDF	72918-21-9	0.0731	JBQ	0.0224	5.64	1
11031	234678-HxCDF	60851-34-5	0.0980	JB	0.0193	5.64	1
11031	1234678-HpCDF	67562-39-4	0.234	JB	0.0160	5.64	1
11031	1234789-HpCDF	55673-89-7	0.0545	JB	0.0203	5.64	1
11031	OCDF	39001-02-0	0.145	JB	0.0370	11.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	86	25 - 164
13C12-12378-PeCDD	94	25 - 181
13C12-123478-HxCDD	98	32 - 141
13C12-123678-HxCDD	99	28 - 130
13C12-123789-HxCDD	99	28 - 130
13C12-1234678-HpCDD	109	23 - 140
13C12-OCDD	114	17 - 157
13C12-2378-TCDF	87	24 - 169
13C12-12378-PeCDF	94	24 - 185
13C12-23478-PeCDF	94	21 - 178
13C12-123478-HxCDF	78	26 - 152
13C12-123678-HxCDF	87	26 - 123
13C12-234678-HxCDF	91	28 - 136
13C12-123789-HxCDF	98	29 - 147
13C12-1234678-HpCDF	103	28 - 143
13C12-1234789-HpCDF	96	26 - 138
13C12-OCDF	102	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438635
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4907 SDG#: DX149-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-006-SA3-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-006-SA3-SB-9.0-10.0

LLI Sample # SW 6438635
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/13/2011 14:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4907 SDG#: DX149-07

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 02:19	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438636
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4908 SDG#: DX149-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438636
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4908 SDG#: DX149-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0632	JQ	0.0504	1.15	1
11031	12378-PeCDD	40321-76-4	0.391	JB	0.0450	5.73	1
11031	123478-HxCDD	39227-28-6	0.202	JBQ	0.0323	5.73	1
11031	123678-HxCDD	57653-85-7	0.197	JQ	0.0328	5.73	1
11031	123789-HxCDD	19408-74-3	0.158	JBQ	0.0322	5.73	1
11031	1234678-HpCDD	35822-46-9	0.366	JBQ	0.0346	5.73	1
11031	OCDD	3268-87-9	0.559	JBQ	0.0305	11.5	1
11031	2378-TCDF	51207-31-9	0.0811	J	0.0298	1.15	1
11031	12378-PeCDF	57117-41-6	0.479	JB	0.0230	5.73	1
11031	23478-PeCDF	57117-31-4	0.357	JB	0.0207	5.73	1
11031	123478-HxCDF	70648-26-9	0.241	JB	0.0243	5.73	1
11031	123678-HxCDF	57117-44-9	0.281	JBQ	0.0222	5.73	1
11031	123789-HxCDF	72918-21-9	0.184	JBQ	0.0235	5.73	1
11031	234678-HxCDF	60851-34-5	0.165	JBQ	0.0211	5.73	1
11031	1234678-HpCDF	67562-39-4	0.229	JBQ	0.0152	5.73	1
11031	1234789-HpCDF	55673-89-7	0.105	JBQ	0.0191	5.73	1
11031	OCDF	39001-02-0	0.200	JBQ	0.0389	11.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	87	32 - 141
13C12-123678-HxCDD	87	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	89	23 - 140
13C12-OCDD	94	17 - 157
13C12-2378-TCDF	75	24 - 169
13C12-12378-PeCDF	77	24 - 185
13C12-23478-PeCDF	76	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	83	28 - 136
13C12-123789-HxCDF	86	29 - 147
13C12-1234678-HpCDF	88	28 - 143
13C12-1234789-HpCDF	84	26 - 138
13C12-OCDF	86	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438636
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4908 SDG#: DX149-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-036-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438636
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:38

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4908 SDG#: DX149-08

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 03:16	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438637
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4909 SDG#: DX149-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	13.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438637
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4909 SDG#: DX149-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0518 U	0.0518	1.13	1
11031	12378-PeCDD	40321-76-4	0.182 JBQ	0.0440	5.64	1
11031	123478-HxCDD	39227-28-6	0.0897 JBQ	0.0364	5.64	1
11031	123678-HxCDD	57653-85-7	0.286 J	0.0369	5.64	1
11031	123789-HxCDD	19408-74-3	0.690 JBQ	0.0360	5.64	1
11031	1234678-HpCDD	35822-46-9	0.355 JBQ	0.0349	5.64	1
11031	OCDD	3268-87-9	0.628 JB	0.0335	11.3	1
11031	2378-TCDF	51207-31-9	0.0589 JQ	0.0349	1.13	1
11031	12378-PeCDF	57117-41-6	0.267 JB	0.0217	5.64	1
11031	23478-PeCDF	57117-31-4	0.168 JBQ	0.0209	5.64	1
11031	123478-HxCDF	70648-26-9	0.137 JBQ	0.0243	5.64	1
11031	123678-HxCDF	57117-44-9	0.166 JBQ	0.0217	5.64	1
11031	123789-HxCDF	72918-21-9	0.725 JBQ	0.0245	5.64	1
11031	234678-HxCDF	60851-34-5	0.114 JB	0.0204	5.64	1
11031	1234678-HpCDF	67562-39-4	0.165 JBQ	0.0167	5.64	1
11031	1234789-HpCDF	55673-89-7	0.0242 JBQ	0.0227	5.64	1
11031	OCDF	39001-02-0	0.112 JBQ	0.0453	11.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	71	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	86	23 - 140
13C12-OCDD	93	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	74	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	88	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	81	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438637
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4909 SDG#: DX149-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-036-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-036-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438637
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:34

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4909 SDG#: DX149-09

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 04:12	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438638
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4910 SDG#: DX149-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	13.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438638
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4910 SDG#: DX149-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.114 JQ	0.0563	1.15	1
11031	12378-PeCDD	40321-76-4	0.172 JBQ	0.0442	5.75	1
11031	123478-HxCDD	39227-28-6	0.0654 JBQ	0.0311	5.75	1
11031	123678-HxCDD	57653-85-7	0.239 J	0.0320	5.75	1
11031	123789-HxCDD	19408-74-3	0.488 JB	0.0343	5.75	1
11031	1234678-HpCDD	35822-46-9	0.294 JBQ	0.0338	5.75	1
11031	OCDD	3268-87-9	0.670 JB	0.0350	11.5	1
11031	2378-TCDF	51207-31-9	0.0416 J	0.0344	1.15	1
11031	12378-PeCDF	57117-41-6	0.301 JB	0.0224	5.75	1
11031	23478-PeCDF	57117-31-4	0.285 JBQ	0.0201	5.75	1
11031	123478-HxCDF	70648-26-9	0.136 JBQ	0.0264	5.75	1
11031	123678-HxCDF	57117-44-9	0.0902 JBQ	0.0235	5.75	1
11031	123789-HxCDF	72918-21-9	0.657 JB	0.0258	5.75	1
11031	234678-HxCDF	60851-34-5	0.0677 JBQ	0.0213	5.75	1
11031	1234678-HpCDF	67562-39-4	0.138 JBQ	0.0171	5.75	1
11031	1234789-HpCDF	55673-89-7	0.0546 JBQ	0.0234	5.75	1
11031	OCDF	39001-02-0	0.0767 JB	0.0428	11.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	70	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	88	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	84	23 - 140
13C12-OCDD	91	17 - 157
13C12-2378-TCDF	68	24 - 169
13C12-12378-PeCDF	73	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	71	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	85	28 - 143
13C12-1234789-HpCDF	74	26 - 138
13C12-OCDF	79	17 - 157

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*
Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438638
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4910 SDG#: DX149-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438638
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:47

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4910 SDG#: DX149-10

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 05:09	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438639
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4911 SDG#: DX149-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	15.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438639
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4911 SDG#: DX149-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0526 U	0.0526	1.17	1
11031	12378-PeCDD	40321-76-4	0.0430 U	0.0430	5.83	1
11031	123478-HxCDD	39227-28-6	0.0314 JBQ	0.0287	5.83	1
11031	123678-HxCDD	57653-85-7	0.0299 U	0.0299	5.83	1
11031	123789-HxCDD	19408-74-3	0.0452 JBQ	0.0291	5.83	1
11031	1234678-HpCDD	35822-46-9	0.298 JB	0.0337	5.83	1
11031	OCDD	3268-87-9	0.585 JB	0.0303	11.7	1
11031	2378-TCDF	51207-31-9	0.0316 U	0.0316	1.17	1
11031	12378-PeCDF	57117-41-6	0.0215 JBQ	0.0202	5.83	1
11031	23478-PeCDF	57117-31-4	0.0579 JBQ	0.0196	5.83	1
11031	123478-HxCDF	70648-26-9	0.0300 JBQ	0.0187	5.83	1
11031	123678-HxCDF	57117-44-9	0.0294 JBQ	0.0165	5.83	1
11031	123789-HxCDF	72918-21-9	0.0584 JBQ	0.0184	5.83	1
11031	234678-HxCDF	60851-34-5	0.0283 JBQ	0.0150	5.83	1
11031	1234678-HpCDF	67562-39-4	0.0771 JB	0.0142	5.83	1
11031	1234789-HpCDF	55673-89-7	0.0336 JBQ	0.0215	5.83	1
11031	OCDF	39001-02-0	0.194 JB	0.0405	11.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	70	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	85	23 - 140
13C12-OCDD	91	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	65	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	87	28 - 143
13C12-1234789-HpCDF	75	26 - 138
13C12-OCDF	78	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438639
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4911 SDG#: DX149-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-037-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-037-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438639
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 09:05

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4911 SDG#: DX149-11

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 06:05	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438640
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4912 SDG#: DX149-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438640
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4912 SDG#: DX149-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0444 U	0.0444	1.08	1
11031	12378-PeCDD	40321-76-4	0.0398 U	0.0398	5.38	1
11031	123478-HxCDD	39227-28-6	0.0436 JBQ	0.0246	5.38	1
11031	123678-HxCDD	57653-85-7	0.0241 U	0.0241	5.38	1
11031	123789-HxCDD	19408-74-3	0.101 JBQ	0.0236	5.38	1
11031	1234678-HpCDD	35822-46-9	0.268 JBQ	0.0314	5.38	1
11031	OCDD	3268-87-9	0.914 JB	0.0271	10.8	1
11031	2378-TCDF	51207-31-9	0.0293 U	0.0293	1.08	1
11031	12378-PeCDF	57117-41-6	0.0523 JBQ	0.0175	5.38	1
11031	23478-PeCDF	57117-31-4	0.0392 JBQ	0.0174	5.38	1
11031	123478-HxCDF	70648-26-9	0.0182 U	0.0182	5.38	1
11031	123678-HxCDF	57117-44-9	0.0179 JBQ	0.0169	5.38	1
11031	123789-HxCDF	72918-21-9	0.120 JBQ	0.0167	5.38	1
11031	234678-HxCDF	60851-34-5	0.0146 U	0.0146	5.38	1
11031	1234678-HpCDF	67562-39-4	0.0996 JBQ	0.0140	5.38	1
11031	1234789-HpCDF	55673-89-7	0.0575 JBQ	0.0205	5.38	1
11031	OCDF	39001-02-0	0.217 JBQ	0.0406	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	87	32 - 141
13C12-123678-HxCDD	89	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	91	23 - 140
13C12-OCDD	99	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	79	24 - 185
13C12-23478-PeCDF	75	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	83	29 - 147
13C12-1234678-HpCDF	93	28 - 143
13C12-1234789-HpCDF	79	26 - 138
13C12-OCDF	85	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438640
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4912 SDG#: DX149-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-038-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-4.0-5.0

LLI Sample # SW 6438640
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 11:00

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4912 SDG#: DX149-12

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 07:02	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438641
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4913 SDG#: DX149-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438641
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4913 SDG#: DX149-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0447 U	0.0447	1.04	1
11031	12378-PeCDD	40321-76-4	0.0544 JBQ	0.0352	5.22	1
11031	123478-HxCDD	39227-28-6	0.0276 U	0.0276	5.22	1
11031	123678-HxCDD	57653-85-7	0.0290 U	0.0290	5.22	1
11031	123789-HxCDD	19408-74-3	0.0735 JBQ	0.0288	5.22	1
11031	1234678-HpCDD	35822-46-9	0.332 JBQ	0.0263	5.22	1
11031	OCDD	3268-87-9	0.580 JB	0.0296	10.4	1
11031	2378-TCDF	51207-31-9	0.0289 U	0.0289	1.04	1
11031	12378-PeCDF	57117-41-6	0.0315 JBQ	0.0188	5.22	1
11031	23478-PeCDF	57117-31-4	0.0419 JBQ	0.0172	5.22	1
11031	123478-HxCDF	70648-26-9	0.0292 JB	0.0187	5.22	1
11031	123678-HxCDF	57117-44-9	0.0232 JBQ	0.0166	5.22	1
11031	123789-HxCDF	72918-21-9	0.147 JBQ	0.0201	5.22	1
11031	234678-HxCDF	60851-34-5	0.0281 JBQ	0.0161	5.22	1
11031	1234678-HpCDF	67562-39-4	0.0871 JBQ	0.0145	5.22	1
11031	1234789-HpCDF	55673-89-7	0.0399 JBQ	0.0198	5.22	1
11031	OCDF	39001-02-0	0.146 JBQ	0.0351	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	88	28 - 130
13C12-123789-HxCDD	88	28 - 130
13C12-1234678-HpCDD	92	23 - 140
13C12-OCDD	104	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	80	24 - 185
13C12-23478-PeCDF	75	21 - 178
13C12-123478-HxCDF	71	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	84	28 - 136
13C12-123789-HxCDF	79	29 - 147
13C12-1234678-HpCDF	93	28 - 143
13C12-1234789-HpCDF	80	26 - 138
13C12-OCDF	90	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

LLI Sample # SW 6438641
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 10:27

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4913 SDG#: DX149-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA5DS-SB-9.0-10.0

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Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4913 SDG#: DX149-13

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 07:59	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438642
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4914 SDG#: DX149-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	2.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438642
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4914 SDG#: DX149-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0430 U	0.0430	0.999	1
11031	12378-PeCDD	40321-76-4	0.0477 JB	0.0339	5.00	1
11031	123478-HxCDD	39227-28-6	0.0311 JBQ	0.0289	5.00	1
11031	123678-HxCDD	57653-85-7	0.0296 U	0.0296	5.00	1
11031	123789-HxCDD	19408-74-3	0.0690 JB	0.0280	5.00	1
11031	1234678-HpCDD	35822-46-9	0.584 JB	0.0335	5.00	1
11031	OCDD	3268-87-9	4.56 JB	0.0246	9.99	1
11031	2378-TCDF	51207-31-9	0.0362 U	0.0362	0.999	1
11031	12378-PeCDF	57117-41-6	0.0354 JBQ	0.0222	5.00	1
11031	23478-PeCDF	57117-31-4	0.0601 JB	0.0210	5.00	1
11031	123478-HxCDF	70648-26-9	0.0717 JBQ	0.0219	5.00	1
11031	123678-HxCDF	57117-44-9	0.0286 JB	0.0195	5.00	1
11031	123789-HxCDF	72918-21-9	0.0294 JBQ	0.0211	5.00	1
11031	234678-HxCDF	60851-34-5	0.0622 JBQ	0.0177	5.00	1
11031	1234678-HpCDF	67562-39-4	0.195 JB	0.0150	5.00	1
11031	1234789-HpCDF	55673-89-7	0.0524 JBQ	0.0220	5.00	1
11031	OCDF	39001-02-0	0.392 JBQ	0.0368	9.99	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	71	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	86	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	96	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	66	26 - 152
13C12-123678-HxCDF	74	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	89	28 - 143
13C12-1234789-HpCDF	77	26 - 138
13C12-OCDF	83	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-164-SA7-SB-0.5-1.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

LLI Sample # SW 6438642
LLI Group # 1271486
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/14/2011 14:20

Submitted: 10/15/2011 09:45
Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4914 SDG#: DX149-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

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SSFL Area IV Collocated Soil Sampling
SL-164-SA7-SB-0.5-1.5

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LLI Group # 1271486
Account # 13013

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Reported: 10/30/2011 16:19

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X4914 SDG#: DX149-14

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 08:55	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402A	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271486
Reported: 10/30/11 at 04:19 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11298162402A	Sample number(s): 6438634-6438642								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11294002	Sample number(s): 6438634-6438642								
2378-TCDD	0.0609 U	0.0609	1.00	ng/kg	107		67-158		
12378-PeCDD	0.0460 J	0.0441	5.00	ng/kg	105		70-142		
123478-HxCDD	0.0460 J	0.0278	5.00	ng/kg	100		70-164		
123678-HxCDD	0.0276 U	0.0276	5.00	ng/kg	94		76-134		
123789-HxCDD	0.0516 J	0.0279	5.00	ng/kg	102		64-162		
1234678-HpCDD	0.267 J	0.0317	5.00	ng/kg	100		70-140		
OCDD	0.461 J	0.0245	10.0	ng/kg	95		78-144		
2378-TCDF	0.0429 U	0.0429	1.00	ng/kg	97		75-158		
12378-PeCDF	0.0382 J	0.0220	5.00	ng/kg	102		80-134		
23478-PeCDF	0.0374 J	0.0203	5.00	ng/kg	96		68-160		
123478-HxCDF	0.0843 J	0.0241	5.00	ng/kg	97		72-134		
123678-HxCDF	0.0224 J	0.0214	5.00	ng/kg	98		84-130		
123789-HxCDF	0.0575 J	0.0180	5.00	ng/kg	98		78-130		
234678-HxCDF	0.0541 J	0.0162	5.00	ng/kg	96		70-156		
1234678-HpCDF	0.154 J	0.0152	5.00	ng/kg	92		82-122		
1234789-HpCDF	0.0824 J	0.0190	5.00	ng/kg	96		78-138		
OCDF	0.172 J	0.0394	10.0	ng/kg	97		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11298162402A	Sample number(s): 6438634-6438642 BKG: P438623								
Moisture Content by 160.3						15.4	15.6	1	20
Batch number: 11294002	Sample number(s): 6438634-6438642 UNSPK: P435711								
2378-TCDD	109	105	67-158	3	25				
12378-PeCDD	105	104	70-142	0	25				
123478-HxCDD	98	98	70-164	1	25				
123678-HxCDD	93	95	76-134	3	25				
123789-HxCDD	100	102	64-162	3	25				
1234678-HpCDD	98	99	70-140	3	25				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271486
Reported: 10/30/11 at 04:19 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
OCDD	96	95	78-144	1	25				
2378-TCDF	98	97	75-158	0	25				
12378-PeCDF	101	102	80-134	2	25				
23478-PeCDF	96	93	68-160	2	25				
123478-HxCDF	100	97	72-134	2	25				
123678-HxCDF	98	98	84-130	0	25				
123789-HxCDF	100	98	78-130	0	25				
234678-HxCDF	95	95	70-156	2	25				
1234678-HpCDF	90	90	82-122	1	25				
1234789-HpCDF	96	96	78-138	1	25				
OCDF	97	95	63-170	1	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11294002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6438634	76	78	73	78	87	86
6438635	86	94	78	87	91	98
6438636	72	76	70	77	83	86
6438637	69	70	70	76	78	77
6438638	67	71	64	71	80	77
6438639	70	72	65	73	80	77
6438640	74	75	69	76	81	83
6438641	74	75	71	78	84	79
6438642	71	72	66	74	79	77
Blank	86	88	61	70	88	96
MS	76	80	51	59	84	85
MSD	72	79	50	54	81	84
OPR	74	77	60	69	78	83
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6438634	92	86	91	77	88	92
6438635	103	96	102	94	98	99
6438636	88	84	86	75	87	87
6438637	88	76	81	71	83	85
6438638	85	74	79	70	83	88
6438639	87	75	78	75	86	85
6438640	93	79	85	77	87	89
6438641	93	80	90	76	88	88
6438642	89	77	83	73	86	86
Blank	92	93	100	92	92	97
MS	77	83	88	81	90	89

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271486
Reported: 10/30/11 at 04:19 PM

Surrogate Quality Control

MSD	72	83	92	79	83	84
OPR	88	82	87	81	86	87
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6438634	88	93	103	78	79
6438635	99	109	114	87	94
6438636	86	89	94	75	77
6438637	82	86	93	70	74
6438638	82	84	91	68	73
6438639	83	85	91	70	75
6438640	86	91	99	73	79
6438641	88	92	104	73	80
6438642	83	87	96	72	75
Blank	96	108	118	82	92
MS	89	95	102	78	84
MSD	85	92	103	72	79
OPR	86	95	103	73	81
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 QP# 1271436 sample# 6135634-42

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 5 (SA5) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-006-SA3-SB-4.0-5.0	10.13.11	1529	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													Sampled 10.13.11
SL-006-SA3-SB-9.0-10.0	10.13.11	1447	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													Sampled 10.13.11
SL-036-SA5DS-SB-4.0-5.0	10.14.11	1138	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-036-SA5DS-SB-9.0-10.0	10.14.11	1134	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-037-SA5DS-SB-4.0-5.0	10.14.11	0947	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-037-SA5DS-SB-9.0-10.0	10.14.11	0905	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-038-SA5DS-SB-4.0-5.0	10.14.11	1100	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-038-SA5DS-SB-9.0-10.0	10.14.11	1027	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-164-SA7-SB-0.5-1.5	10.14.11	1420	SOIL	NONE	1-SS Sleeve			X	X																	
SL-164-SA7-SB-0.5-1.5	10.14.11	1420	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X		
EB-SA3-SB-101411	10.14.11	1400	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-HA crew
TB-101411	10.14.11	0800	WATER	NONE	1-1 L Amber														X							
TB-101411	10.14.11	0800	SOIL	NONE	1-4 oz Jar														X							

Relinquished by: (*Signature*) — Date/Time: 10/13/2011 / 1630 — Received for Laboratory by: (*Signature*)

Received by: (*Signature*) — Date/Time: 10-15-11 0945 — Airbill No.(s): 8767 9858 6806, 6817

Laboratory: Lancaster Laboratories, Inc.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 04, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/18/2011
Group Number: 1271741
SDG: DE270
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-139-SA7-SB-2.0-3.0 Soil	6439920
SL-033-SA5DS-SB-2.0-3.0 Soil	6439921
SL-034-SA5DS-SB-4.0-5.0 Soil	6439922
SL-034-SA5DS-SB-4.0-5.0MS Soil	6439923
SL-034-SA5DS-SB-4.0-5.0MSD Soil	6439924
SL-034-SA5DS-SB-4.0-5.0DUP Soil	6439925
SL-034-SA5DS-SB-4.0-5.0RL MS Soil	6439926
SL-034-SA5DS-SB-4.0-5.0RL LCS Soil	6439927
SL-034-SA5DS-SB-9.0-10.0 Soil	6439928
SL-039-SA5DS-SB-3.0-4.0 Soil	6439929
DUP03-SA5DS-QC-101711 Soil	6439930
EB-SA5DS-SB-101711 Water	6439931
TB-101711 Water	6439932
TB-101711 Sand	6439933
TB-101711 Water	6439934

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170	1
04688	4-Chloroaniline	106-47-8	70	U	70	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	25	J	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	70	U	70	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	35	U	35	170	1
04688	4-Methylphenol	106-44-5	35	U	35	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	35	U	35	170	1
04688	4-Nitroaniline	100-01-6	70	U	70	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.69	U	0.69	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.69	U	0.69	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.69	U	0.69	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.69	U	0.69	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.69	U	0.69	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	19	1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19	1
10138	Chrysene	218-01-9	0.34	U	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.69	U	0.69	1.7	1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19	1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.2	U	6.2	19	1
10138	Fluoranthene	206-44-0	0.69	U	0.69	1.7	1
10138	Fluorene	86-73-7	0.69	U	0.69	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	U	0.69	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7	1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19	1
10138	Phenanthrene	85-01-8	0.69	U	0.69	1.7	1
10138	Pyrene	129-00-0	0.69	U	0.69	1.7	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	24.95
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.5	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.5	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.64	J	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	1.3		0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.65	J	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	5.5		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	9.8		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.44	J	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	17,100		6.18	20.4	1
07914	Boron	7440-42-8	0.368	U	0.368	5.10	1
01650	Calcium	7440-70-2	2,770		2.55	20.4	1
01654	Iron	7439-89-6	21,300		2.66	20.4	1
01656	Lithium	7439-93-2	23.8		0.63	2.0	1
01657	Magnesium	7439-95-4	4,760		0.449	10.2	1
06958	Manganese	7439-96-5	259		0.0368	0.510	1
10145	Phosphorus	7723-14-0	251		0.357	10.2	1
01662	Potassium	7440-09-7	2,420		11.5	51.0	1
01667	Sodium	7440-23-5	93.2	J	6.07	102	1
07968	Strontium	7440-24-6	16.6		0.0255	0.510	1
06969	Tin	7440-31-5	2.66	J	0.327	10.2	1
06970	Titanium	7440-32-6	1,320		0.0739	1.04	1
10146	Zirconium	7440-67-7	1.47	J	0.470	5.10	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0755 U	0.0755	0.204	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.					
06125	Arsenic	7440-38-2	4.96	0.0817	0.408	2
06126	Barium	7440-39-3	82.2	0.108	0.408	2
06127	Beryllium	7440-41-7	0.547	0.0408	0.255	5
06128	Cadmium	7440-43-9	0.243	0.0449	0.102	2
06131	Chromium	7440-47-3	21.4	0.123	0.408	2
06132	Cobalt	7440-48-4	6.94	0.0204	0.102	2
06133	Copper	7440-50-8	7.37	0.0817	0.408	2
06135	Lead	7439-92-1	7.19	0.0104	0.204	2
06138	Molybdenum	7439-98-7	0.448	0.0510	0.102	2
06139	Nickel	7440-02-0	12.0	0.102	0.408	2
06141	Selenium	7782-49-2	0.143 J	0.0592	0.408	2
06142	Silver	7440-22-4	0.0442 J	0.0145	0.102	2
06145	Thallium	7440-28-0	0.221	0.0306	0.102	2
06148	Vanadium	7440-62-2	41.9	0.0225	0.102	2
06149	Zinc	7440-66-6	51.4	0.572	3.06	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0139 J	0.0071	0.101	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.0	0.83	1.0	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.5 U	9.5	31.5	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.33 J	0.21	1.1	1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19 U	0.19	0.52	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.39	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.9	0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*=This limit was used in the evaluation of the final result

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-139-SA7-SB-2.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 10:27	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 13:32	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11293A16A	10/21/2011 06:25	Laura M Krieger	24.95
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129125880	10/18/2011 19:21	Lois E Hiltz	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129125880	10/18/2011 19:22	Lois E Hiltz	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/22/2011 23:01	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112920034A	10/19/2011 20:17	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112930029A	10/20/2011 21:06	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 18:18	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 04:51	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112920034A	10/19/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112930029A	10/20/2011 16:05	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:27	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:31	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 06:57	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 07:14	Choon Y Tian	5

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439920
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL139 SDG#: DE270-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 06:57	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 06:57	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 06:57	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:19	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 15:33	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621202A	10/21/2011 02:00	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201B	10/20/2011 19:24	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:17	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439921
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL033 SDG#: DE270-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	190	U	190	570	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800	1
04688	Benzoic acid	65-85-0	190	U	190	570	1
04688	Benzyl alcohol	100-51-6	190	U	190	570	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190	1
04688	4-Chloroaniline	106-47-8	76	U	76	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190	1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570	1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	38	U	38	190	1
04688	4-Methylphenol	106-44-5	38	U	38	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	38	U	38	190	1
04688	4-Nitroaniline	100-01-6	76	U	76	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	570	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	570	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439921
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL033 SDG#: DE270-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190	1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9	1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9	1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9	1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.8	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.8	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.8	1
10225	PCB-1016	12674-11-2	0.38	U	0.38	1.9	1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9	1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9	1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9	1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9	1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9	1
10225	PCB-1260	11096-82-5	0.45	U	0.45	1.9	1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9	1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	34,000		6.77	22.4	1
07914	Boron	7440-42-8	3.70	J	0.403	5.60	1
01650	Calcium	7440-70-2	19,600		2.80	22.4	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439921
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL033 SDG#: DE270-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	33,600		14.6	112	5
01656	Lithium	7439-93-2	35.0		0.69	2.2	1
01657	Magnesium	7439-95-4	8,290		0.492	11.2	1
06958	Manganese	7439-96-5	306		0.0403	0.560	1
10145	Phosphorus	7723-14-0	347		0.392	11.2	1
01662	Potassium	7440-09-7	3,630		12.6	56.0	1
01667	Sodium	7440-23-5	159		6.66	112	1
07968	Strontium	7440-24-6	58.5		0.0280	0.560	1
06969	Tin	7440-31-5	2.82	J	0.358	11.2	1
06970	Titanium	7440-32-6	1,740		0.0787	1.11	1
10146	Zirconium	7440-67-7	5.18	J	0.515	5.60	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.104	J	0.0828	0.224	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.25		0.0895	0.448	2
06126	Barium	7440-39-3	124		0.119	0.448	2
06127	Beryllium	7440-41-7	0.808		0.0179	0.112	2
06128	Cadmium	7440-43-9	0.137		0.0492	0.112	2
06131	Chromium	7440-47-3	36.7		0.134	0.448	2
06132	Cobalt	7440-48-4	15.7		0.0224	0.112	2
06133	Copper	7440-50-8	17.2		0.0895	0.448	2
06135	Lead	7439-92-1	8.15		0.0114	0.224	2
06138	Molybdenum	7439-98-7	0.357		0.0560	0.112	2
06139	Nickel	7440-02-0	19.3		0.112	0.448	2
06141	Selenium	7782-49-2	0.257	J	0.0649	0.448	2
06142	Silver	7440-22-4	0.0183	J	0.0159	0.112	2
06145	Thallium	7440-28-0	0.302		0.0336	0.112	2
06148	Vanadium	7440-62-2	68.4		0.0246	0.112	2
06149	Zinc	7440-66-6	70.6		0.627	3.36	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0078	U	0.0078	0.111	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.5		0.93	1.2	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.3	U	10.3	34.2	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23	U	0.23	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439921
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL033 SDG#: DE270-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.31	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	12.4	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 10:52	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 14:06	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/22/2011 23:20	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 17:02	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:39	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:43	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 07:00	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439921
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL033 SDG#: DE270-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 07:00	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 07:00	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 07:00	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:20	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 15:47	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202A	10/24/2011 13:45	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201B	10/20/2011 19:38	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201A	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439922
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	190	U	190	570	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800	1
04688	Benzoic acid	65-85-0	190	U	190	570	1
04688	Benzyl alcohol	100-51-6	190	U	190	570	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190	1
04688	4-Chloroaniline	106-47-8	76	U	76	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190	1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570	1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	38	U	38	190	1
04688	4-Methylphenol	106-44-5	38	U	38	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	38	U	38	190	1
04688	4-Nitroaniline	100-01-6	76	U	76	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	570	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	570	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439922
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190	1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9	1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9	1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9	1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9	1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9	1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	34,200		6.89	22.8	1
07914	Boron	7440-42-8	4.91	J	0.410	5.69	1
01650	Calcium	7440-70-2	9,770		2.85	22.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439922
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	36,000		14.9	114	5
01656	Lithium	7439-93-2	31.2		0.71	2.3	1
01657	Magnesium	7439-95-4	8,730		0.501	11.4	1
06958	Manganese	7439-96-5	367		0.0410	0.569	1
10145	Phosphorus	7723-14-0	258		0.399	11.4	1
01662	Potassium	7440-09-7	4,010		12.9	56.9	1
01667	Sodium	7440-23-5	132		6.78	114	1
07968	Strontium	7440-24-6	47.1		0.0285	0.569	1
06969	Tin	7440-31-5	2.76	J	0.364	11.4	1
06970	Titanium	7440-32-6	1,820		0.0809	1.14	1
10146	Zirconium	7440-67-7	5.12	J	0.524	5.69	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.126	J	0.0826	0.223	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.85		0.0893	0.447	2
06126	Barium	7440-39-3	162		0.118	0.447	2
06127	Beryllium	7440-41-7	0.879		0.0179	0.112	2
06128	Cadmium	7440-43-9	0.162		0.0491	0.112	2
06131	Chromium	7440-47-3	48.2		0.134	0.447	2
06132	Cobalt	7440-48-4	15.5		0.0223	0.112	2
06133	Copper	7440-50-8	21.3		0.0893	0.447	2
06135	Lead	7439-92-1	11.0		0.0114	0.223	2
06138	Molybdenum	7439-98-7	0.326		0.0558	0.112	2
06139	Nickel	7440-02-0	26.2		0.112	0.447	2
06141	Selenium	7782-49-2	0.220	J	0.0648	0.447	2
06142	Silver	7440-22-4	0.0230	J	0.0159	0.112	2
06145	Thallium	7440-28-0	0.441		0.0335	0.112	2
06148	Vanadium	7440-62-2	99.3		0.0246	0.112	2
06149	Zinc	7440-66-6	91.9		0.625	3.35	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0078	U	0.0078	0.110	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.9		0.91	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.3	U	10.3	34.2	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23	U	0.23	1.2	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439922
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.26	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 05:25	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 11:53	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/22/2011 23:39	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 16:39	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:01	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:07	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 06:27	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439922
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 06:27	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 06:27	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 06:27	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:21	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 14:33	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621202A	10/21/2011 00:51	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201B	10/20/2011 20:07	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439923
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg	ug/kg	ug/kg	
04688	Acenaphthene	83-32-9	1,800	19	190	1
04688	Acenaphthylene	208-96-8	1,900	19	190	1
04688	Aniline	62-53-3	1,300	190	560	1
04688	Anthracene	120-12-7	1,900	19	190	1
04688	Benzidine	92-87-5	4,300	1,300	3,700	1
04688	Benzo(a)anthracene	56-55-3	1,800	19	190	1
04688	Benzo(a)pyrene	50-32-8	1,800	19	190	1
04688	Benzo(b)fluoranthene	205-99-2	1,800	19	190	1
04688	Benzo(g,h,i)perylene	191-24-2	1,800	19	190	1
04688	Benzo(k)fluoranthene	207-08-9	1,800	19	190	1
04688	Benzoic acid	65-85-0	1,100	190	560	1
04688	Benzyl alcohol	100-51-6	1,800	190	560	1
04688	4-Bromophenyl-phenylether	101-55-3	1,900	19	190	1
04688	Butylbenzylphthalate	85-68-7	1,900	19	190	1
04688	Di-n-butylphthalate	84-74-2	1,900	19	190	1
04688	Carbazole	86-74-8	1,800	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	1,900	37	190	1
04688	4-Chloroaniline	106-47-8	1,100	75	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	1,800	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	1,700	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	1,700	19	190	1
04688	2-Chloronaphthalene	91-58-7	1,200	19	190	1
04688	2-Chlorophenol	95-57-8	1,800	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	1,800	37	190	1
04688	Chrysene	218-01-9	1,700	19	190	1
04688	Dibenz(a,h)anthracene	53-70-3	1,800	19	190	1
04688	Dibenzofuran	132-64-9	1,800	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	1,600	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	1,700	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	1,600	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	890	110	370	1
04688	2,4-Dichlorophenol	120-83-2	1,900	19	190	1
04688	Diethylphthalate	84-66-2	1,800	19	190	1
04688	2,4-Dimethylphenol	105-67-9	1,900	37	190	1
04688	3,5-Dimethylphenol	108-68-9	2,100	37	190	1
04688	Dimethylphthalate	131-11-3	1,800	19	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	1,200	190	560	1
04688	2,4-Dinitrophenol	51-28-5	1,200	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	1,800	37	190	1
04688	2,6-Dinitrotoluene	606-20-2	1,900	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	1,900	19	190	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	1,800	19	370	1
04688	Fluoranthene	206-44-0	1,900	19	190	1
04688	Fluorene	86-73-7	1,900	19	190	1
04688	Hexachlorobenzene	118-74-1	1,800	19	190	1
04688	Hexachlorobutadiene	87-68-3	1,800	75	190	1
04688	Hexachlorocyclopentadiene	77-47-4	3,000	190	560	1
04688	Hexachloroethane	67-72-1	1,600	19	190	1
04688	Indeno(1,2,3-cd)pyrene	193-39-5	1,800	19	190	1
04688	Isophorone	78-59-1	1,800	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439923
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg	ug/kg	ug/kg	
04688	1-Methylnaphthalene	90-12-0	1,700	19	190	1
04688	2-Methylnaphthalene	91-57-6	1,700	19	190	1
04688	2-Methylphenol	95-48-7	1,800	37	190	1
04688	4-Methylphenol	106-44-5	1,700	37	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04688	Naphthalene	91-20-3	1,700	19	190	1
04688	2-Nitroaniline	88-74-4	1,800	19	190	1
04688	3-Nitroaniline	99-09-2	1,800	37	190	1
04688	4-Nitroaniline	100-01-6	1,400	75	190	1
04688	Nitrobenzene	98-95-3	1,800	19	190	1
04688	2-Nitrophenol	88-75-5	1,800	19	190	1
04688	4-Nitrophenol	100-02-7	1,700	190	560	1
04688	N-Nitrosodimethylamine	62-75-9	1,700	37	190	1
04688	N-Nitroso-di-n-propylamine	621-64-7	1,600	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	1,900	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04688	Di-n-octylphthalate	117-84-0	2,000	19	190	1
04688	Pentachlorophenol	87-86-5	1,700	190	560	1
04688	Phenanthrene	85-01-8	1,800	19	190	1
04688	Phenol	108-95-2	1,800	19	190	1
04688	Pyrene	129-00-0	1,800	19	190	1
04688	1,2,4-Trichlorobenzene	120-82-1	1,700	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	1,900	37	190	1
04688	2,4,6-Trichlorophenol	88-06-2	1,900	37	190	1
GC/MS Semivolatiles SW-846 8270C SIM			ug/kg	ug/kg	ug/kg	
10138	Acenaphthene	83-32-9	30	0.75	1.9	1
10138	Acenaphthylene	208-96-8	28	0.37	1.9	1
10138	Anthracene	120-12-7	31	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	33	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	30	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	33	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	32	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	32	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	33	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	33	6.7	20	1
10138	Chrysene	218-01-9	33	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	31	0.75	1.9	1
10138	Diethylphthalate	84-66-2	32	6.7	20	1
10138	Dimethylphthalate	131-11-3	32	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	39	6.7	20	1
10138	Fluoranthene	206-44-0	33	0.75	1.9	1
10138	Fluorene	86-73-7	27	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	32	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	28	0.75	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439923
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	2-Methylnaphthalene	91-57-6	28		0.75	1.9	1
10138	Naphthalene	91-20-3	29		0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	32		0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	31		6.7	20	1
10138	Phenanthrene	85-01-8	30		0.75	1.9	1
10138	Pyrene	129-00-0	32		0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.8	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.8	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.8	1
10225	PCB-1016	12674-11-2	14		0.38	1.9	1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9	1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9	1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9	1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9	1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9	1
10225	PCB-1260	11096-82-5	16		0.44	1.9	1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9	1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	39,400		6.82	22.6	1
07914	Boron	7440-42-8	226		0.406	5.64	1
01650	Calcium	7440-70-2	13,300		2.82	22.6	1
01654	Iron	7439-89-6	36,200		14.7	113	5
01656	Lithium	7439-93-2	145		0.70	2.3	1
01657	Magnesium	7439-95-4	8,900		0.496	11.3	1
06958	Manganese	7439-96-5	400		0.0406	0.564	1
10145	Phosphorus	7723-14-0	388		0.395	11.3	1
01662	Potassium	7440-09-7	5,320		12.7	56.4	1
01667	Sodium	7440-23-5	1,210		6.71	113	1
07968	Strontium	7440-24-6	156		0.0282	0.564	1
06969	Tin	7440-31-5	391		0.361	11.3	1
06970	Titanium	7440-32-6	2,230		0.400	5.64	5
10146	Zirconium	7440-67-7	113		0.519	5.64	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.667		0.0843	0.228	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	8.32		0.0911	0.456	2
06126	Barium	7440-39-3	153		0.121	0.456	2
06127	Beryllium	7440-41-7	1.69		0.0182	0.114	2
06128	Cadmium	7440-43-9	1.35		0.0501	0.114	2
06131	Chromium	7440-47-3	53.6		0.137	0.456	2
06132	Cobalt	7440-48-4	70.7		0.0228	0.114	2
06133	Copper	7440-50-8	29.8		0.0911	0.456	2

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439923
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06135	Lead	7439-92-1	12.7	0.0116	0.228	2
06138	Molybdenum	7439-98-7	11.0	0.0569	0.114	2
06139	Nickel	7440-02-0	34.0	0.114	0.456	2
06141	Selenium	7782-49-2	2.34	0.0661	0.456	2
06142	Silver	7440-22-4	11.5	0.0162	0.114	2
06145	Thallium	7440-28-0	0.820	0.0342	0.114	2
06148	Vanadium	7440-62-2	97.8	0.0251	0.114	2
06149	Zinc	7440-66-6	86.6	0.638	3.42	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.189	0.0075	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	11.9	0.90	1.1	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	614	10.3	34.2	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	38.7	1.1	5.6	5
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 05:50	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 12:26	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/22/2011 23:57	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439923
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 16:50	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:41	Tara L Snyder	5
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:19	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 06:54	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 06:54	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 06:54	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 06:54	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:24	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 15:03	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621202A	10/21/2011 01:37	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201B	10/20/2011 20:29	Elyse P Brunstetter	5
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439924
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Acenaphthene	83-32-9	1,800		19	190	1
04688	Acenaphthylene	208-96-8	1,900		19	190	1
04688	Aniline	62-53-3	1,300		190	570	1
04688	Anthracene	120-12-7	1,900		19	190	1
04688	Benzidine	92-87-5	4,300		1,300	3,800	1
04688	Benzo(a)anthracene	56-55-3	1,900		19	190	1
04688	Benzo(a)pyrene	50-32-8	1,900		19	190	1
04688	Benzo(b)fluoranthene	205-99-2	1,900		19	190	1
04688	Benzo(g,h,i)perylene	191-24-2	1,800		19	190	1
04688	Benzo(k)fluoranthene	207-08-9	1,900		19	190	1
04688	Benzoic acid	65-85-0	490	J	190	570	1
04688	Benzyl alcohol	100-51-6	1,800		190	570	1
04688	4-Bromophenyl-phenylether	101-55-3	1,900		19	190	1
04688	Butylbenzylphthalate	85-68-7	1,900		19	190	1
04688	Di-n-butylphthalate	84-74-2	1,900		19	190	1
04688	Carbazole	86-74-8	1,800		19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	1,900		38	190	1
04688	4-Chloroaniline	106-47-8	1,200		76	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	1,800		19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	1,700		19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	1,700		19	190	1
04688	2-Chloronaphthalene	91-58-7	1,800		19	190	1
04688	2-Chlorophenol	95-57-8	1,900		19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	1,900		38	190	1
04688	Chrysene	218-01-9	1,800		19	190	1
04688	Dibenz(a,h)anthracene	53-70-3	1,900		19	190	1
04688	Dibenzofuran	132-64-9	1,800		19	190	1
04688	1,2-Dichlorobenzene	95-50-1	1,700		19	190	1
04688	1,3-Dichlorobenzene	541-73-1	1,700		19	190	1
04688	1,4-Dichlorobenzene	106-46-7	1,700		19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	990		110	380	1
04688	2,4-Dichlorophenol	120-83-2	1,900		19	190	1
04688	Diethylphthalate	84-66-2	1,800		19	190	1
04688	2,4-Dimethylphenol	105-67-9	1,900		38	190	1
04688	3,5-Dimethylphenol	108-68-9	2,200		38	190	1
04688	Dimethylphthalate	131-11-3	1,900		19	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	330	J	190	570	1
04688	2,4-Dinitrophenol	51-28-5	450	J	380	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	1,900		38	190	1
04688	2,6-Dinitrotoluene	606-20-2	1,900		19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	1,900		19	190	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	1,800		19	380	1
04688	Fluoranthene	206-44-0	1,900		19	190	1
04688	Fluorene	86-73-7	1,900		19	190	1
04688	Hexachlorobenzene	118-74-1	1,900		19	190	1
04688	Hexachlorobutadiene	87-68-3	1,800		76	190	1
04688	Hexachlorocyclopentadiene	77-47-4	3,000		190	570	1
04688	Hexachloroethane	67-72-1	1,600		19	190	1
04688	Indeno(1,2,3-cd)pyrene	193-39-5	1,900		19	190	1
04688	Isophorone	78-59-1	1,800		19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439924
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**	**ug/kg**	**ug/kg**	
04688	1-Methylnaphthalene	90-12-0	1,700	19	190	1
04688	2-Methylnaphthalene	91-57-6	1,800	19	190	1
04688	2-Methylphenol	95-48-7	1,900	38	190	1
04688	4-Methylphenol	106-44-5	1,800	38	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04688	Naphthalene	91-20-3	1,800	19	190	1
04688	2-Nitroaniline	88-74-4	1,900	19	190	1
04688	3-Nitroaniline	99-09-2	1,800	38	190	1
04688	4-Nitroaniline	100-01-6	1,400	76	190	1
04688	Nitrobenzene	98-95-3	1,800	19	190	1
04688	2-Nitrophenol	88-75-5	1,800	19	190	1
04688	4-Nitrophenol	100-02-7	1,700	190	570	1
04688	N-Nitrosodimethylamine	62-75-9	1,600	38	190	1
04688	N-Nitroso-di-n-propylamine	621-64-7	1,700	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	1,900	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04688	Di-n-octylphthalate	117-84-0	2,000	19	190	1
04688	Pentachlorophenol	87-86-5	1,200	190	570	1
04688	Phenanthrene	85-01-8	1,800	19	190	1
04688	Phenol	108-95-2	1,900	19	190	1
04688	Pyrene	129-00-0	1,800	19	190	1
04688	1,2,4-Trichlorobenzene	120-82-1	1,800	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	1,900	38	190	1
04688	2,4,6-Trichlorophenol	88-06-2	1,900	38	190	1
GC/MS Semivolatiles SW-846 8270C SIM			**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	32	0.75	1.9	1
10138	Acenaphthylene	208-96-8	30	0.37	1.9	1
10138	Anthracene	120-12-7	32	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	33	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	30	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	33	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	33	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	33	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	34	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	33	6.7	20	1
10138	Chrysene	218-01-9	33	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	31	0.75	1.9	1
10138	Diethylphthalate	84-66-2	33	6.7	20	1
10138	Dimethylphthalate	131-11-3	34	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	38	6.7	20	1
10138	Fluoranthene	206-44-0	34	0.75	1.9	1
10138	Fluorene	86-73-7	33	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	32	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	30	0.75	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439924
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	2-Methylnaphthalene	91-57-6	29		0.75	1.9	1
10138	Naphthalene	91-20-3	30		0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	34		0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	31		6.7	20	1
10138	Phenanthrene	85-01-8	32		0.75	1.9	1
10138	Pyrene	129-00-0	32		0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	12		0.38	1.9	1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9	1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9	1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9	1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9	1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9	1
10225	PCB-1260	11096-82-5	14		0.44	1.9	1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9	1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	40,900		6.63	21.9	1
07914	Boron	7440-42-8	222		0.394	5.48	1
01650	Calcium	7440-70-2	9,350		2.74	21.9	1
01654	Iron	7439-89-6	36,300		14.3	110	5
01656	Lithium	7439-93-2	141		0.68	2.2	1
01657	Magnesium	7439-95-4	9,000		0.482	11.0	1
06958	Manganese	7439-96-5	391		0.0394	0.548	1
10145	Phosphorus	7723-14-0	430		0.383	11.0	1
01662	Potassium	7440-09-7	5,320		12.4	54.8	1
01667	Sodium	7440-23-5	1,170		6.52	110	1
07968	Strontium	7440-24-6	154		0.0274	0.548	1
06969	Tin	7440-31-5	376		0.350	11.0	1
06970	Titanium	7440-32-6	2,290		0.389	5.48	5
10146	Zirconium	7440-67-7	108		0.504	5.48	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.664		0.0810	0.219	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	8.58		0.0876	0.438	2
06126	Barium	7440-39-3	174		0.116	0.438	2
06127	Beryllium	7440-41-7	1.82		0.0175	0.110	2
06128	Cadmium	7440-43-9	1.37		0.0482	0.110	2
06131	Chromium	7440-47-3	59.9		0.131	0.438	2
06132	Cobalt	7440-48-4	77.1		0.0219	0.110	2
06133	Copper	7440-50-8	32.1		0.0876	0.438	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439924
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06135	Lead	7439-92-1	13.8	0.0112	0.219	2
06138	Molybdenum	7439-98-7	11.5	0.0548	0.110	2
06139	Nickel	7440-02-0	36.8	0.110	0.438	2
06141	Selenium	7782-49-2	2.68	0.0635	0.438	2
06142	Silver	7440-22-4	12.5	0.0156	0.110	2
06145	Thallium	7440-28-0	0.869	0.0329	0.110	2
06148	Vanadium	7440-62-2	108	0.0241	0.110	2
06149	Zinc	7440-66-6	95.5	0.613	3.29	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.198	0.0077	0.109	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 06:16	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 13:00	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 00:16	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 16:54	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:45	Tara L Snyder	5

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439924
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:23	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 06:36	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 06:36	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 06:36	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 06:36	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:25	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0DUP

LLI Sample # SW 6439925
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03DUP

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	33,500		6.56	21.7	1
07914	Boron	7440-42-8	4.02	J	0.390	5.42	1
01650	Calcium	7440-70-2	11,300		2.71	21.7	1
01654	Iron	7439-89-6	35,500		14.2	108	5
01656	Lithium	7439-93-2	30.7		0.67	2.2	1
01657	Magnesium	7439-95-4	8,530		0.477	10.8	1
06958	Manganese	7439-96-5	389		0.0390	0.542	1
10145	Phosphorus	7723-14-0	290		0.380	10.8	1
01662	Potassium	7440-09-7	3,900		12.3	54.2	1
01667	Sodium	7440-23-5	129		6.45	108	1
07968	Strontium	7440-24-6	47.0		0.0271	0.542	1
06969	Tin	7440-31-5	2.60	J	0.347	10.8	1
06970	Titanium	7440-32-6	1,850		0.0785	1.11	1
10146	Zirconium	7440-67-7	5.41	J	0.499	5.42	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.103	J	0.0843	0.228	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.47		0.0911	0.456	2
06126	Barium	7440-39-3	137		0.121	0.456	2
06127	Beryllium	7440-41-7	0.862		0.0182	0.114	2
06128	Cadmium	7440-43-9	0.145		0.0501	0.114	2
06131	Chromium	7440-47-3	39.2		0.137	0.456	2
06132	Cobalt	7440-48-4	14.0		0.0228	0.114	2
06133	Copper	7440-50-8	17.4		0.0911	0.456	2
06135	Lead	7439-92-1	9.85		0.0116	0.228	2
06138	Molybdenum	7439-98-7	0.200		0.0569	0.114	2
06139	Nickel	7440-02-0	20.8		0.114	0.456	2
06141	Selenium	7782-49-2	0.144	J	0.0661	0.456	2
06142	Silver	7440-22-4	0.0167	J	0.0162	0.114	2
06145	Thallium	7440-28-0	0.356		0.0342	0.114	2
06148	Vanadium	7440-62-2	77.0		0.0251	0.114	2
06149	Zinc	7440-66-6	75.4		0.638	3.42	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076	U	0.0076	0.109	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	5.0		0.93	1.2	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.3	U	10.3	34.2	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23	U	0.23	1.1	1

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0DUP

LLI Sample # SW 6439925
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03DUP

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.27	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11626	28a Moisture Content by 160.3	n.a.	12.5	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.					
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 16:47	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:09	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:15	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 06:51	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 06:51	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 06:51	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0DUP

LLI Sample # SW 6439925
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 06:51	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:23	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 14:48	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11293621202A	10/21/2011 01:14	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201B	10/20/2011 21:12	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11626	28a Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0RL MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0RL MS

LLI Sample # SW 6439926
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03RLR

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.8	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.8	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.8	1
10225	PCB-1016	12674-11-2	1.8	J	0.38	1.9	1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9	1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9	1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9	1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9	1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9	1
10225	PCB-1260	11096-82-5	2.0		0.44	1.9	1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9	1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9	1
Wet Chemistry	**EPA 160.3 modified**		%		%	%	
11625	Moisture Content by 160.3	n.a.	12.2		0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 00:35	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0RL LCS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0RL LCS

LLI Sample # SW 6439927
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL034 SDG#: DE270-03RLQ

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.3	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.3	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.3	1
10225	PCB-1016	12674-11-2	1.5	J	0.33	1.7	1
10225	PCB-1221	11104-28-2	0.33	U	0.33	1.7	1
10225	PCB-1232	11141-16-5	0.33	U	0.33	1.7	1
10225	PCB-1242	53469-21-9	0.33	U	0.33	1.7	1
10225	PCB-1248	12672-29-6	0.33	U	0.33	1.7	1
10225	PCB-1254	11097-69-1	0.33	U	0.33	1.7	1
10225	PCB-1260	11096-82-5	1.8		0.39	1.7	1
10225	PCB-1262	37324-23-5	0.33	U	0.33	1.7	1
10225	PCB-1268	11100-14-4	0.33	U	0.33	1.7	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 00:53	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439928
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL349 SDG#: DE270-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	190	U	190	560	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700	1
04688	Benzoic acid	65-85-0	190	U	190	560	1
04688	Benzyl alcohol	100-51-6	190	U	190	560	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	190	1
04688	4-Chloroaniline	106-47-8	75	U	75	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	190	1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	560	1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	75	U	75	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	560	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	37	U	37	190	1
04688	4-Methylphenol	106-44-5	37	U	37	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	37	U	37	190	1
04688	4-Nitroaniline	100-01-6	75	U	75	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	560	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	560	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439928
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL349 SDG#: DE270-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	190	1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.74	U	0.74	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.74	U	0.74	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.74	U	0.74	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.74	U	0.74	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.74	U	0.74	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.74	U	0.74	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.74	U	0.74	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.74	U	0.74	1.9	1
10138	Fluorene	86-73-7	0.74	U	0.74	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.74	U	0.74	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.74	U	0.74	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.74	U	0.74	1.9	1
10138	Naphthalene	91-20-3	0.74	U	0.74	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.74	U	0.74	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.74	U	0.74	1.9	1
10138	Pyrene	129-00-0	0.74	U	0.74	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9	1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9	1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	28,300		6.66	22.0	1
07914	Boron	7440-42-8	3.84	J	0.396	5.50	1
01650	Calcium	7440-70-2	8,610		2.75	22.0	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439928
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL349 SDG#: DE270-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	37,800		14.4	110	5
01656	Lithium	7439-93-2	40.4		0.68	2.2	1
01657	Magnesium	7439-95-4	9,470		0.484	11.0	1
06958	Manganese	7439-96-5	304		0.0396	0.550	1
10145	Phosphorus	7723-14-0	646		0.385	11.0	1
01662	Potassium	7440-09-7	4,670		12.4	55.0	1
01667	Sodium	7440-23-5	238		6.55	110	1
07968	Strontium	7440-24-6	42.0		0.0275	0.550	1
06969	Tin	7440-31-5	2.59	J	0.352	11.0	1
06970	Titanium	7440-32-6	1,870		0.0789	1.11	1
10146	Zirconium	7440-67-7	4.89	J	0.506	5.50	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.204	U	0.204	0.550	5
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony. Reporting limits for ICPMS metals were raised due to interference from the sample matrix.						
06125	Arsenic	7440-38-2	7.79		0.220	1.10	5
06126	Barium	7440-39-3	104		0.292	1.10	5
06127	Beryllium	7440-41-7	0.870		0.0440	0.275	5
06128	Cadmium	7440-43-9	0.136	J	0.121	0.275	5
06131	Chromium	7440-47-3	43.2		0.330	1.10	5
06132	Cobalt	7440-48-4	25.6		0.0550	0.275	5
06133	Copper	7440-50-8	22.9		0.220	1.10	5
06135	Lead	7439-92-1	12.6		0.0281	0.550	5
06138	Molybdenum	7439-98-7	0.239	J	0.138	0.275	5
06139	Nickel	7440-02-0	25.5		0.275	1.10	5
06141	Selenium	7782-49-2	0.165	J	0.0638	0.440	2
06142	Silver	7440-22-4	0.0391	U	0.0391	0.275	5
06145	Thallium	7440-28-0	0.391		0.0826	0.275	5
06148	Vanadium	7440-62-2	87.2		0.0605	0.275	5
06149	Zinc	7440-66-6	91.1		1.54	8.26	5
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076	U	0.0076	0.109	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.9		0.91	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.2	U	10.2	34.0	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.25	J	0.23	1.2	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439928
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL349 SDG#: DE270-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.57	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	11.8	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 11:18	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 14:39	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 02:27	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 17:06	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:43	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:48	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 07:17	Choon Y Tian	5
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439928
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL349 SDG#: DE270-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 07:17	Choon Y Tian	5
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 07:03	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 07:17	Choon Y Tian	5
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:26	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 16:32	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202A	10/24/2011 14:08	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11292243201B	10/20/2011 21:27	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439929
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL039 SDG#: DE270-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	72	U	72	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	72	U	72	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439929
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL039 SDG#: DE270-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19	1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.5	U	6.5	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Perchlorate	**SW-846 6850 1/2007**		**ug/kg**		**ug/kg**	**ug/kg**	
06557	6a Perchlorate EPA 6850	14797-73-0	2.3	U	2.3	5.5	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9	1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9	1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439929
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL039 SDG#: DE270-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	28,100		6.36	21.0	1
07914	Boron	7440-42-8	4.03	J	0.379	5.26	1
01650	Calcium	7440-70-2	25,000		2.63	21.0	1
01654	Iron	7439-89-6	30,900		13.7	105	5
01656	Lithium	7439-93-2	38.6		0.65	2.1	1
01657	Magnesium	7439-95-4	8,820		0.463	10.5	1
06958	Manganese	7439-96-5	227		0.0379	0.526	1
10145	Phosphorus	7723-14-0	469		0.368	10.5	1
01662	Potassium	7440-09-7	4,320		11.9	52.6	1
01667	Sodium	7440-23-5	145		6.26	105	1
07968	Strontium	7440-24-6	91.0		0.0263	0.526	1
06969	Tin	7440-31-5	2.55	J	0.337	10.5	1
06970	Titanium	7440-32-6	1,480		0.0754	1.06	1
10146	Zirconium	7440-67-7	4.05	J	0.484	5.26	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.139	J	0.0771	0.208	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.97		0.0834	0.417	2
06126	Barium	7440-39-3	143		0.110	0.417	2
06127	Beryllium	7440-41-7	0.769		0.0167	0.104	2
06128	Cadmium	7440-43-9	0.131		0.0458	0.104	2
06131	Chromium	7440-47-3	44.7		0.125	0.417	2
06132	Cobalt	7440-48-4	15.0		0.0208	0.104	2
06133	Copper	7440-50-8	19.2		0.0834	0.417	2
06135	Lead	7439-92-1	10.1		0.0106	0.208	2
06138	Molybdenum	7439-98-7	0.235		0.0521	0.104	2
06139	Nickel	7440-02-0	24.3		0.104	0.417	2
06141	Selenium	7782-49-2	0.294	J	0.0604	0.417	2
06142	Silver	7440-22-4	0.0229	J	0.0148	0.104	2
06145	Thallium	7440-28-0	0.391		0.0313	0.104	2
06148	Vanadium	7440-62-2	78.6		0.0229	0.104	2
06149	Zinc	7440-66-6	90.0		0.584	3.13	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073	U	0.0073	0.104	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.5		0.89	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8	U	9.8	32.8	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439929
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL039 SDG#: DE270-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.59	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	8.6	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 11:43	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 15:12	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
06557	6a Perchlorate EPA 6850	SW-846 6850 1/2007	1	112980018A	10/26/2011 18:54	Richard A Shober	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 02:46	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
06568	Perchlorate Soil Prep	SW-846 6850 1/2007	1	112980018A	10/26/2011 09:00	Maria Davenport	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 17:17	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:48	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:52	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439929
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL039 SDG#: DE270-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 07:06	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 07:06	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 07:06	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 07:06	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:27	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 16:46	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202A	10/24/2011 14:31	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201B	10/20/2011 21:34	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439930
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DUP03 SDG#: DE270-06FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	190	U	190	570	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800	1
04688	Benzoic acid	65-85-0	190	U	190	570	1
04688	Benzyl alcohol	100-51-6	190	U	190	570	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190	1
04688	4-Chloroaniline	106-47-8	76	U	76	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190	1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570	1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	38	U	38	190	1
04688	4-Methylphenol	106-44-5	38	U	38	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	38	U	38	190	1
04688	4-Nitroaniline	100-01-6	76	U	76	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	570	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	570	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439930
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DUP03 SDG#: DE270-06FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190	1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9	1
10138	Acenaphthylene	208-96-8	0.38	U	0.38	1.9	1
10138	Anthracene	120-12-7	0.38	U	0.38	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.8	U	6.8	20	1
10138	Di-n-butylphthalate	84-74-2	6.8	U	6.8	20	1
10138	Chrysene	218-01-9	0.38	U	0.38	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9	1
10138	Diethylphthalate	84-66-2	6.8	U	6.8	20	1
10138	Dimethylphthalate	131-11-3	6.8	U	6.8	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.8	U	6.8	20	1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9	1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9	1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.8	U	6.8	20	1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9	1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.8	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.8	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.8	1
10225	PCB-1016	12674-11-2	0.38	U	0.38	1.9	1
10225	PCB-1221	11104-28-2	0.38	U	0.38	1.9	1
10225	PCB-1232	11141-16-5	0.38	U	0.38	1.9	1
10225	PCB-1242	53469-21-9	0.38	U	0.38	1.9	1
10225	PCB-1248	12672-29-6	0.38	U	0.38	1.9	1
10225	PCB-1254	11097-69-1	0.38	U	0.38	1.9	1
10225	PCB-1260	11096-82-5	0.45	U	0.45	1.9	1
10225	PCB-1262	37324-23-5	0.38	U	0.38	1.9	1
10225	PCB-1268	11100-14-4	0.38	U	0.38	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	34,700		6.86	22.7	1
07914	Boron	7440-42-8	4.65	J	0.408	5.67	1
01650	Calcium	7440-70-2	14,900		2.84	22.7	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439930
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DUP03 SDG#: DE270-06FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	36,000		14.8	113	5
01656	Lithium	7439-93-2	31.7		0.70	2.3	1
01657	Magnesium	7439-95-4	8,640		0.499	11.3	1
06958	Manganese	7439-96-5	327		0.0408	0.567	1
10145	Phosphorus	7723-14-0	295		0.397	11.3	1
01662	Potassium	7440-09-7	3,840		12.8	56.7	1
01667	Sodium	7440-23-5	135		6.75	113	1
07968	Strontium	7440-24-6	49.0		0.0284	0.567	1
06969	Tin	7440-31-5	2.70	J	0.363	11.3	1
06970	Titanium	7440-32-6	1,820		0.0782	1.10	1
10146	Zirconium	7440-67-7	4.85	J	0.522	5.67	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.208	U	0.208	0.562	5
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony. Reporting limits for ICPMS metals were raised due to interference from the sample matrix.						
06125	Arsenic	7440-38-2	6.43		0.225	1.12	5
06126	Barium	7440-39-3	133		0.298	1.12	5
06127	Beryllium	7440-41-7	0.852		0.0449	0.281	5
06128	Cadmium	7440-43-9	0.154	J	0.124	0.281	5
06131	Chromium	7440-47-3	40.0		0.337	1.12	5
06132	Cobalt	7440-48-4	12.7		0.0562	0.281	5
06133	Copper	7440-50-8	18.3		0.225	1.12	5
06135	Lead	7439-92-1	9.38		0.0286	0.562	5
06138	Molybdenum	7439-98-7	0.262	J	0.140	0.281	5
06139	Nickel	7440-02-0	21.8		0.281	1.12	5
06141	Selenium	7782-49-2	0.163	U	0.163	1.12	5
06142	Silver	7440-22-4	0.0399	U	0.0399	0.281	5
06145	Thallium	7440-28-0	0.290		0.0842	0.281	5
06148	Vanadium	7440-62-2	81.3		0.0618	0.281	5
06149	Zinc	7440-66-6	77.6		1.57	8.42	5
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0080	U	0.0080	0.113	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	5.4		0.92	1.2	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.3	U	10.3	34.4	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439930
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DUP03 SDG#: DE270-06FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.50	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	12.7	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11291SLD026	10/21/2011 12:08	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 15:45	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11291SLD026	10/18/2011 21:35	Karen L Beyer	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 03:05	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	112915708005	10/27/2011 17:21	Eric L Eby	5
01656	Lithium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 08:52	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112915708005	10/26/2011 07:56	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06125	Arsenic	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06126	Barium	SW-846 6020	1	112911026002D	10/20/2011 07:32	Choon Y Tian	5
06127	Beryllium	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06128	Cadmium	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5

*=This limit was used in the evaluation of the final result

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439930
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DUP03 SDG#: DE270-06FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06132	Cobalt	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06133	Copper	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06135	Lead	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06138	Molybdenum	SW-846 6020	1	112911026002C	10/20/2011 07:32	Choon Y Tian	5
06139	Nickel	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06141	Selenium	SW-846 6020	1	112911026002B	10/20/2011 07:32	Choon Y Tian	5
06142	Silver	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06145	Thallium	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06148	Vanadium	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
06149	Zinc	SW-846 6020	1	112911026002A	10/20/2011 07:32	Choon Y Tian	5
00159	Mercury	SW-846 7471A	1	112915711005	10/19/2011 18:31	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112915708005	10/19/2011 11:04	James L Mertz	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112911026002	10/19/2011 11:39	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112915711005	10/19/2011 12:44	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11299621201B	10/27/2011 17:01	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202A	10/24/2011 14:54	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11292243201B	10/20/2011 21:48	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11299621201B	10/26/2011 06:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202A	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11292243201B	10/19/2011 09:50	Michelle L Lalli	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: **EB-SA5DS-SB-101711 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101711

LLI Sample # WW 6439931
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:30

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB117 SDG#: DE270-07EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	3.54	0.530	1.06	1

N-Nitrosodimethylamine was detected in the method blank at a concentration of .718 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11292WAA026	11/01/2011 19:17	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11292WAA026	10/19/2011 15:00	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101711 Water
SSFL Area IV Collocated Soil Sampling
TB-101711

LLI Sample # WW 6439932
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 08:00

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB117 SDG#: DE270-08TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	0.489 U	0.489	0.978	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11292WAA026	11/01/2011 19:36	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11292WAA026	10/19/2011 15:00	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101711 Sand
SSFL Area IV Collocated Soil Sampling
TB-101711

LLI Sample # SW 6439933
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 08:00

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB17S SDG#: DE270-09TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	105		16.6	33.2	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11291SLG026	11/02/2011 02:14	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11291SLG026	10/19/2011 06:50	Katheryne V Sponheimer	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101711 Water
SSFL Area IV Collocated Soil Sampling
TB-101711

LLI Sample # WW 6439934
LLI Group # 1271741
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 08:00

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 09:54

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB17V SDG#: DE270-10TB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11294B20A	10/24/2011 12:38	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11294B20A	10/24/2011 12:38	Catherine J Schwarz	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11291SLD026	Sample number(s): 6439920-6439924,6439928-6439930									
Acenaphthene	17	U	17.	170	ug/kg	95		76-111		
Acenaphthylene	17	U	17.	170	ug/kg	100		75-122		
Aniline	170 U		170.	500	ug/kg	68		20-115		
Anthracene	17	U	17.	170	ug/kg	100		76-112		
Benzidine	1,200 U		1,200.	3,300	ug/kg	57		15-121		
Benzo(a)anthracene	17	U	17.	170	ug/kg	98		73-112		
Benzo(a)pyrene	17	U	17.	170	ug/kg	98		65-124		
Benzo(b)fluoranthene	17	U	17.	170	ug/kg	95		61-127		
Benzo(g,h,i)perylene	17	U	17.	170	ug/kg	99		60-125		
Benzo(k)fluoranthene	17	U	17.	170	ug/kg	99		67-125		
Benzoic acid	170 U		170.	500	ug/kg	65		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	91		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	101		73-114		
Butylbenzylphthalate	17	U	17.	170	ug/kg	101		75-115		
Di-n-butylphthalate	17	U	17.	170	ug/kg	103		79-112		
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	97		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	47		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	94		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	90		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	91		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	94		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	96		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	97		74-115		
Chrysene	17	U	17.	170	ug/kg	94		76-113		
Dibenz(a,h)anthracene	17	U	17.	170	ug/kg	96		61-126		
Dibenzofuran	17	U	17.	170	ug/kg	94		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	89		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	89		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	89		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	43		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	99		75-111		
Diethylphthalate	17	U	17.	170	ug/kg	97		76-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	97		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	119		83-120		
Dimethylphthalate	17	U	17.	170	ug/kg	96		77-109		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	47		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	26		18-133		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	101		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	102		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	97		75-117		
Fluoranthene	17	U	17.	170	ug/kg	101		78-116		
Fluorene	17	U	17.	170	ug/kg	100		75-116		
Hexachlorobenzene	17	U	17.	170	ug/kg	99		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	97		65-117		
Hexachlorocyclopentadiene	170	U	170.	500	ug/kg	86		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	87		61-109		
Indeno(1,2,3-cd)pyrene	17	U	17.	170	ug/kg	100		64-119		
Isophorone	17	U	17.	170	ug/kg	94		69-110		
1-Methylnaphthalene	17	U	17.	170	ug/kg	90		74-105		
2-Methylnaphthalene	17	U	17.	170	ug/kg	92		69-109		
2-Methylphenol	33	U	33.	170	ug/kg	95		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	90		66-117		
Naphthalene	17	U	17.	170	ug/kg	94		73-106		
2-Nitroaniline	17	U	17.	170	ug/kg	95		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	93		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	72		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	94		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	95		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	91		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	86		63-107		
N-Nitrosodimethylamine	33	U	33.	170	ug/kg	88		60-106		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	101		67-141		
Di-n-octylphthalate	17	U	17.	170	ug/kg	105		62-137		
Pentachlorophenol	170	U	170.	500	ug/kg	85		51-117		
Phenanthrene	17	U	17.	170	ug/kg	97		77-113		
Phenol	17	U	17.	170	ug/kg	95		58-112		
Pyrene	17	U	17.	170	ug/kg	95		75-115		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	93		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	96		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	99		78-111		
Batch number: 11291SLG026	Sample number(s): 6439933									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	105		70-130		
Batch number: 11292SLE026	Sample number(s): 6439920-6439924,6439928-6439930									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	91		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	84		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	91		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	96		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	88		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	100		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	95		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	94		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	93		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	98		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	98		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	91		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	95		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	95		79-121		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	102		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	97		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	93		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	92		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	84		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	89		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	89		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	89		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	93		72-119		
Batch number: 11292WAA026	Sample number(s): 6439931-6439932									
N-Nitrosodimethylamine	0.718	J	0.500	1.00	ng/l	94	100	70-130	6	30
Batch number: 11293A16A	Sample number(s): 6439920									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	76		67-119		
Batch number: 11294B20A	Sample number(s): 6439934									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 112980018A	Sample number(s): 6439929									
6a Perchlorate EPA 6850	2.1	U	2.1	5.0	ug/kg	100		85-115		
Batch number: 112920031A	Sample number(s): 6439920-6439924,6439926-6439930									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	66	67	36-106	0	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	88		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	96		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112920034A	Sample number(s): 6439920									
Ethanol	100 U		100.	500	ug/kg	85		71-129		
Isopropanol	100 U		100.	500	ug/kg	89		75-125		
Methanol	100 U		100.	500	ug/kg	76		68-129		
Batch number: 112930029A	Sample number(s): 6439920									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	102		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	98		67-131		
Batch number: 112920027A	Sample number(s): 6439920									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	94		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	96		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	97		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	85		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	83		49-107		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 112920028A	Sample number(s): 6439920									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	100		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	105		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		69-109		
Batch number: 112911026002A	Sample number(s): 6439920-6439925,6439928-6439930									
Antimony	0.0733	U	0.0733	0.198	mg/kg	80		40-227		
Arsenic	0.0792	U	0.0792	0.396	mg/kg	100		83-111		
Beryllium	0.0158	U	0.0158	0.0990	mg/kg	101		84-112		
Cadmium	0.0436	U	0.0436	0.0990	mg/kg	105		83-111		
Chromium	0.119	U	0.119	0.396	mg/kg	111		77-123		
Cobalt	0.0198	U	0.0198	0.0990	mg/kg	108		85-114		
Copper	0.0792	U	0.0792	0.396	mg/kg	105		81-110		
Lead	0.0154	J	0.0101	0.198	mg/kg	97		84-112		
Nickel	0.0990	U	0.0990	0.396	mg/kg	100		81-110		
Silver	0.0141	U	0.0141	0.0990	mg/kg	100		83-112		
Thallium	0.0297	U	0.0297	0.0990	mg/kg	99		82-112		
Vanadium	0.307		0.0218	0.0990	mg/kg	101		76-110		
Zinc	0.554	U	0.554	2.97	mg/kg	100		82-110		
Batch number: 112911026002B	Sample number(s): 6439920-6439925,6439928-6439930									
Selenium	0.0574	U	0.0574	0.396	mg/kg	105		79-110		
Batch number: 112911026002C	Sample number(s): 6439920-6439925,6439928-6439930									
Molybdenum	0.0495	U	0.0495	0.0990	mg/kg	100		80-110		
Batch number: 112911026002D	Sample number(s): 6439920-6439925,6439928-6439930									
Barium	0.112	J	0.105	0.396	mg/kg	103		83-110		
Batch number: 112915708005	Sample number(s): 6439920-6439925,6439928-6439930									
Aluminum	6.05	U	6.05	20.0	mg/kg	88		40-127		
Boron	0.360	U	0.360	5.00	mg/kg	100		83-110		
Calcium	8.59	J	2.50	20.0	mg/kg	105		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	83		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	103		80-120		
Magnesium	0.440	U	0.440	10.0	mg/kg	91		63-116		
Manganese	0.0360	U	0.0360	0.500	mg/kg	99		85-116		
Phosphorus	1.21	J	0.350	10.0	mg/kg	105		80-120		
Potassium	11.3	U	11.3	50.0	mg/kg	103		71-110		
Sodium	5.95	U	5.95	100	mg/kg	101		76-110		
Strontium	0.0330	J	0.0250	0.500	mg/kg	100		84-110		
Tin	1.48	J	0.320	10.0	mg/kg	99		86-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	103		80-120		
Batch number: 112915711005	Sample number(s): 6439920-6439925,6439928-6439930									
Mercury	0.0067	U	0.0067	0.0957	mg/kg	102		83-119		
Batch number: 113005708002	Sample number(s): 6439920-6439925,6439928-6439930									
Titanium	0.0710	U	0.0710	1.00	mg/kg	119		80-120		
Batch number: 11292243201B	Sample number(s): 6439920-6439923,6439925,6439928-6439930									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11293102201B	Sample number(s): 6439920									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	85		80-120		
Batch number: 11293621202A	Sample number(s): 6439920-6439923,6439925,6439928-6439930									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	105		85-115		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11299621201B	Sample number(s): 6439920-6439923,6439925,6439928-6439930									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11300039402A	Sample number(s): 6439920-6439922,6439925,6439928-6439930									
17a pH by 9045C						100		95-105		
Batch number: 11298162402B	Sample number(s): 6439920-6439926,6439928-6439930,6439933									
28a Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11291SLD026	Sample number(s): 6439920-6439924,6439928-6439930 UNSPK: 6439922								
Acenaphthene	96	97	75-115	2	30				
Acenaphthylene	103	102	81-110	1	30				
Aniline	71	71	18-116	0	30				
Anthracene	99	99	75-115	1	30				
Benzidine	46	46	35-141	1	30				
Benzo(a)anthracene	97	99	65-122	3	30				
Benzo(a)pyrene	97	100	57-126	3	30				
Benzo(b)fluoranthene	98	101	59-125	3	30				
Benzo(g,h,i)perylene	95	97	59-127	3	30				
Benzo(k)fluoranthene	97	99	56-132	3	30				
Benzoic acid	58	26	10-173	75*	30				
Benzyl alcohol	94	96	67-115	3	30				
4-Bromophenyl-phenylether	100	100	67-129	1	30				
Butylbenzylphthalate	99	99	73-134	1	30				
Di-n-butylphthalate	101	101	67-123	1	30				
Carbazole	98	97	64-120	0	30				
4-Chloro-3-methylphenol	99	98	62-122	0	30				
4-Chloroaniline	57	64	13-107	13	30				
bis(2-Chloroethoxy)methane	95	96	75-104	2	30				
bis(2-Chloroethyl)ether	90	92	60-116	2	30				
bis(2-Chloroisopropyl)ether	91	91	55-142	1	30				
2-Chloronaphthalene	67	93	50-141	34*	30				
2-Chlorophenol	97	99	73-121	3	30				
4-Chlorophenyl-phenylether	99	99	80-109	1	30				
Chrysene	93	94	62-128	1	30				
Dibenz(a,h)anthracene	95	99	65-125	5	30				
Dibenzofuran	95	95	71-112	1	30				
1,2-Dichlorobenzene	88	88	66-108	1	30				
1,3-Dichlorobenzene	88	88	63-109	0	30				
1,4-Dichlorobenzene	88	88	58-108	1	30				
3,3'-Dichlorobenzidine	47	52	28-109	11	30				
2,4-Dichlorophenol	102	101	66-123	1	30				
Diethylphthalate	99	97	66-118	0	30				
2,4-Dimethylphenol	99	98	68-118	0	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
3,5-Dimethylphenol	111	118	71-127	8	30				
Dimethylphthalate	99	98	64-118	1	30				
4,6-Dinitro-2-methylphenol	63	18	11-126	112*	30				
2,4-Dinitrophenol	33	12*	20-143	93*	30				
2,4-Dinitrotoluene	98	98	56-129	1	30				
2,6-Dinitrotoluene	101	102	69-123	2	30				
1,2-Diphenylhydrazine	100	100	71-129	1	30				
bis(2-Ethylhexyl)phthalate	98	97	63-122	1	30				
Fluoranthene	101	100	73-112	0	30				
Fluorene	102	102	63-121	1	30				
Hexachlorobenzene	98	98	77-114	1	30				
Hexachlorobutadiene	95	96	62-120	2	30				
Hexachlorocyclopentadiene	80	80	10-153	2	30				
Hexachloroethane	87	85	57-109	1	30				
Indeno(1,2,3-cd)pyrene	96	98	61-126	3	30				
Isophorone	95	95	73-102	1	30				
1-Methylnaphthalene	92	91	64-122	0	30				
2-Methylnaphthalene	92	93	76-114	1	30				
2-Methylphenol	97	98	75-111	2	30				
4-Methylphenol	93	94	59-123	2	30				
Naphthalene	93	94	72-116	2	30				
2-Nitroaniline	99	100	67-125	2	30				
3-Nitroaniline	95	95	59-122	1	30				
4-Nitroaniline	76	75	41-109	0	30				
Nitrobenzene	94	95	57-125	2	30				
2-Nitrophenol	95	96	56-127	2	30				
4-Nitrophenol	93	89	37-129	3	30				
N-Nitroso-di-n-propylamine	87	88	60-116	2	30				
N-Nitrosodimethylamine	91	85	47-116	6	30				
N-Nitrosodiphenylamine	101	100	71-122	0	30				
Di-n-octylphthalate	105	106	56-126	2	30				
Pentachlorophenol	89	64	28-127	32*	30				
Phenanthrene	96	97	65-125	2	30				
Phenol	94	98	58-126	5	30				
Pyrene	95	95	74-126	1	30				
1,2,4-Trichlorobenzene	93	94	72-115	2	30				
2,4,5-Trichlorophenol	100	99	58-129	0	30				
2,4,6-Trichlorophenol	99	99	56-134	1	30				
Batch number: 11291SLG026	Sample number(s): 6439933 UNSPK: P437195								
N-Nitrosodimethylamine	97	95	70-130	2	30				
Batch number: 11292SLE026	Sample number(s): 6439920-6439924,6439928-6439930 UNSPK: 6439922								
Acenaphthene	81	85	63-105	5	30				
Acenaphthylene	76	80	67-114	6	30				
Anthracene	84	86	73-115	3	30				
Benzo(a)anthracene	89	88	59-128	1	30				
Benzo(a)pyrene	81	81	58-142	0	30				
Benzo(b)fluoranthene	87	88	54-163	1	30				
Benzo(g,h,i)perylene	86	87	33-141	2	30				
Benzo(k)fluoranthene	85	88	57-153	3	30				
Butylbenzylphthalate	87	90	57-173	4	30				
Di-n-butylphthalate	89	89	65-148	0	30				

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chrysene	89	89	67-123	0	30				
Dibenz(a,h)anthracene	84	83	22-133	0	30				
Diethylphthalate	86	88	70-136	1	30				
Dimethylphthalate	87	90	74-118	4	30				
Bis(2-Ethylhexyl)phthalate	103	101	39-167	2	30				
Fluoranthene	88	90	51-149	2	30				
Fluorene	73	88	66-122	18	30				
Indeno(1,2,3-cd)pyrene	84	85	21-143	1	30				
1-Methylnaphthalene	75	80	72-123	6	30				
2-Methylnaphthalene	75	79	64-103	5	30				
Naphthalene	77	80	61-102	5	30				
N-Nitrosodimethylamine	85	90	48-113	6	30				
Di-n-octylphthalate	83	82	40-192	1	30				
Phenanthrene	81	85	62-122	5	30				
Pyrene	85	85	51-131	0	30				
Batch number: 11293A16A	Sample number(s): 6439920 UNSPK: P437195								
9a TPH by EPA 8015B Gas C5-C12	77	76	39-118	9	30				
Batch number: 112980018A	Sample number(s): 6439929 UNSPK: 6439929								
6a Perchlorate EPA 6850	100	104	80-120	4	20				
Batch number: 112920031A	Sample number(s): 6439920-6439924,6439926-6439930 UNSPK: 6439922								
PCB-1016	72	65	29-146	11	50				
PCB-1260	83	75	39-149	11	50				
Batch number: 112920034A	Sample number(s): 6439920 UNSPK: 6439920								
Ethanol	81	80	48-130	1	20				
Isopropanol	82	82	12-149	1	20				
Methanol	85	86	43-138	1	20				
Batch number: 112930029A	Sample number(s): 6439920 UNSPK: P435690								
Diethylene glycol	5*	8*	59-109	42*	20				
Ethylene glycol	47*	45*	63-107	6	20				
Propylene glycol	65	62*	63-107	5	20				
Batch number: 112920027A	Sample number(s): 6439920 UNSPK: P437195								
EFH (C12-C14)	82	89	49-123	8	20				
EFH (C15-C20)	81	98	49-123	13	20				
EFH (C21-C30)	102	117	49-123	7	20				
EFH (C30 - C40)	110	138*	49-123	8	20				
EFH (C8-C11)	0*	5*	49-123	10	20				
Batch number: 112920028A	Sample number(s): 6439920 UNSPK: P437195								
m-Terphenyl	97	98	75-125	2	20				
o-Terphenyl	102	103	75-125	1	20				
p-Terphenyl	95	97	75-125	2	20				
Batch number: 112911026002A	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Antimony	40*	41*	75-125	0	20	0.110 J	0.0903 J	20 (1)	20
Arsenic	64*	79	75-125	3	20	6.02	4.80	22*	20
Beryllium	89	108	75-125	8	20	0.772	0.757	2	20
Cadmium	104	110	75-125	1	20	0.142	0.127	11 (1)	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chromium	48 (2)	108 (2)	75-125	11	20	42.3	34.4	20	20
Cobalt	97	113	75-125	9	20	13.6	12.3	10	20
Copper	75	99	75-125	7	20	18.7	15.3	20	20
Lead	48*	83	75-125	8	20	9.68	8.65	11	20
Nickel	69*	97	75-125	8	20	23.0	18.3	23*	20
Silver	101	114	75-125	9	20	0.0202 J	0.0147 J	32* (1)	20
Thallium	83	98	75-125	6	20	0.387	0.312	21* (1)	20
Vanadium	-13 (2)	77 (2)	75-125	10	20	87.2	67.6	25*	20
Zinc	-47 (2)	32 (2)	75-125	10	20	80.7	66.2	20	20
Batch number: 112911026002B	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Selenium	93	112	75-125	14	20	0.193 J	0.126 J	42* (1)	20
Batch number: 112911026002C	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Molybdenum	94	102	75-125	4	20	0.286	0.176	48* (1)	20
Batch number: 112911026002D	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Barium	-84 (2)	107 (2)	75-125	13	20	142	121	16	20
Batch number: 112915708005	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Aluminum	2292 (2)	3042 (2)	75-125	4	20	30,000	29,400	2	20
Boron	98	99	84-115	2	20	4.31 J	3.53 J	20 (1)	20
Calcium	792 (2)	-96 (2)	75-125	35*	20	8,580	9,930	15	20
Iron	181 (2)	299 (2)	75-125	0	20	31,600	31,100	1	20
Lithium	100	100	82-114	2	20	27.4	27.0	2	20
Magnesium	75 (2)	126 (2)	75-125	1	20	7,660	7,490	2	20
Manganese	59 (2)	43 (2)	75-125	2	20	322	341	6	20
Phosphorus	115	156*	75-125	10	20	227	255	12	20
Potassium	116	120	75-125	0	20	3,520	3,430	3	20
Sodium	96	95	75-125	3	20	116	113	2 (1)	20
Strontium	96	97	75-115	1	20	41.3	41.2	0	20
Tin	86	85	80-110	4	20	2.43 J	2.28 J	6 (1)	20
Zirconium	96	94	81-110	4	20	4.50 J	4.75 J	5 (1)	20
Batch number: 112915711005	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Mercury	107	109	65-135	4	20	0.0068 U	0.0067 U	0 (1)	20
Batch number: 113005708002	Sample number(s): 6439920-6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
Titanium	367 (2)	432 (2)	75-125	3	20	1,600	1,620	2	20
Batch number: 11292243201B	Sample number(s): 6439920-6439923,6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
3a Cr VI by EPA 7199	86		75-125			0.20 U	0.20 U	0 (1)	20
Batch number: 11293102201B	Sample number(s): 6439920 UNSPK: P437195 BKG: P437195								
16a Cyanide by 9012B	99		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11293621202A	Sample number(s): 6439920-6439923,6439925,6439928-6439930 UNSPK: 6439922 BKG: 6439922								
7a Perchlorate EPA 314.0	108		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11299621201B	Sample number(s): 6439920-6439923,6439925,6439928-6439930 UNSPK: 6439922 BKG:								

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
	6439922								
11a Anions by 300.0 - Fluoride	62*		80-120			4.3	4.4	1 (1)	20
Batch number: 11300039402A	Sample number(s): 6439920-6439922,6439925,6439928-6439930 BKG: 6439922								
17a pH by 9045C						8.26	8.27	0	3
Batch number: 11298162402B	Sample number(s): 6439920-6439926,6439928-6439930,6439933 BKG: 6439922								
28a Moisture Content by 160.3						12.2	12.5	2	20
Moisture Content by 160.3						12.2	12.5	2	20
Moisture Content by 160.3						12.2	12.5	2	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11291SLD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6439920	92	95	86	92	90	86
6439921	84	88	74	82	80	83
6439922	86	90	81	86	85	81
6439923	91	94	89	89	90	82
6439924	91	95	86	89	89	83
6439928	89	93	76	86	89	85
6439929	86	91	74	86	85	84
6439930	91	94	79	89	88	87
Blank	88	93	84	88	88	84
LCS	89	93	86	88	90	83
MS	91	94	89	89	90	82
MSD	91	95	86	89	89	83
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 21a NDMA by 1625C
Batch number: 11291SLG026

	N-Nitrosodimethylamine-d6
6439933	114
Blank	124
LCS	120
MS	94
MSD	77
Limits:	50-150

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11292SLE026

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Surrogate Quality Control

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6439920	100	84	89
6439921	96	80	91
6439922	90	75	85
6439923	101	77	84
6439924	97	81	82
6439928	93	78	86
6439929	96	79	91
6439930	97	80	89
Blank	94	83	90
LCS	101	84	88
MS	101	77	84
MSD	97	81	82
Limits:	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11292WAA026

	N-Nitrosodimethylamine-d6
6439931	144
6439932	107
Blank	117
LCS	120
LCSD	114
Limits:	50-150

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11293A16A

	Trifluorotoluene-F
6439920	88
Blank	92
LCS	93
MS	90
MSD	76
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11294B20A

	Trifluorotoluene-F
6439934	87
Blank	86
LCS	117
LCSD	113
Limits:	63-135

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112920031A

	Tetrachloro-m-xylene	Decachlorobiphenyl

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Surrogate Quality Control

6439920	91	98
6439921	84	97
6439922	78	88
6439923	90	97
6439924	86	91
6439926	88	95
6439927	93	102
6439928	87	96
6439929	88	93
6439930	91	102
Blank	86	94
LCS	94	102
LCSD	94	106
MS	90	97
MSD	86	91
Limits:	53-139	45-120

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 112920027A

	Chlorobenzene	Orthoterphenyl
6439920	80	87
Blank	82	88
LCS	88	92
MS	77	86
MSD	80	90
Limits:	37-125	47-145

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112920028A

	n-Triacontane-d62
6439920	86
Blank	80
LCS	79
MS	79
MSD	79
Limits:	19-152

Analysis Name: 18a Alcohols by 8015B
Batch number: 112920034A

	Acetone
6439920	81
Blank	86
LCS	89
MS	80
MSD	78
Limits:	42-138

Analysis Name: 19a Glycols by 8015B
Batch number: 112930029A

	Tetramethylene glycol

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271741
Reported: 11/04/11 at 09:54 AM

Surrogate Quality Control

6439920	88
Blank	98
LCS	98
MS	92
MSD	90
Limits:	29-137

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

13013 1271741 6439920-34

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH EPA 8015B Mod	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dimethal EPA 8270	Other Instructions and Notes
SL-139-SA7-SB-2.5	10.17.11	1203	SOIL	NONE	2-Encores										X											
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	1-SS Sleeve			X	X																	
SL-139-SA7-SB-2.0-3.0	10.17.11	1223	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X					X	X	X	X		
SL-033-SA5DS-SB-2.0-3.0	10.17.11	1158	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-034-SA5DS-SB-4.0-5.0MS	10.17.11	1053	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X													MS/MSD
SL-034-SA5DS-SB-9.0-10.0	10.17.11	0958	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-039-SA5DS-SB-3.0-4.0	10.17.11	1435	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X												
DUP03-SA5DS-QC-101711	10.17.11	1044	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
EB-SA5DS-SB-101711	10.17.11	1430	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-DI Blank
TB-101711	10.17.11	0800	WATER	NONE	1-1 L Amber														X							
TB-101711	10.17.11	0800	SOIL	NONE	1-4 oz Jar														X							
TB-101711	10.17.11	0800	WATER	NONE	2-40 mL Vials										X											

Relinquished by: (Signature) — Date/Time: 10/17/2011 / 1630

Received for Laboratory by: (Signature) — 10/18/11 0725

Received by: (Signature) — Date/Time — Airbill No.(s)

Laboratory:

Lancaster Laboratories, Inc.

Nicole Maljovec

From: Bloisa, Peggy [BloisaMJ@cdm.com]
Sent: Thursday, October 27, 2011 11:56 AM
To: Nicole Maljovec
Cc: Hartman, Pamela
Subject: Sample SL-139-SA7-SB-2.0-3.0
Attachments: COC_10_17_11 revised.xlsx

Hi Nicole – the above referenced sample collected on 10/17/11 had two different collection times for the sleeve and the jars. Please use the earlier time (1205) for both containers.

See attached revised COC.

Thanks, Peggy

Peggy Bloisa, P.G.
CDM
|100 Pringle Avenue Suite 300| Walnut Creek, CA 94596|
|Phone and Fax: (925) 296-8053|

Please consider the environment before printing this email.

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers
Signatures:

						PRIMARY FOR ALL LOCATIONS									SECONDARY FOR ALL LOCATIONS										
SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	*perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015M	**Dowonal EPA 8270	Other Instructions and Notes
SL-139-SA7-SB-2.5	10.17.11	1203	SOIL	NONE	2-Encores										X										
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	1-SS Sleeve			X	X																
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X					X	X	X	X	
SL-033-SA5DS-SB-2.0-3.0	10.17.11	1158	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-034-SA5DS-SB-4.0-5.0MS	10.17.11	1053	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X												MS/MSD
SL-034-SA5DS-SB-9.0-10.0	10.17.11	0958	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-039-SA5DS-SB-3.0-4.0	10.17.11	1435	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X											
DUP03-SA5DS-QC-101711	10.17.11	1044	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
EB-SA5DS-SB-101711	10.17.11	1430	WATER	NONE	1-1 L Amber														X						HGL ASTM II WATER-DPT crew
TB-101711	10.17.11	0800	WATER	NONE	1-1 L Amber														X						
TB-101711	10.17.11	0800	SOIL	NONE	1-4 oz Jar														X						
TB-101711	10.17.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	**Date/Time** 10/17/2011 / 1630	**Received for Laboratory by: (*Signature*)**	**Laboratory:** Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)** 8767 9858 6828 6770	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 04, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/18/2011
Group Number: 1271745
SDG: DX151
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-139-SA7-SB-2.0-3.0 Soil	6439943
SL-033-SA5DS-SB-2.0-3.0 Soil	6439944
SL-034-SA5DS-SB-4.0-5.0 Soil	6439945
SL-034-SA5DS-SB-4.0-5.0MS Soil	6439946
SL-034-SA5DS-SB-4.0-5.0MSD Soil	6439947
SL-034-SA5DS-SB-9.0-10.0 Soil	6439948
SL-039-SA5DS-SB-3.0-4.0 Soil	6439949
DUP03-SA5DS-QC-101711 Soil	6439950

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439943
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD139 SDG#: DX151-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439943
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD139 SDG#: DX151-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0287	U	0.0287	1.04	1
11031	12378-PeCDD	40321-76-4	0.0962	JQ	0.0287	5.21	1
11031	123478-HxCDD	39227-28-6	0.0374	U	0.0374	5.21	1
11031	123678-HxCDD	57653-85-7	0.282	J	0.0364	5.21	1
11031	123789-HxCDD	19408-74-3	0.191	JBQ	0.0375	5.21	1
11031	1234678-HpCDD	35822-46-9	6.33	B	0.0508	5.21	1
11031	OCDD	3268-87-9	76.5	B	0.0371	10.4	1
11031	2378-TCDF	51207-31-9	0.0624	JQ	0.0368	1.04	1
11031	12378-PeCDF	57117-41-6	0.106	JB	0.0259	5.21	1
11031	23478-PeCDF	57117-31-4	0.177	JBQ	0.0254	5.21	1
11031	123478-HxCDF	70648-26-9	0.473	JB	0.0343	5.21	1
11031	123678-HxCDF	57117-44-9	0.0907	JBQ	0.0292	5.21	1
11031	123789-HxCDF	72918-21-9	0.0734	JBQ	0.0343	5.21	1
11031	234678-HxCDF	60851-34-5	0.116	JB	0.0319	5.21	1
11031	1234678-HpCDF	67562-39-4	1.10	JB	0.0158	5.21	1
11031	1234789-HpCDF	55673-89-7	0.126	JB	0.0250	5.21	1
11031	OCDF	39001-02-0	2.82	JB	0.0345	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	81	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	85	28 - 130
13C12-1234678-HpCDD	94	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	67	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	74	28 - 136
13C12-123789-HxCDF	74	29 - 147
13C12-1234678-HpCDF	100	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	72	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439943
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD139 SDG#: DX151-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-139-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-139-SA7-SB-2.0-3.0

LLI Sample # SW 6439943
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 12:05

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD139 SDG#: DX151-01

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 14:17	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439944
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD033 SDG#: DX151-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439944
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD033 SDG#: DX151-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0307 U	0.0307	1.14	1
11031	12378-PeCDD	40321-76-4	0.0393 JQ	0.0274	5.70	1
11031	123478-HxCDD	39227-28-6	0.0241 JQ	0.0176	5.70	1
11031	123678-HxCDD	57653-85-7	0.0230 JQ	0.0171	5.70	1
11031	123789-HxCDD	19408-74-3	0.0598 JBQ	0.0174	5.70	1
11031	1234678-HpCDD	35822-46-9	0.233 JB	0.0241	5.70	1
11031	OCDD	3268-87-9	0.626 JB	0.0318	11.4	1
11031	2378-TCDF	51207-31-9	0.0244 U	0.0244	1.14	1
11031	12378-PeCDF	57117-41-6	0.0268 JBQ	0.0168	5.70	1
11031	23478-PeCDF	57117-31-4	0.0522 JB	0.0159	5.70	1
11031	123478-HxCDF	70648-26-9	0.0449 JBQ	0.0137	5.70	1
11031	123678-HxCDF	57117-44-9	0.0196 JB	0.0115	5.70	1
11031	123789-HxCDF	72918-21-9	0.0926 JB	0.0137	5.70	1
11031	234678-HxCDF	60851-34-5	0.0437 JB	0.0122	5.70	1
11031	1234678-HpCDF	67562-39-4	0.120 JB	0.0113	5.70	1
11031	1234789-HpCDF	55673-89-7	0.0505 JB	0.0171	5.70	1
11031	OCDF	39001-02-0	0.225 JBQ	0.0340	11.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	73	32 - 141
13C12-123678-HxCDD	75	28 - 130
13C12-123789-HxCDD	75	28 - 130
13C12-1234678-HpCDD	84	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	59	24 - 169
13C12-12378-PeCDF	71	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	68	26 - 123
13C12-234678-HxCDF	65	28 - 136
13C12-123789-HxCDF	66	29 - 147
13C12-1234678-HpCDF	85	28 - 143
13C12-1234789-HpCDF	64	26 - 138
13C12-OCDF	58	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-033-SA5DS-SB-2.0-3.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439944
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD033 SDG#: DX151-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA5DS-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA5DS-SB-2.0-3.0

LLI Sample # SW 6439944
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 11:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD033 SDG#: DX151-02

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 15:14	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439945
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439945
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0349	U	0.0349	1.10	1
11031	12378-PeCDD	40321-76-4	0.0273	U	0.0273	5.49	1
11031	123478-HxCDD	39227-28-6	0.0183	U	0.0183	5.49	1
11031	123678-HxCDD	57653-85-7	0.0442	JQ	0.0191	5.49	1
11031	123789-HxCDD	19408-74-3	0.0445	JBQ	0.0172	5.49	1
11031	1234678-HpCDD	35822-46-9	0.233	JBQ	0.0260	5.49	1
11031	OCDD	3268-87-9	0.630	JBQ	0.0353	11.0	1
11031	2378-TCDF	51207-31-9	0.0289	U	0.0289	1.10	1
11031	12378-PeCDF	57117-41-6	0.0286	JBQ	0.0161	5.49	1
11031	23478-PeCDF	57117-31-4	0.0434	JBQ	0.0158	5.49	1
11031	123478-HxCDF	70648-26-9	0.0416	JBQ	0.0187	5.49	1
11031	123678-HxCDF	57117-44-9	0.0281	JB	0.0148	5.49	1
11031	123789-HxCDF	72918-21-9	0.107	JBQ	0.0161	5.49	1
11031	234678-HxCDF	60851-34-5	0.0515	JBQ	0.0139	5.49	1
11031	1234678-HpCDF	67562-39-4	0.142	JB	0.0108	5.49	1
11031	1234789-HpCDF	55673-89-7	0.0155	U	0.0155	5.49	1
11031	OCDF	39001-02-0	0.174	JBQ	0.0374	11.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	80	25 - 181
13C12-123478-HxCDD	76	32 - 141
13C12-123678-HxCDD	74	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	83	23 - 140
13C12-OCDD	81	17 - 157
13C12-2378-TCDF	62	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	62	26 - 123
13C12-234678-HxCDF	67	28 - 136
13C12-123789-HxCDF	65	29 - 147
13C12-1234678-HpCDF	83	28 - 143
13C12-1234789-HpCDF	66	26 - 138
13C12-OCDF	62	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439945
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0

LLI Sample # SW 6439945
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03BKG

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 16:11	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439946
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439946
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	23.0		0.0691	1.14	1
11031	12378-PeCDD	40321-76-4	109		0.0555	5.69	1
11031	123478-HxCDD	39227-28-6	101		0.0562	5.69	1
11031	123678-HxCDD	57653-85-7	105		0.0603	5.69	1
11031	123789-HxCDD	19408-74-3	114	B	0.0558	5.69	1
11031	1234678-HpCDD	35822-46-9	111	B	0.0688	5.69	1
11031	OCDD	3268-87-9	220	B	0.0566	11.4	1
11031	2378-TCDF	51207-31-9	21.8		0.0858	1.14	1
11031	12378-PeCDF	57117-41-6	108	B	0.0532	5.69	1
11031	23478-PeCDF	57117-31-4	105	B	0.0576	5.69	1
11031	123478-HxCDF	70648-26-9	111	B	0.0936	5.69	1
11031	123678-HxCDF	57117-44-9	107	B	0.0780	5.69	1
11031	123789-HxCDF	72918-21-9	116	B	0.0917	5.69	1
11031	234678-HxCDF	60851-34-5	111	B	0.0794	5.69	1
11031	1234678-HpCDF	67562-39-4	99.5	B	0.0434	5.69	1
11031	1234789-HpCDF	55673-89-7	109	B	0.0680	5.69	1
11031	OCDF	39001-02-0	217	B	0.0691	11.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	63	25 - 164
13C12-12378-PeCDD	66	25 - 181
13C12-123478-HxCDD	69	32 - 141
13C12-123678-HxCDD	64	28 - 130
13C12-123789-HxCDD	68	28 - 130
13C12-1234678-HpCDD	71	23 - 140
13C12-OCDD	71	17 - 157
13C12-2378-TCDF	56	24 - 169
13C12-12378-PeCDF	62	24 - 185
13C12-23478-PeCDF	56	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	59	26 - 123
13C12-234678-HxCDF	56	28 - 136
13C12-123789-HxCDF	55	29 - 147
13C12-1234678-HpCDF	75	28 - 143
13C12-1234789-HpCDF	55	26 - 138
13C12-OCDF	55	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439946
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-034-SA5DS-SB-4.0-5.0MS Soil**
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MS

LLI Sample # SW 6439946
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MS

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 17:07	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439947
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439947
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	22.7		0.0399	1.14	1
11031	12378-PeCDD	40321-76-4	115		0.0402	5.69	1
11031	123478-HxCDD	39227-28-6	114		0.0395	5.69	1
11031	123678-HxCDD	57653-85-7	106		0.0383	5.69	1
11031	123789-HxCDD	19408-74-3	116	B	0.0372	5.69	1
11031	1234678-HpCDD	35822-46-9	114	B	0.0540	5.69	1
11031	OCDD	3268-87-9	224	B	0.0424	11.4	1
11031	2378-TCDF	51207-31-9	22.6		0.0469	1.14	1
11031	12378-PeCDF	57117-41-6	111	B	0.0331	5.69	1
11031	23478-PeCDF	57117-31-4	105	B	0.0314	5.69	1
11031	123478-HxCDF	70648-26-9	113	B	0.0565	5.69	1
11031	123678-HxCDF	57117-44-9	113	B	0.0503	5.69	1
11031	123789-HxCDF	72918-21-9	113	B	0.0527	5.69	1
11031	234678-HxCDF	60851-34-5	116	B	0.0528	5.69	1
11031	1234678-HpCDF	67562-39-4	105	B	0.0399	5.69	1
11031	1234789-HpCDF	55673-89-7	112	B	0.0550	5.69	1
11031	OCDF	39001-02-0	231	B	0.0465	11.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	66	25 - 164
13C12-12378-PeCDD	68	25 - 181
13C12-123478-HxCDD	66	32 - 141
13C12-123678-HxCDD	70	28 - 130
13C12-123789-HxCDD	72	28 - 130
13C12-1234678-HpCDD	76	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	56	24 - 169
13C12-12378-PeCDF	64	24 - 185
13C12-23478-PeCDF	62	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	63	26 - 123
13C12-234678-HxCDF	61	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	76	28 - 143
13C12-1234789-HpCDF	62	26 - 138
13C12-OCDF	60	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439947
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-034-SA5DS-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-4.0-5.0MSD

LLI Sample # SW 6439947
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:53

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD034 SDG#: DX151-03MSD

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 18:04	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439948
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD349 SDG#: DX151-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439948
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD349 SDG#: DX151-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0249	U	0.0249	1.11	1
11031	12378-PeCDD	40321-76-4	0.0265	JQ	0.0232	5.55	1
11031	123478-HxCDD	39227-28-6	0.0187	U	0.0187	5.55	1
11031	123678-HxCDD	57653-85-7	0.0328	JQ	0.0190	5.55	1
11031	123789-HxCDD	19408-74-3	0.0563	JB	0.0175	5.55	1
11031	1234678-HpCDD	35822-46-9	0.249	JBQ	0.0249	5.55	1
11031	OCDD	3268-87-9	0.511	JB	0.0311	11.1	1
11031	2378-TCDF	51207-31-9	0.0235	U	0.0235	1.11	1
11031	12378-PeCDF	57117-41-6	0.0323	JB	0.0141	5.55	1
11031	23478-PeCDF	57117-31-4	0.0446	JBQ	0.0149	5.55	1
11031	123478-HxCDF	70648-26-9	0.0514	JBQ	0.0162	5.55	1
11031	123678-HxCDF	57117-44-9	0.0409	JBQ	0.0136	5.55	1
11031	123789-HxCDF	72918-21-9	0.0594	JB	0.0144	5.55	1
11031	234678-HxCDF	60851-34-5	0.0419	JBQ	0.0126	5.55	1
11031	1234678-HpCDF	67562-39-4	0.106	JB	0.0107	5.55	1
11031	1234789-HpCDF	55673-89-7	0.0526	JB	0.0155	5.55	1
11031	OCDF	39001-02-0	0.174	JBQ	0.0323	11.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	82	32 - 141
13C12-123678-HxCDD	82	28 - 130
13C12-123789-HxCDD	85	28 - 130
13C12-1234678-HpCDD	88	23 - 140
13C12-OCDD	88	17 - 157
13C12-2378-TCDF	64	24 - 169
13C12-12378-PeCDF	74	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	60	26 - 152
13C12-123678-HxCDF	70	26 - 123
13C12-234678-HxCDF	73	28 - 136
13C12-123789-HxCDF	71	29 - 147
13C12-1234678-HpCDF	91	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	68	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439948
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD349 SDG#: DX151-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-034-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-034-SA5DS-SB-9.0-10.0

LLI Sample # SW 6439948
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 09:58

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD349 SDG#: DX151-04

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 19:01	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439949
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD039 SDG#: DX151-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439949
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD039 SDG#: DX151-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0260 U	0.0260	1.08	1
11031	12378-PeCDD	40321-76-4	0.0475 JQ	0.0257	5.42	1
11031	123478-HxCDD	39227-28-6	0.0298 J	0.0181	5.42	1
11031	123678-HxCDD	57653-85-7	0.0385 JQ	0.0199	5.42	1
11031	123789-HxCDD	19408-74-3	0.0325 JB	0.0178	5.42	1
11031	1234678-HpCDD	35822-46-9	0.247 JBQ	0.0257	5.42	1
11031	OCDD	3268-87-9	0.558 JB	0.0309	10.8	1
11031	2378-TCDF	51207-31-9	0.0208 U	0.0208	1.08	1
11031	12378-PeCDF	57117-41-6	0.0388 JBQ	0.0151	5.42	1
11031	23478-PeCDF	57117-31-4	0.0741 JB	0.0142	5.42	1
11031	123478-HxCDF	70648-26-9	0.0451 JBQ	0.0146	5.42	1
11031	123678-HxCDF	57117-44-9	0.0565 JB	0.0125	5.42	1
11031	123789-HxCDF	72918-21-9	0.0455 JBQ	0.0120	5.42	1
11031	234678-HxCDF	60851-34-5	0.0576 JBQ	0.0114	5.42	1
11031	1234678-HpCDF	67562-39-4	0.155 JBQ	0.0111	5.42	1
11031	1234789-HpCDF	55673-89-7	0.0511 JBQ	0.0149	5.42	1
11031	OCDF	39001-02-0	0.165 JB	0.0242	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	74	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	85	17 - 157
13C12-2378-TCDF	61	24 - 169
13C12-12378-PeCDF	68	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	63	26 - 123
13C12-234678-HxCDF	68	28 - 136
13C12-123789-HxCDF	71	29 - 147
13C12-1234678-HpCDF	82	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	67	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439949
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD039 SDG#: DX151-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-039-SA5DS-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-039-SA5DS-SB-3.0-4.0

LLI Sample # SW 6439949
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 14:35

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD039 SDG#: DX151-05

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 19:57	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439950
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DDP03 SDG#: DX151-06FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	12.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439950
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DDP03 SDG#: DX151-06FD*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0345	JQ	0.0259	1.13	1
11031	12378-PeCDD	40321-76-4	0.128	JQ	0.0266	5.63	1
11031	123478-HxCDD	39227-28-6	0.0475	JQ	0.0196	5.63	1
11031	123678-HxCDD	57653-85-7	0.0734	JQ	0.0196	5.63	1
11031	123789-HxCDD	19408-74-3	0.111	JBQ	0.0194	5.63	1
11031	1234678-HpCDD	35822-46-9	0.254	JBQ	0.0253	5.63	1
11031	OCDD	3268-87-9	0.413	JB	0.0313	11.3	1
11031	2378-TCDF	51207-31-9	0.0237	U	0.0237	1.13	1
11031	12378-PeCDF	57117-41-6	0.190	JB	0.0157	5.63	1
11031	23478-PeCDF	57117-31-4	0.174	JB	0.0166	5.63	1
11031	123478-HxCDF	70648-26-9	0.135	JBQ	0.0228	5.63	1
11031	123678-HxCDF	57117-44-9	0.108	JB	0.0170	5.63	1
11031	123789-HxCDF	72918-21-9	0.143	JBQ	0.0163	5.63	1
11031	234678-HxCDF	60851-34-5	0.0900	JBQ	0.0157	5.63	1
11031	1234678-HpCDF	67562-39-4	0.126	JB	0.0119	5.63	1
11031	1234789-HpCDF	55673-89-7	0.0575	JB	0.0151	5.63	1
11031	OCDF	39001-02-0	0.187	JBQ	0.0318	11.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	84	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	92	28 - 130
13C12-123789-HxCDD	92	28 - 130
13C12-1234678-HpCDD	99	23 - 140
13C12-OCDD	99	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	79	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	65	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	78	29 - 147
13C12-1234678-HpCDF	83	28 - 143
13C12-1234789-HpCDF	79	26 - 138
13C12-OCDF	77	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439950
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DDP03 SDG#: DX151-06FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP03-SA5DS-QC-101711 Soil
SSFL Area IV Collocated Soil Sampling
DUP03-SA5DS-QC-101711

LLI Sample # SW 6439950
LLI Group # 1271745
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/17/2011 10:44

Submitted: 10/18/2011 09:25
Reported: 11/04/2011 00:39

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DDP03 SDG#: DX151-06FD*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301001	10/30/2011 20:54	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301001	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162402B	10/25/2011 18:30	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271745
Reported: 11/04/11 at 12:39 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11298162402B	Sample number(s): 6439943-6439950								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11301001	Sample number(s): 6439943-6439950								
2378-TCDD	0.0315 U	0.0315	1.00	ng/kg	96		67-158		
12378-PeCDD	0.0271 U	0.0271	5.00	ng/kg	96		70-142		
123478-HxCDD	0.0160 U	0.0160	5.00	ng/kg	91		70-164		
123678-HxCDD	0.0156 U	0.0156	5.00	ng/kg	88		76-134		
123789-HxCDD	0.0409 J	0.0163	5.00	ng/kg	95		64-162		
1234678-HpCDD	0.224 J	0.0203	5.00	ng/kg	97		70-140		
OCDD	0.412 J	0.0275	10.0	ng/kg	95		78-144		
2378-TCDF	0.0293 U	0.0293	1.00	ng/kg	93		75-158		
12378-PeCDF	0.0229 J	0.0162	5.00	ng/kg	94		80-134		
23478-PeCDF	0.0728 J	0.0166	5.00	ng/kg	92		68-160		
123478-HxCDF	0.0465 J	0.0153	5.00	ng/kg	98		72-134		
123678-HxCDF	0.0250 J	0.0127	5.00	ng/kg	95		84-130		
123789-HxCDF	0.0278 J	0.0136	5.00	ng/kg	98		78-130		
234678-HxCDF	0.0347 J	0.0128	5.00	ng/kg	96		70-156		
1234678-HpCDF	0.159 J	0.0111	5.00	ng/kg	89		82-122		
1234789-HpCDF	0.0467 J	0.0180	5.00	ng/kg	92		78-138		
OCDF	0.202 J	0.0313	10.0	ng/kg	96		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11298162402B	Sample number(s): 6439943-6439950 BKG: P439922								
Moisture Content by 160.3						12.2	12.5	2	20
Batch number: 11301001	Sample number(s): 6439943-6439950 UNSPK: 6439945								
2378-TCDD	101	99	67-158	1	25				
12378-PeCDD	96	101	70-142	5	25				
123478-HxCDD	89	100	70-164	12	25				
123678-HxCDD	92	93	76-134	1	25				
123789-HxCDD	100	101	64-162	2	25				
1234678-HpCDD	98	100	70-140	3	25				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271745
Reported: 11/04/11 at 12:39 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
OCDD	96	98	78-144	2	25				
2378-TCDF	96	99	75-158	4	25				
12378-PeCDF	95	98	80-134	3	25				
23478-PeCDF	92	92	68-160	1	25				
123478-HxCDF	97	99	72-134	2	25				
123678-HxCDF	94	99	84-130	5	25				
123789-HxCDF	102	99	78-130	3	25				
234678-HxCDF	97	102	70-156	4	25				
1234678-HpCDF	87	92	82-122	6	25				
1234789-HpCDF	96	99	78-138	3	25				
OCDF	95	101	63-170	6	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11301001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6439943	72	69	67	77	74	74
6439944	69	67	59	68	65	66
6439945	72	71	52	62	67	65
6439946	63	56	52	59	56	55
6439947	66	62	59	63	61	69
6439948	74	67	60	70	73	71
6439949	67	67	59	63	68	71
6439950	78	72	52	65	78	78
Blank	73	70	60	71	74	74
MS	63	56	52	59	56	55
MSD	66	62	59	63	61	69
OPR	70	67	63	71	72	78
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6439943	100	76	72	81	83	85
6439944	85	64	58	78	73	75
6439945	83	66	62	80	76	74
6439946	75	55	55	66	69	64
6439947	76	62	60	68	66	70
6439948	91	71	68	78	82	82
6439949	82	70	67	74	80	74
6439950	83	79	77	84	89	92
Blank	96	73	69	83	89	87
MS	75	55	55	66	69	64
MSD	76	62	60	68	66	70
OPR	92	77	72	77	81	80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271745
Reported: 11/04/11 at 12:39 AM

Surrogate Quality Control

Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6439943	85	94	95	65	75	
6439944	75	84	80	59	71	
6439945	79	83	81	62	75	
6439946	68	71	71	56	62	
6439947	72	76	76	56	64	
6439948	85	88	88	64	74	
6439949	80	82	85	61	68	
6439950	92	99	99	70	79	
Blank	90	97	96	61	76	
MS	68	71	71	56	62	
MSD	72	76	76	56	64	
OPR	84	90	87	61	71	
Limits:	28-130	23-140	17-157	24-169	24-185	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1271745 62439943-50

CHAIN OF CUSTODY RECORD

CDM — SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010B/7000B/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dioxins/ EPA 8270	Other Instructions and Notes
SL-139-SA7-SB-2.5	10.17.11	1203	SOIL	NONE	2-Encores										X											
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	1-SS Sleeve			X	X																	
SL-139-SA7-SB-2.0-3.0	10.17.11	1223	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X					X	X	X	X		
SL-033-SA5DS-SB-2.0-3.0	10.17.11	1158	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-034-SA5DS-SB-4.0-5.0MS	10.17.11	1053	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X													MS/MSD
SL-034-SA5DS-SB-9.0-10.0	10.17.11	0958	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-039-SA5DS-SB-3.0-4.0	10.17.11	1435	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X												
DUP03-SA5DS-QC-101711	10.17.11	1044	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
EB-SA5DS-SB-101711	10.17.11	1430	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-OPT crew
TB-101711	10.17.11	0800	WATER	NONE	1-1 L Amber														X							
TB-101711	10.17.11	0800	SOIL	NONE	1-4 oz Jar														X							
TB-101711	10.17.11	0800	WATER	NONE	2-40 mL Vials										X											

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	
	10/17/2011 / 1630		10/18/11 0925
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	

Laboratory:
Lancaster Laboratories, Inc.

Nicole Maljovec

From: Bloisa, Peggy [BloisaMJ@cdm.com]
Sent: Thursday, October 27, 2011 11:56 AM
To: Nicole Maljovec
Cc: Hartman, Pamela
Subject: Sample SL-139-SA7-SB-2.0-3.0
Attachments: COC_10_17_11 revised.xlsx

Hi Nicole – the above referenced sample collected on 10/17/11 had two different collection times for the sleeve and the jars. Please use the earlier time (1205) for both containers.

See attached revised COC.

Thanks, Peggy

Peggy Bloisa, P.G.
CDM
|100 Pringle Avenue Suite 300| Walnut Creek, CA 94596|
|Phone and Fax: (925) 296-8053|


Please consider the environment before printing this email.

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers
Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS									SECONDARY FOR ALL LOCATIONS										Other Instructions and Notes
						*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs LPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Inorganics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
SL-139-SA7-SB-2.5	10.17.11	1203	SOIL	NONE	2-Encores										X										
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	1-SS Sleeve			X	X																
SL-139-SA7-SB-2.0-3.0	10.17.11	1205	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X				X	X	X	X		
SL-033-SA5DS-SB-2.0-3.0	10.17.11	1158	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-034-SA5DS-SB-4.0-5.0MS	10.17.11	1053	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X												MS/MSD
SL-034-SA5DS-SB-9.0-10.0	10.17.11	0958	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-039-SA5DS-SB-3.0-4.0	10.17.11	1435	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X											
DUP03-SA5DS-QC-101711	10.17.11	1044	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
EB-SA5DS-SB-101711	10.17.11	1430	WATER	NONE	1-1 L Amber													X							HGL ASTM II WATER-DPT crew
TB-101711	10.17.11	0800	WATER	NONE	1-1 L Amber													X							
TB-101711	10.17.11	0800	SOIL	NONE	1-4 oz Jar													X							
TB-101711	10.17.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/17/2011 / 1630		Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9858 6828 6770	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 18, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/19/2011
Group Number: 1271993
SDG: DE271
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-013-SA5DS-SB-4.0-5.0 Soil	6441963
SL-015-SA5DS-SB-3.5-4.5 Soil	6441964
SL-020-SA7-SB-4.0-5.0 Soil	6441965
SL-020-SA7-SB-9.0-10.0 Soil	6441966
SL-140-SA7-SB-3.0-4.0 Soil	6441967
EB-SA7-SB-101811 Water	6441968
TB-101811 Water	6441969
TB-101811 Sand	6441970
TB-101811 Water	6441971
EB-SA5DS-SB-101811 Water	6441972

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441963
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL013 SDG#: DE271-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	570		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,800		1
04688	Benzoic acid	65-85-0	1,200		190	570		1
04688	Benzyl alcohol	100-51-6	190	U	190	570		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	38	U	38	190		1
04688	4-Chloroaniline	106-47-8	76	U	76	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	38	U	38	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	380		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	38	U	38	190		1
04688	3,5-Dimethylphenol	108-68-9	38	U	38	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	570		1
04688	2,4-Dinitrophenol	51-28-5	380	U	380	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	38	U	38	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	76	U	76	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	570		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	38	U	38	190		1
04688	4-Methylphenol	106-44-5	38	U	38	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	38	U	38	190		1
04688	4-Nitroaniline	100-01-6	76	U	76	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	570		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	570		1
04688	Phenol	108-95-2	19	U	19	190		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441963
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL013 SDG#: DE271-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	38	U	38	190		1
04688	2,4,6-Trichlorophenol	88-06-2	38	U	38	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.74	U	0.74	1.9		1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9		1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.74	U	0.74	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.74	U	0.74	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.74	U	0.74	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.74	U	0.74	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.74	U	0.74	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20		1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20		1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.74	U	0.74	1.9		1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20		1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20		1
10138	Fluoranthene	206-44-0	0.74	U	0.74	1.9		1
10138	Fluorene	86-73-7	0.74	U	0.74	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.74	U	0.74	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.74	U	0.74	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.74	U	0.74	1.9		1
10138	Naphthalene	91-20-3	0.74	U	0.74	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.74	U	0.74	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20		1
10138	Phenanthrene	85-01-8	0.74	U	0.74	1.9		1
10138	Pyrene	129-00-0	0.74	U	0.74	1.9		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7		1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9		1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9		1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9		1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9		1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9		1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9		1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9		1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9		1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	23,300		6.53	21.6		1
07914	Boron	7440-42-8	0.388	U	0.388	5.39		1
01650	Calcium	7440-70-2	3,120		2.70	21.6		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441963
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL013 SDG#: DE271-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	25,000		2.82	21.6		1
01656	Lithium	7439-93-2	23.2		0.67	2.2		1
01657	Magnesium	7439-95-4	5,430		0.475	10.8		1
06958	Manganese	7439-96-5	281		0.0388	0.539		1
10145	Phosphorus	7723-14-0	491		0.378	10.8		1
01662	Potassium	7440-09-7	1,790		12.2	53.9		1
01667	Sodium	7440-23-5	102	J	6.42	108		1
07968	Strontium	7440-24-6	25.4		0.0270	0.539		1
06969	Tin	7440-31-5	2.67	J	0.345	10.8		1
06970	Titanium	7440-32-6	1,090		0.0766	1.08		1
10146	Zirconium	7440-67-7	7.64		0.496	5.39		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.128	J	0.0806	0.218		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.34		0.0871	0.436		2
06126	Barium	7440-39-3	92.1		0.115	0.436		2
06127	Beryllium	7440-41-7	0.896		0.0174	0.109		2
06128	Cadmium	7440-43-9	0.143		0.0479	0.109		2
06131	Chromium	7440-47-3	45.8		0.131	0.436		2
06132	Cobalt	7440-48-4	9.22		0.0218	0.109		2
06133	Copper	7440-50-8	8.96		0.0871	0.436		2
06135	Lead	7439-92-1	7.64		0.0111	0.218		2
06138	Molybdenum	7439-98-7	0.585		0.0544	0.109		2
06139	Nickel	7440-02-0	16.7		0.109	0.436		2
06141	Selenium	7782-49-2	0.304	J	0.0632	0.436		2
06142	Silver	7440-22-4	0.0267	J	0.0155	0.109		2
06145	Thallium	7440-28-0	0.272		0.0327	0.109		2
06148	Vanadium	7440-62-2	78.1		0.0240	0.109		2
06149	Zinc	7440-66-6	60.0		0.610	3.27		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0078	U	0.0078	0.111		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.2		0.92	1.2		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.2	U	10.2	34.0		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.52	J	0.23	1.1		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441963
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL013 SDG#: DE271-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.67	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	11.7	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11293SLB026	10/23/2011 00:20	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 16:17	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11293SLB026	10/20/2011 16:45	JoElla L Rice	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 03:23	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
07914	Boron	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01656	Lithium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
10145	Phosphorus	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
07968	Strontium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
06969	Tin	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
06970	Titanium	SW-846 6010B	1	112935708007	10/28/2011 04:41	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112935708007	10/26/2011 20:38	John W Yanzuk II	1
06124	Antimony	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112931026004D	10/24/2011 14:28	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2

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Analysis Report

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441963
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL013 SDG#: DE271-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112931026004C	10/24/2011 14:28	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112931026004B	10/24/2011 14:28	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112931026004A	10/24/2011 14:28	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112935711007	10/24/2011 17:39	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112935708007	10/21/2011 09:42	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112931026004	10/21/2011 09:42	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112935711007	10/21/2011 11:37	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 09:37	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202B	10/24/2011 15:17	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 13:36	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202B	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

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Analysis Report

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441964
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL015 SDG#: DE271-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	390	J	180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180		1
04688	4-Chloroaniline	106-47-8	74	U	74	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	74	U	74	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	37	U	37	180		1
04688	4-Methylphenol	106-44-5	37	U	37	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	37	U	37	180		1
04688	4-Nitroaniline	100-01-6	74	U	74	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1
04688	Phenol	108-95-2	18	U	18	180		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441964
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL015 SDG#: DE271-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.73	U	0.73	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.73	U	0.73	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.73	U	0.73	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.73	U	0.73	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.73	U	0.73	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.73	U	0.73	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	20		1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	20		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.73	U	0.73	1.8		1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	20		1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.5	U	6.5	20		1
10138	Fluoranthene	206-44-0	0.73	U	0.73	1.8		1
10138	Fluorene	86-73-7	0.73	U	0.73	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	U	0.73	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.73	U	0.73	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.73	U	0.73	1.8		1
10138	Naphthalene	91-20-3	0.73	U	0.73	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.73	U	0.73	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	20		1
10138	Phenanthrene	85-01-8	0.73	U	0.73	1.8		1
10138	Pyrene	129-00-0	0.73	U	0.73	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9		1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,800		6.37	21.1		1
07914	Boron	7440-42-8	0.379	U	0.379	5.27		1
01650	Calcium	7440-70-2	3,190		2.63	21.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441964
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL015 SDG#: DE271-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	23,800	2.75	21.1		1
01656	Lithium	7439-93-2	20.4	0.65	2.1		1
01657	Magnesium	7439-95-4	5,530	0.464	10.5		1
06958	Manganese	7439-96-5	239	0.0379	0.527		1
10145	Phosphorus	7723-14-0	550	0.369	10.5		1
01662	Potassium	7440-09-7	2,080	11.9	52.7		1
01667	Sodium	7440-23-5	109	6.27	105		1
07968	Strontium	7440-24-6	25.6	0.0263	0.527		1
06969	Tin	7440-31-5	2.54 J	0.337	10.5		1
06970	Titanium	7440-32-6	1,040	0.0748	1.05		1
10146	Zirconium	7440-67-7	6.73	0.485	5.27		1
	SW-846 6020		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.150 J	0.0803	0.217		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.91	0.0868	0.434		2
06126	Barium	7440-39-3	90.8	0.115	0.434		2
06127	Beryllium	7440-41-7	0.774	0.0174	0.108		2
06128	Cadmium	7440-43-9	0.151	0.0477	0.108		2
06131	Chromium	7440-47-3	41.8	0.130	0.434		2
06132	Cobalt	7440-48-4	9.72	0.0217	0.108		2
06133	Copper	7440-50-8	8.23	0.0868	0.434		2
06135	Lead	7439-92-1	7.22	0.0111	0.217		2
06138	Molybdenum	7439-98-7	0.498	0.0542	0.108		2
06139	Nickel	7440-02-0	14.6	0.108	0.434		2
06141	Selenium	7782-49-2	0.303 J	0.0629	0.434		2
06142	Silver	7440-22-4	0.0200 J	0.0154	0.108		2
06145	Thallium	7440-28-0	0.226	0.0325	0.108		2
06148	Vanadium	7440-62-2	72.2	0.0239	0.108		2
06149	Zinc	7440-66-6	60.2	0.607	3.25		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076 U	0.0076	0.107		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.5	0.89	1.1		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10 U	10	33.2		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	2.1	0.22	1.1		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441964
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL015 SDG#: DE271-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.76	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	9.6	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11293SLB026	10/23/2011 01:36	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 16:51	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11293SLB026	10/20/2011 16:45	JoElla L Rice	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 03:42	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
01643	Aluminum	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
07914	Boron	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01656	Lithium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
10145	Phosphorus	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
07968	Strontium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
06969	Tin	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
06970	Titanium	SW-846 6010B	1	112935708007	10/28/2011 05:04	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112935708007	10/26/2011 21:02	John W Yanzuk II	1
06124	Antimony	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112931026004D	10/24/2011 14:31	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2

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Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441964
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL015 SDG#: DE271-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112931026004C	10/24/2011 14:31	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112931026004B	10/24/2011 14:31	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112931026004A	10/24/2011 14:31	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112935711007	10/24/2011 17:40	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112935708007	10/21/2011 09:42	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112931026004	10/21/2011 09:42	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112935711007	10/21/2011 11:37	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 10:21	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202B	10/24/2011 16:49	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 14:43	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202B	10/20/2011 07:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	540		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	J	180	540		1
04688	Benzyl alcohol	100-51-6	180	U	180	540		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	72	U	72	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	72	U	72	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	540		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	540		1
04688	Phenol	108-95-2	18	U	18	180		1

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Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8		1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.8		1
10138	Anthracene	120-12-7	0.35	U	0.35	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.71	U	0.71	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.74	J	0.71	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19		1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19		1
10138	Chrysene	218-01-9	0.39	J	0.35	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8		1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19		1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	9.9	J	6.4	19		1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8		1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8		1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19		1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8		1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0		24.27
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.8		1
10225	PCB-1260	11096-82-5	1.6	J	0.42	1.8		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	540		1
10501	Isopropanol	67-63-0	110	U	110	540		1
10501	Methanol	67-56-1	110	U	110	540		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.4	U	5.4	11		1
08283	Ethylene glycol	107-21-1	5.4	U	5.4	11		1
08283	Propylene glycol	57-55-6	5.4	U	5.4	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.8		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.8		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.8		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.43	U	0.43	1.3		1
10199	EFH (C15-C20)	n.a.	0.43	U	0.43	1.3		1
10199	EFH (C21-C30)	n.a.	4.4		0.43	1.3		1
10199	EFH (C30 - C40)	n.a.	8.1		0.43	1.3		1
10199	EFH (C8-C11)	n.a.	0.43	U	0.43	1.3		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,900		6.39	21.1		1
07914	Boron	7440-42-8	0.380	U	0.380	5.28		1
01650	Calcium	7440-70-2	2,540		2.64	21.1		1
01654	Iron	7439-89-6	20,300		2.76	21.1		1
01656	Lithium	7439-93-2	23.1		0.66	2.1		1
01657	Magnesium	7439-95-4	4,560		0.465	10.6		1
06958	Manganese	7439-96-5	204		0.0380	0.528		1
10145	Phosphorus	7723-14-0	221		0.370	10.6		1
01662	Potassium	7440-09-7	1,810		11.9	52.8		1
01667	Sodium	7440-23-5	129		6.29	106		1
07968	Strontium	7440-24-6	17.5		0.0264	0.528		1
06969	Tin	7440-31-5	2.63	J	0.338	10.6		1
06970	Titanium	7440-32-6	1,090		0.0750	1.06		1
10146	Zirconium	7440-67-7	0.913	J	0.486	5.28		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	

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Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0932 J	0.0782	0.211		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.80	0.0845	0.423		2
06126	Barium	7440-39-3	77.4	0.112	0.423		2
06127	Beryllium	7440-41-7	0.654	0.0169	0.106		2
06128	Cadmium	7440-43-9	0.0809 J	0.0465	0.106		2
06131	Chromium	7440-47-3	20.1	0.127	0.423		2
06132	Cobalt	7440-48-4	5.59	0.0211	0.106		2
06133	Copper	7440-50-8	7.09	0.0845	0.423		2
06135	Lead	7439-92-1	6.15	0.0108	0.211		2
06138	Molybdenum	7439-98-7	0.487	0.0528	0.106		2
06139	Nickel	7440-02-0	10.7	0.106	0.423		2
06141	Selenium	7782-49-2	0.144 J	0.0613	0.423		2
06142	Silver	7440-22-4	0.0314 J	0.0150	0.106		2
06145	Thallium	7440-28-0	0.306	0.0317	0.106		2
06148	Vanadium	7440-62-2	39.0	0.0232	0.106		2
06149	Zinc	7440-66-6	54.1	0.592	3.17		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0074 U	0.0074	0.105		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.4	0.86	1.1		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7 U	9.7	32.3		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.44 J	0.22	1.1		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19 U	0.19	0.54		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.72	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	7.2	0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

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Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-020-SA7-SB-4.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11293SLB026	10/23/2011 02:01	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/22/2011 17:23	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11293SLB026	10/20/2011 16:45	JoElla L Rice	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11293A16A	10/21/2011 07:03	Laura M Krieger	24.27
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129225896	10/19/2011 22:00	Lois E Hiltz	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129225896	10/19/2011 22:01	Lois E Hiltz	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 04:01	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112920034A	10/19/2011 20:34	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112930029A	10/20/2011 21:19	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 19:02	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 05:15	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112920034A	10/19/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112930029A	10/20/2011 16:05	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
07914	Boron	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01656	Lithium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
10145	Phosphorus	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
07968	Strontium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
06969	Tin	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
06970	Titanium	SW-846 6010B	1	112935708007	10/28/2011 05:15	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112935708007	10/26/2011 21:14	John W Yanzuk II	1
06124	Antimony	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112931026004D	10/24/2011 14:04	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2

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Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441965
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL204 SDG#: DE271-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112931026004C	10/24/2011 14:04	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112931026004B	10/24/2011 14:04	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112931026004A	10/24/2011 14:04	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112935711007	10/24/2011 17:42	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112935708007	10/21/2011 09:42	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112931026004	10/21/2011 09:42	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112935711007	10/21/2011 11:37	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 10:36	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202B	10/24/2011 17:12	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 14:57	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:21	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202B	10/20/2011 07:10	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402A	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	580		1
04688	Benzidine	92-87-5	1,400	U	1,400	3,900		1
04688	Benzoic acid	65-85-0	190	U	190	580		1
04688	Benzyl alcohol	100-51-6	190	U	190	580		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	39	U	39	190		1
04688	4-Chloroaniline	106-47-8	78	U	78	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	39	U	39	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	120	U	120	390		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	39	U	39	190		1
04688	3,5-Dimethylphenol	108-68-9	39	U	39	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	580		1
04688	2,4-Dinitrophenol	51-28-5	390	U	390	1,200		1
04688	2,4-Dinitrotoluene	121-14-2	39	U	39	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	78	U	78	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	580		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	39	U	39	190		1
04688	4-Methylphenol	106-44-5	39	U	39	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	39	U	39	190		1
04688	4-Nitroaniline	100-01-6	78	U	78	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	580		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	580		1
04688	Phenol	108-95-2	19	U	19	190		1

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Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	190	U	190	190		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	39	U	39	190		1
04688	2,4,6-Trichlorophenol	88-06-2	39	U	39	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.77	U	0.77	1.9		1
10138	Acenaphthylene	208-96-8	0.38	U	0.38	1.9		1
10138	Anthracene	120-12-7	0.38	U	0.38	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.77	U	0.77	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.77	U	0.77	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.77	U	0.77	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.77	U	0.77	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.77	U	0.77	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.9	U	6.9	21		1
10138	Di-n-butylphthalate	84-74-2	6.9	U	6.9	21		1
10138	Chrysene	218-01-9	0.38	U	0.38	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.77	U	0.77	1.9		1
10138	Diethylphthalate	84-66-2	6.9	U	6.9	21		1
10138	Dimethylphthalate	131-11-3	6.9	U	6.9	21		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.9	U	6.9	21		1
10138	Fluoranthene	206-44-0	0.77	U	0.77	1.9		1
10138	Fluorene	86-73-7	0.77	U	0.77	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.77	U	0.77	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.77	U	0.77	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.77	U	0.77	1.9		1
10138	Naphthalene	91-20-3	0.77	U	0.77	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.77	U	0.77	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.9	U	6.9	21		1
10138	Phenanthrene	85-01-8	0.77	U	0.77	1.9		1
10138	Pyrene	129-00-0	0.77	U	0.77	1.9		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.2		25.05
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.2	U	1.2	3.9		1
10225	Aroclor 5442	12642-23-8	1.2	U	1.2	3.9		1
10225	Aroclor 5460	11126-42-4	1.2	U	1.2	3.9		1
10225	PCB-1016	12674-11-2	0.39	U	0.39	2.0		1
10225	PCB-1221	11104-28-2	0.39	U	0.39	2.0		1
10225	PCB-1232	11141-16-5	0.39	U	0.39	2.0		1
10225	PCB-1242	53469-21-9	0.39	U	0.39	2.0		1
10225	PCB-1248	12672-29-6	0.39	U	0.39	2.0		1

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Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
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Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.39	U	0.39	2.0		1
10225	PCB-1260	11096-82-5	0.46	U	0.46	2.0		1
10225	PCB-1262	37324-23-5	0.39	U	0.39	2.0		1
10225	PCB-1268	11100-14-4	0.39	U	0.39	2.0		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	120	U	120	580		1
10501	Isopropanol	67-63-0	120	U	120	580		1
10501	Methanol	67-56-1	120	U	120	580		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.8	U	5.8	12		1
08283	Ethylene glycol	107-21-1	5.8	U	5.8	12		1
08283	Propylene glycol	57-55-6	5.8	U	5.8	12		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.8	U	1.8	4.1		1
10318	o-Terphenyl	84-15-1	1.8	U	1.8	4.1		1
10318	p-Terphenyl	92-94-4	1.8	U	1.8	4.1		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.47	U	0.47	1.4		1
10199	EFH (C15-C20)	n.a.	0.47	U	0.47	1.4		1
10199	EFH (C21-C30)	n.a.	1.5		0.47	1.4		1
10199	EFH (C30 - C40)	n.a.	4.1		0.47	1.4		1
10199	EFH (C8-C11)	n.a.	0.47	U	0.47	1.4		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	20,300		6.80	22.5		1
07914	Boron	7440-42-8	0.404	U	0.404	5.62		1
01650	Calcium	7440-70-2	1,650		2.81	22.5		1
01654	Iron	7439-89-6	20,900		2.93	22.5		1
01656	Lithium	7439-93-2	22.2		0.70	2.2		1
01657	Magnesium	7439-95-4	2,880		0.494	11.2		1
06958	Manganese	7439-96-5	129		0.0404	0.562		1
10145	Phosphorus	7723-14-0	245		0.393	11.2		1
01662	Potassium	7440-09-7	1,140		12.7	56.2		1
01667	Sodium	7440-23-5	102	J	6.68	112		1
07968	Strontium	7440-24-6	11.3		0.0281	0.562		1
06969	Tin	7440-31-5	2.58	J	0.359	11.2		1
06970	Titanium	7440-32-6	828		0.0798	1.12		1
10146	Zirconium	7440-67-7	1.57	J	0.517	5.62		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.230 J	0.0864	0.234		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	24.6	0.0935	0.467		2
06126	Barium	7440-39-3	79.8	0.124	0.467		2
06127	Beryllium	7440-41-7	1.60	0.0187	0.117		2
06128	Cadmium	7440-43-9	0.0514 U	0.0514	0.117		2
06131	Chromium	7440-47-3	27.3	0.140	0.467		2
06132	Cobalt	7440-48-4	5.98	0.0234	0.117		2
06133	Copper	7440-50-8	12.7	0.0935	0.467		2
06135	Lead	7439-92-1	13.1	0.0119	0.234		2
06138	Molybdenum	7439-98-7	2.95	0.0584	0.117		2
06139	Nickel	7440-02-0	15.3	0.117	0.467		2
06141	Selenium	7782-49-2	0.305 J	0.0678	0.467		2
06142	Silver	7440-22-4	0.0874 J	0.0166	0.117		2
06145	Thallium	7440-28-0	0.211	0.0350	0.117		2
06148	Vanadium	7440-62-2	77.4	0.0257	0.117		2
06149	Zinc	7440-66-6	49.7	0.654	3.50		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0143 J	0.0078	0.111		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.9	0.94	1.2		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.5 U	10.5	35.0		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.45 J	0.23	1.2		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.20 U	0.20	0.55		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.60	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	14.4	0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-020-SA7-SB-9.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11293SLB026	10/23/2011 02:26	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/24/2011 09:25	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11293SLB026	10/20/2011 16:45	JoElla L Rice	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11293A16A	10/21/2011 07:40	Laura M Krieger	25.05
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129225896	10/19/2011 22:02	Lois E Hiltz	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129225896	10/19/2011 22:04	Lois E Hiltz	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 04:20	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112920034A	10/19/2011 20:51	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112930029A	10/20/2011 21:32	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 17:33	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 05:39	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112920034A	10/19/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112930029A	10/20/2011 16:05	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
07914	Boron	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01656	Lithium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
10145	Phosphorus	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
07968	Strontium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
06969	Tin	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
06970	Titanium	SW-846 6010B	1	112935708007	10/28/2011 05:19	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112935708007	10/26/2011 21:18	John W Yanzuk II	1
06124	Antimony	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112931026004D	10/24/2011 14:34	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441966
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL209 SDG#: DE271-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112931026004C	10/24/2011 14:34	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112931026004B	10/24/2011 14:34	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112931026004A	10/24/2011 14:34	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112935711007	10/24/2011 17:43	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112935708007	10/21/2011 09:42	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112931026004	10/21/2011 09:42	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112935711007	10/21/2011 11:37	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 10:50	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202B	10/24/2011 17:35	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 15:23	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:22	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202B	10/20/2011 07:10	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	840		180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180		1
04688	4-Chloroaniline	106-47-8	74	U	74	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	74	U	74	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	37	U	37	180		1
04688	4-Methylphenol	106-44-5	37	U	37	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	37	U	37	180		1
04688	4-Nitroaniline	100-01-6	74	U	74	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1
04688	Phenol	108-95-2	18	U	18	180		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.73	U	0.73	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.73	U	0.73	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.73	U	0.73	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.73	U	0.73	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.73	U	0.73	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.73	U	0.73	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	20		1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	20		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.73	U	0.73	1.8		1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	20		1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.5	U	6.5	20		1
10138	Fluoranthene	206-44-0	0.73	U	0.73	1.8		1
10138	Fluorene	86-73-7	0.73	U	0.73	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	U	0.73	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.73	U	0.73	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.73	U	0.73	1.8		1
10138	Naphthalene	91-20-3	0.73	U	0.73	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.73	U	0.73	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	20		1
10138	Phenanthrene	85-01-8	0.73	U	0.73	1.8		1
10138	Pyrene	129-00-0	0.73	U	0.73	1.8		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1		24.95
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9		1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	550		1
10501	Isopropanol	67-63-0	110	U	110	550		1
10501	Methanol	67-56-1	110	U	110	550		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.5	U	5.5	11		1
08283	Ethylene glycol	107-21-1	5.5	U	5.5	11		1
08283	Propylene glycol	57-55-6	5.5	U	5.5	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.7	U	1.7	3.9		1
10318	o-Terphenyl	84-15-1	1.7	U	1.7	3.9		1
10318	p-Terphenyl	92-94-4	1.7	U	1.7	3.9		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.44	U	0.44	1.3		1
10199	EFH (C15-C20)	n.a.	0.44	U	0.44	1.3		1
10199	EFH (C21-C30)	n.a.	1.7		0.44	1.3		1
10199	EFH (C30 - C40)	n.a.	5.0		0.44	1.3		1
10199	EFH (C8-C11)	n.a.	0.44	U	0.44	1.3		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	26,000		6.56	21.7		1
07914	Boron	7440-42-8	0.390	U	0.390	5.42		1
01650	Calcium	7440-70-2	2,770		2.71	21.7		1
01654	Iron	7439-89-6	24,800		2.83	21.7		1
01656	Lithium	7439-93-2	31.8		0.67	2.2		1
01657	Magnesium	7439-95-4	3,690		0.477	10.8		1
06958	Manganese	7439-96-5	144		0.0390	0.542		1
10145	Phosphorus	7723-14-0	176		0.380	10.8		1
01662	Potassium	7440-09-7	1,090		12.3	54.2		1
01667	Sodium	7440-23-5	147		6.45	108		1
07968	Strontium	7440-24-6	19.5		0.0271	0.542		1
06969	Tin	7440-31-5	2.90	J	0.347	10.8		1
06970	Titanium	7440-32-6	863		0.0770	1.08		1
10146	Zirconium	7440-67-7	1.49	J	0.499	5.42		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0965 J	0.0810	0.219		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.03	0.0876	0.438		2
06126	Barium	7440-39-3	99.9	0.116	0.438		2
06127	Beryllium	7440-41-7	0.746	0.0175	0.110		2
06128	Cadmium	7440-43-9	0.0482 U	0.0482	0.110		2
06131	Chromium	7440-47-3	24.6	0.131	0.438		2
06132	Cobalt	7440-48-4	5.53	0.0219	0.110		2
06133	Copper	7440-50-8	5.24	0.0876	0.438		2
06135	Lead	7439-92-1	6.89	0.0112	0.219		2
06138	Molybdenum	7439-98-7	0.663	0.0548	0.110		2
06139	Nickel	7440-02-0	12.4	0.110	0.438		2
06141	Selenium	7782-49-2	0.359 J	0.0635	0.438		2
06142	Silver	7440-22-4	0.0460 J	0.0156	0.110		2
06145	Thallium	7440-28-0	0.204	0.0329	0.110		2
06148	Vanadium	7440-62-2	48.0	0.0241	0.110		2
06149	Zinc	7440-66-6	34.1	0.613	3.29		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0486 J	0.0075	0.107		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.1	0.88	1.1		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10 U	10	33.2		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.60 J	0.22	1.1		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.20 U	0.20	0.55		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.54	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	9.6	0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-140-SA7-SB-3.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11293SLB026	10/23/2011 02:51	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11292SLE026	10/24/2011 09:58	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11292SLE026	10/20/2011 10:45	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11293SLB026	10/20/2011 16:45	JoElla L Rice	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11293A16A	10/21/2011 08:18	Laura M Krieger	24.95
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129225896	10/19/2011 22:06	Lois E Hiltz	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129225896	10/19/2011 22:07	Lois E Hiltz	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112920031A	10/23/2011 04:38	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112920031A	10/20/2011 06:50	Katheryne V Sponheimer	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112920034A	10/19/2011 21:07	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112930029A	10/20/2011 21:45	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112920028A	10/21/2011 17:56	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112920027A	10/21/2011 06:02	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	112920027A	10/20/2011 12:00	Olivia I Santiago	1
10303	Terphenyls soil prep	SW-846 3550B	1	112920028A	10/20/2011 12:00	Olivia I Santiago	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112920034A	10/19/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112930029A	10/20/2011 16:05	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
07914	Boron	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01656	Lithium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
10145	Phosphorus	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
07968	Strontium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
06969	Tin	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
06970	Titanium	SW-846 6010B	1	112935708007	10/28/2011 05:22	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	112935708007	10/26/2011 21:22	John W Yanzuk II	1
06124	Antimony	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112931026004D	10/24/2011 14:37	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441967
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL140 SDG#: DE271-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112931026004C	10/24/2011 14:37	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112931026004B	10/24/2011 14:37	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112931026004A	10/24/2011 14:37	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112935711007	10/24/2011 17:44	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112935708007	10/21/2011 09:42	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112931026004	10/21/2011 09:42	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112935711007	10/21/2011 11:37	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 11:05	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11293621202B	10/24/2011 17:58	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 15:37	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11293102201B	10/21/2011 08:23	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11293621202B	10/20/2011 07:10	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11293102201B	10/20/2011 15:35	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
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Lancaster Laboratories

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Analysis Report

Sample Description: **EB-SA7-SB-101811 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101811

LLI Sample # WW 6441968
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB118 SDG#: DE271-06EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	3.72	0.546	1.09		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of .718 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11292WAA026	11/01/2011 19:55	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11292WAA026	10/19/2011 15:00	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101811 Water
SSFL Area IV Collocated Soil Sampling
TB-101811

LLI Sample # WW 6441969
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 08:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB118 SDG#: DE271-07TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	0.500 U	0.500	0.999		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11292WAA026	11/01/2011 20:14	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11292WAA026	10/19/2011 15:00	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101811 Sand
SSFL Area IV Collocated Soil Sampling
TB-101811

LLI Sample # SW 6441970
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 08:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB182 SDG#: DE271-08TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		ng/kg		ng/kg	ng/kg	ng/kg	
11622	N-Nitrosodimethylamine	62-75-9	16.7	U	16.7	33.3		1
Wet Chemistry	**EPA 160.3 modified**		%		%	%	%	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11293SLE026	11/02/2011 22:21	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11293SLE026	10/20/2011 18:00	Sally L Appleyard	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101811 Water
SSFL Area IV Collocated Soil Sampling
TB-101811

LLI Sample # WW 6441971
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 08:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB183 SDG#: DE271-09TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11297B20A	10/25/2011 11:20	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11297B20A	10/25/2011 11:20	Marie D John	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	4.42		0.522	1.04		1
	N-Nitrosodimethylamine was detected in the method blank at a concentration of .718 ng/l. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and N-Nitrosodimethylamine was again detected in the re-analysis of the sample. The data reported here is from the initial extraction of the sample.							
GC/MS Semivolatiles SW-846 8270C			**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04678	Aniline	62-53-3	1	U	1	5		1
04678	Benzidine	92-87-5	20	U	20	60		1
04678	Benzoic acid	65-85-0	6	U	6	15		1
04678	Benzyl alcohol	100-51-6	5	U	5	15		1
04678	4-Bromophenyl-phenylether	101-55-3	1	U	1	5		1
04678	2-butoxy-Ethanol	111-76-2	50	U	50	50		1
04678	Carbazole	86-74-8	1	U	1	5		1
04678	4-Chloro-3-methylphenol	59-50-7	1	U	1	5		1
04678	4-Chloroaniline	106-47-8	1	U	1	5		1
04678	bis(2-Chloroethoxy)methane	111-91-1	1	U	1	5		1
04678	bis(2-Chloroethyl)ether	111-44-4	1	U	1	5		1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	1	U	1	5		1
04678	2-Chloronaphthalene	91-58-7	2	U	2	5		1
04678	2-Chlorophenol	95-57-8	1	U	1	5		1
04678	4-Chlorophenyl-phenylether	7005-72-3	2	U	2	5		1
04678	Dibenzofuran	132-64-9	1	U	1	5		1
04678	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
04678	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
04678	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
04678	3,3'-Dichlorobenzidine	91-94-1	2	U	2	5		1
04678	2,4-Dichlorophenol	120-83-2	1	U	1	5		1
04678	2,4-Dimethylphenol	105-67-9	3	U	3	10		1
04678	3,5-Dimethylphenol	108-68-9	3	U	3	10		1
04678	4,6-Dinitro-2-methylphenol	534-52-1	5	U	5	15		1
04678	2,4-Dinitrophenol	51-28-5	10	U	10	30		1
04678	2,4-Dinitrotoluene	121-14-2	1	U	1	5		1
04678	2,6-Dinitrotoluene	606-20-2	1	U	1	5		1
04678	1,2-Diphenylhydrazine	122-66-7	1	U	1	5		1
04678	Hexachlorobenzene	118-74-1	1	U	1	5		1
04678	Hexachlorobutadiene	87-68-3	1	U	1	5		1
04678	Hexachlorocyclopentadiene	77-47-4	5	U	5	15		1
04678	Hexachloroethane	67-72-1	1	U	1	5		1
04678	Isophorone	78-59-1	1	U	1	5		1
04678	2-Methylphenol	95-48-7	1	U	1	5		1
04678	4-Methylphenol	106-44-5	2	U	2	5		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04678	2-Nitroaniline	88-74-4	1	U	1	5		1
04678	3-Nitroaniline	99-09-2	1	U	1	5		1
04678	4-Nitroaniline	100-01-6	1	U	1	5		1
04678	Nitrobenzene	98-95-3	1	U	1	5		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	ug/l	ug/l	
04678	2-Nitrophenol	88-75-5	1	U	1	5		1
04678	4-Nitrophenol	100-02-7	10	U	10	30		1
04678	N-Nitroso-di-n-propylamine	621-64-7	1	U	1	5		1
04678	N-Nitrosodiphenylamine	86-30-6	2	U	2	5		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04678	Pentachlorophenol	87-86-5	3	U	3	15		1
04678	Phenol	108-95-2	1	U	1	5		1
04678	2-phenoxy-Ethanol	122-99-6	50	U	50	50		1
04678	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
04678	2,4,5-Trichlorophenol	95-95-4	1	U	1	5		1
04678	2,4,6-Trichlorophenol	88-06-2	1	U	1	5		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/l		ug/l	ug/l	ug/l	
10137	Acenaphthene	83-32-9	0.020	U	0.020	0.10		1
10137	Acenaphthylene	208-96-8	0.020	U	0.020	0.10		1
10137	Anthracene	120-12-7	0.020	U	0.020	0.10		1
10137	Benzo(a)anthracene	56-55-3	0.020	U	0.020	0.10		1
10137	Benzo(a)pyrene	50-32-8	0.020	U	0.020	0.10		1
10137	Benzo(b)fluoranthene	205-99-2	0.020	U	0.020	0.10		1
10137	Benzo(g,h,i)perylene	191-24-2	0.020	U	0.020	0.10		1
10137	Benzo(k)fluoranthene	207-08-9	0.020	U	0.020	0.10		1
10137	Butylbenzylphthalate	85-68-7	0.10	U	0.10	2.0		1
10137	Di-n-butylphthalate	84-74-2	0.14	J	0.10	2.0		1
10137	Chrysene	218-01-9	0.020	U	0.020	0.10		1
10137	Dibenz(a,h)anthracene	53-70-3	0.020	U	0.020	0.10		1
10137	Diethylphthalate	84-66-2	0.10	U	0.10	2.0		1
10137	Dimethylphthalate	131-11-3	0.10	U	0.10	2.0		1
10137	Bis(2-Ethylhexyl)phthalate	117-81-7	0.10	U	0.10	2.0		1
10137	Fluoranthene	206-44-0	0.020	U	0.020	0.10		1
10137	Fluorene	86-73-7	0.020	U	0.020	0.10		1
10137	Indeno(1,2,3-cd)pyrene	193-39-5	0.020	U	0.020	0.10		1
10137	1-Methylnaphthalene	90-12-0	0.020	U	0.020	0.10		1
10137	2-Methylnaphthalene	91-57-6	0.020	U	0.020	0.10		1
10137	Naphthalene	91-20-3	0.060	U	0.060	0.10		1
10137	N-Nitrosodimethylamine	62-75-9	0.020	U	0.020	0.10		1
10137	Di-n-octylphthalate	117-84-0	0.18	J	0.10	2.0		1
10137	Phenanthrene	85-01-8	0.060	U	0.060	0.10		1
10137	Pyrene	129-00-0	0.020	U	0.020	0.10		1

The recoveries of dimethylphthalate and butylbenzylphthalate were outside of QC limits in the LCS/LCSD. This sample was re-extracted outside of the method required holding time, and acceptable QC was observed. Comparable data was not observed between the two extractions. The data reported here is from the initial extracion of the sample.

Di-n-octylphthalate was detected in the method blank at a concentration of .094 ug/l. The blank value was not subtracted from the analytical result. Di-n-octylphthalate was not detected in the re-extraction of the sample.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Reporting limits were raised due to limited sample volume.								
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1
Explosives	**SW-846 8330A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10131	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.30	U	0.30	0.60	10000000	1
10131	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Diamino-4-nitrotoluene	59229-75-3	0.20	U	0.20	0.60	10000000	1
10131	2,4-Diamino-6-nitrotoluene	6629-29-4	0.20	U	0.20	0.60	10000000	1
10131	1,3-Dinitrobenzene	99-65-0	0.20	U	0.20	0.60	10000000	1
10131	2,4-Dinitrotoluene	121-14-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Dinitrotoluene	606-20-2	0.20	U	0.20	0.60	10000000	1
10131	HMX	2691-41-0	0.65	U	0.65	2.0	10000000	1
10131	Nitrobenzene	98-95-3	0.20	U	0.20	0.60	10000000	1
10131	Nitroglycerin	55-63-0	5.2	U	5.2	15	10000000	1
10131	2-Nitrotoluene	88-72-2	0.20	U	0.20	0.60	10000000	1
10131	3-Nitrotoluene	99-08-1	0.40	U	0.40	1.2	10000000	1
10131	4-Nitrotoluene	99-99-0	0.60	U	0.60	1.2	10000000	1
10131	PETN	78-11-5	6.0	U	6.0	18	10000000	1
10131	RDX	121-82-4	1.6		0.20	0.60	10000000	1
10131	Tetryl	479-45-8	0.40	U	0.40	0.60	10000000	1
10131	1,3,5-Trinitrobenzene	99-35-4	0.20	U	0.20	0.60	10000000	1
10131	2,4,6-Trinitrotoluene	118-96-7	0.20	U	0.20	0.60	10000000	1
HPLC Organics	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50		1
Pesticides/PCBs	**SW-846 8082**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10227	Aroclor 5432	63496-31-1	0.10	U	0.10	0.52		1
10227	Aroclor 5442	12642-23-8	0.10	U	0.10	0.52		1
10227	Aroclor 5460	11126-42-4	0.10	U	0.10	0.52		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/l		ug/l	ug/l	ug/l	
10227	PCB-1016	12674-11-2	0.10	U	0.10	0.52		1
10227	PCB-1221	11104-28-2	0.10	U	0.10	0.52		1
10227	PCB-1232	11141-16-5	0.21	U	0.21	0.52		1
10227	PCB-1242	53469-21-9	0.10	U	0.10	0.52		1
10227	PCB-1248	12672-29-6	0.10	U	0.10	0.52		1
10227	PCB-1254	11097-69-1	0.10	U	0.10	0.52		1
10227	PCB-1260	11096-82-5	0.16	U	0.16	0.52		1
10227	PCB-1262	37324-23-5	0.21	U	0.21	0.52		1
10227	PCB-1268	11100-14-4	0.17	U	0.17	0.52		1
GC Miscellaneous	**SW-846 8015B**		ug/l		ug/l	ug/l	ug/l	
06624	Ethanol	64-17-5	200	U	200	1,000		1
06624	Isopropanol	67-63-0	200	U	200	1,000		1
06624	Methanol	67-56-1	200	U	200	1,000		1
GC Miscellaneous	**SW-846 8015B modified**		mg/l		mg/l	mg/l	mg/l	
08278	Diethylene glycol	111-46-6	20	U	20	200		1
08278	Ethylene glycol	107-21-1	20	U	20	200		1
08278	Propylene glycol	57-55-6	20	U	20	200		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		mg/l		mg/l	mg/l	mg/l	
10319	m-Terphenyl	92-06-8	0.082	U	0.082	0.25		1
10319	o-Terphenyl	84-15-1	0.082	U	0.082	0.25		1
10319	p-Terphenyl	92-94-4	0.082	U	0.082	0.25		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		mg/l		mg/l	mg/l	mg/l	
10365	EFH (C12-C14)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C15-C20)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C21-C30)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C30 - C40)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C8-C11)	n.a.	0.11	U	0.11	0.64		1
Metals	**SW-846 6010B**		mg/l		mg/l	mg/l	mg/l	
01743	Aluminum	7429-90-5	0.0801	U	0.0801	0.200		1
08014	Boron	7440-42-8	0.0034	J	0.0022	0.0500		1
01750	Calcium	7440-70-2	0.0705	U	0.0705	0.200		1
01754	Iron	7439-89-6	0.0141	U	0.0141	0.200		1
01756	Lithium	7439-93-2	0.0076	U	0.0076	0.0200		1
01757	Magnesium	7439-95-4	0.0067	U	0.0067	0.100		1
07058	Manganese	7439-96-5	0.00044	U	0.00044	0.0050		1
10143	Phosphorus	7723-14-0	0.0047	U	0.0047	0.100		1
01762	Potassium	7440-09-7	0.0874	U	0.0874	0.500		1
01767	Sodium	7440-23-5	0.0647	U	0.0647	1.00		1
08068	Strontium	7440-24-6	0.00022	U	0.00022	0.0050		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
07069	Tin	7440-31-5	0.0043 U	0.0043	0.0200		1
07070	Titanium	7440-32-6	0.00046 U	0.00046	0.0100		1
10144	Zirconium	7440-67-7	0.0042 U	0.0042	0.0500		1
	SW-846 6020		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06024	Antimony	7440-36-0	0.00042 U	0.00042	0.0010		1
06025	Arsenic	7440-38-2	0.00095 U	0.00095	0.0020		1
06026	Barium	7440-39-3	0.00069 U	0.00069	0.0020		1
06027	Beryllium	7440-41-7	0.00013 U	0.00013	0.00050		1
06028	Cadmium	7440-43-9	0.00020 U	0.00020	0.00050		1
06031	Chromium	7440-47-3	0.00060 U	0.00060	0.0020		1
06032	Cobalt	7440-48-4	0.00010 U	0.00010	0.00050		1
06033	Copper	7440-50-8	0.00038 U	0.00038	0.0020		1
06035	Lead	7439-92-1	0.000080 U	0.000080	0.0010		1
06038	Molybdenum	7439-98-7	0.00025 U	0.00025	0.00050		1
06039	Nickel	7440-02-0	0.00050 U	0.00050	0.0020		1
06041	Selenium	7782-49-2	0.00027 U	0.00027	0.0020		1
06042	Silver	7440-22-4	0.000098 U	0.000098	0.00050		1
06045	Thallium	7440-28-0	0.00015 U	0.00015	0.00050		1
06048	Vanadium	7440-62-2	0.00018 U	0.00018	0.00050		1
06049	Zinc	7440-66-6	0.0040 U	0.0040	0.0150		1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000026 U	0.000026	0.00020		1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
01504	11b Anions by 300.0 - Fluoride	16984-48-8	0.080 U	0.080	0.10		1
00368	11b Anions by 300.0 - Nitrate	14797-55-8	0.050 U	0.050	0.10		1
	EPA 314.0		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06019	7b Perchlorate EPA 314.0	14797-73-0	0.70 U	0.70	2.0		1
	SW-846 7199		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06467	3b Cr VI by EPA 7199	18540-29-9	5.0 U	5.0	10.0		1
	SW-846 9012B		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
08255	16b Cyanide by 9012B	57-12-5	0.0050 U	0.0050	0.010		1
	SW-846 9040B		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00200	17b pH by 9040B	n.a.	6.1	0.010	0.010		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: **EB-SA5DS-SB-101811 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11292WAA026	11/01/2011 20:51	Matthew S Woods	1
04678	5b Semivolatiles by EPA 8270C	SW-846 8270C	1	11297WAI026	10/26/2011 19:09	Holly Berry	1
10137	4b Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11297WAE026	10/25/2011 10:07	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	11297WAI026	10/25/2011 09:00	Cynthia J Salvatori	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	11297WAE026	10/24/2011 17:00	JoElla L Rice	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11292WAA026	10/19/2011 15:00	Wanda F Oswald	1
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11294B20A	10/24/2011 14:07	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11294B20A	10/24/2011 14:07	Catherine J Schwarz	1
10131	15b Energetics by 8330A	SW-846 8330A	1	112930023A	10/27/2011 10:49	Michele D Hamilton	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	112930018A	10/21/2011 19:25	James H Place	1
10227	8b PCBs/PCTs by 8082	SW-846 8082	1	112980001A	11/01/2011 02:23	Jessica L Miller	1
11117	PCB Waters Extraction	SW-846 3510C	1	112980001A	10/25/2011 16:55	JoElla L Rice	1
01013	Formaldehyde Extraction	SW-846 8315A	1	112930018A	10/21/2011 09:15	Denise L Trimby	1
11122	Energetics Extraction	SW-846 8330	1	112930023A	10/21/2011 09:30	Kerrie A Freeburn	1
06624	18b Alcohols by 8015B	SW-846 8015B	1	112930031A	10/21/2011 20:42	Elizabeth J Marin	1
08278	19b Glycols by 8015B	SW-846 8015B modified	1	112970039A	10/24/2011 23:09	Tyler O Griffin	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	112930011A	10/21/2011 14:58	Robert Brown	1
10365	9b TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112940018A	10/25/2011 13:37	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	112940018A	10/22/2011 10:50	Denise L Trimby	1
10304	Terphenyls water prep	SW-846 3510C	1	112930011A	10/20/2011 14:40	Kathryn I DeHaven	1
01743	Aluminum	SW-846 6010B	1	112921848006	10/24/2011 02:13	Tara L Snyder	1
08014	Boron	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
01750	Calcium	SW-846 6010B	1	112921848006	10/24/2011 02:13	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	112921848006	10/24/2011 02:13	Tara L Snyder	1
01756	Lithium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
01757	Magnesium	SW-846 6010B	1	112921848006	10/24/2011 02:13	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
10143	Phosphorus	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
01762	Potassium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
01767	Sodium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
08068	Strontium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
07069	Tin	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
07070	Titanium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
10144	Zirconium	SW-846 6010B	1	112921848006	10/21/2011 20:01	John P Hook	1
06024	Antimony	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **EB-SA5DS-SB-101811 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441972
LLI Group # 1271993
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 11/18/2011 09:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

EB182 SDG#: DE271-10EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06026	Barium	SW-846 6020	1	112926050003D	10/24/2011 09:48	Choon Y Tian	1
06027	Beryllium	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06028	Cadmium	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06031	Chromium	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06032	Cobalt	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06033	Copper	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06035	Lead	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06038	Molybdenum	SW-846 6020	1	112926050003C	10/24/2011 09:48	Choon Y Tian	1
06039	Nickel	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06041	Selenium	SW-846 6020	1	112926050003B	10/24/2011 09:48	Choon Y Tian	1
06042	Silver	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06045	Thallium	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06048	Vanadium	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
06049	Zinc	SW-846 6020	1	112926050003A	10/24/2011 09:48	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	112945713004	10/25/2011 12:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	112921848006	10/20/2011 09:39	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	112926050003	10/20/2011 09:36	Denise K Conners	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	112945713004	10/21/2011 16:31	Nelli S Markaryan	1
01504	11b Anions by 300.0 - Fluoride	EPA 300.0	1	11291196903A	10/19/2011 11:49	Ashley M Adams	1
00368	11b Anions by 300.0 - Nitrate	EPA 300.0	1	11291196903A	10/19/2011 11:49	Ashley M Adams	1
06019	7b Perchlorate EPA 314.0	EPA 314.0	2	11292281101A	10/24/2011 18:21	Elyse P Brunstetter	1
06467	3b Cr VI by EPA 7199	SW-846 7199	1	11292281401B	10/19/2011 11:38	Elyse P Brunstetter	1
08255	16b Cyanide by 9012B	SW-846 9012B	1	11297117101B	10/24/2011 16:35	Venia B McFadden	1
08256	Cyanide Water Distillation	SW-846 9012B	1	11297117101B	10/24/2011 10:15	Nancy J Shoop	1
00200	17b pH by 9040B	SW-846 9040B	1	11294020001A	10/21/2011 20:30	Luz M Groff	1

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11292SLE026	Sample number(s): 6441963-6441967									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	91		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	84		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	91		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	96		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	88		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	100		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	95		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	94		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	93		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	98		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	98		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	91		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	95		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	95		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	102		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	97		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	93		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	92		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	84		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	89		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	89		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	89		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	93		72-119		
Batch number: 11292WAA026	Sample number(s): 6441968-6441969,6441972									
N-Nitrosodimethylamine	0.718	J	0.500	1.00	ng/l	94	100	70-130	6	30
Batch number: 11293SLB026	Sample number(s): 6441963-6441967									
Aniline	170 U		170.	500	ug/kg	78		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	63		15-121		
Benzoic acid	170 U		170.	500	ug/kg	77		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	91		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	98		73-114		
Carbazole	17	U	17.	170	ug/kg	97		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	96		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	73		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	94		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	90		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	90		62-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Chloronaphthalene	17	U	17.	170	ug/kg	92		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	97		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	97		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	95		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	88		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	88		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	88		74-106		
3,3'-Dichlorobenzidine	100	U	100.	330	ug/kg	71		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	98		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	97		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	117		83-120		
4,6-Dinitro-2-methylphenol	170	U	170.	500	ug/kg	60		46-120		
2,4-Dinitrophenol	330	U	330.	1,000	ug/kg	31		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	99		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	104		71-125		
Hexachlorobenzene	17	U	17.	170	ug/kg	96		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	94		65-117		
Hexachlorocyclopentadiene	170	U	170.	500	ug/kg	81		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	86		61-109		
Isophorone	17	U	17.	170	ug/kg	92		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	94		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	91		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	97		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	95		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	74		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	94		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	93		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	91		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	84		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	101		67-141		
Pentachlorophenol	170	U	170.	500	ug/kg	70		51-117		
Phenol	17	U	17.	170	ug/kg	89		58-112		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	91		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	96		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	97		78-111		
Batch number: 11293SLE026	Sample number(s): 6441970									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	104	101	70-130	3	30
Batch number: 11297WAE026	Sample number(s): 6441972									
Acenaphthene	0.010	U	0.010	0.050	ug/l	96	101	74-109	5	30
Acenaphthylene	0.010	U	0.010	0.050	ug/l	93	95	70-110	2	30
Anthracene	0.010	U	0.010	0.050	ug/l	97	99	66-111	2	30
Benzo(a)anthracene	0.010	U	0.010	0.050	ug/l	101	102	72-114	1	30
Benzo(a)pyrene	0.010	U	0.010	0.050	ug/l	93	93	60-127	0	30
Benzo(b)fluoranthene	0.010	U	0.010	0.050	ug/l	98	99	58-151	1	30
Benzo(g,h,i)perylene	0.010	U	0.010	0.050	ug/l	112	113	57-131	1	30
Benzo(k)fluoranthene	0.010	U	0.010	0.050	ug/l	99	99	59-130	0	30
Butylbenzylphthalate	0.050	U	0.050	1.0	ug/l	22*	21*	40-138	4	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Di-n-butylphthalate	0.050	U	0.050	1.0	ug/l	60	61	56-148	2	30
Chrysene	0.010	U	0.010	0.050	ug/l	100	102	76-116	1	30
Dibenz(a,h)anthracene	0.010	U	0.010	0.050	ug/l	111	111	55-134	1	30
Diethylphthalate	0.050	U	0.050	1.0	ug/l	48	47	37-148	2	30
Dimethylphthalate	0.050	U	0.050	1.0	ug/l	10*	10*	40-119	2	30
Bis(2-Ethylhexyl)phthalate	0.050	U	0.050	1.0	ug/l	106	103	57-154	3	30
Fluoranthene	0.010	U	0.010	0.050	ug/l	97	98	75-116	2	30
Fluorene	0.010	U	0.010	0.050	ug/l	101	101	75-114	0	30
Indeno(1,2,3-cd)pyrene	0.010	U	0.010	0.050	ug/l	109	110	53-158	1	30
1-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	92	93	71-117	0	30
2-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	91	92	75-115	1	30
Naphthalene	0.030	U	0.030	0.050	ug/l	92	93	72-109	1	30
N-Nitrosodimethylamine	0.010	U	0.010	0.050	ug/l	64	65	36-89	1	30
Di-n-octylphthalate	0.094	J	0.050	1.0	ug/l	96	96	57-145	1	30
Phenanthrene	0.030	U	0.030	0.050	ug/l	94	96	76-111	2	30
Pyrene	0.010	U	0.010	0.050	ug/l	104	104	69-118	0	30
Batch number: 11297WAI026	Sample number(s): 6441972									
Aniline	1	U	1.	5	ug/l	74	78	38-116	5	30
Benzidine	20	U	20.	60	ug/l	52	48	34-117	7	30
Benzoic acid	6	U	6.	15	ug/l	44	47	10-69	8	30
Benzyl alcohol	5	U	5.	15	ug/l	84	88	66-97	5	30
4-Bromophenyl-phenylether	1	U	1.	5	ug/l	95	101	75-115	5	30
2-butoxy-Ethanol	50	U	50.	50	ug/l					
Carbazole	1	U	1.	5	ug/l	99	101	75-120	2	30
4-Chloro-3-methylphenol	1	U	1.	5	ug/l	101	102	70-123	1	30
4-Chloroaniline	1	U	1.	5	ug/l	63	59	24-128	6	30
bis(2-Chloroethoxy)methane	1	U	1.	5	ug/l	99	102	74-124	3	30
bis(2-Chloroethyl)ether	1	U	1.	5	ug/l	88	95	77-108	8	30
bis(2-Chloroisopropyl)ether	1	U	1.	5	ug/l	84	93	62-127	10	30
2-Chloronaphthalene	2	U	2.	5	ug/l	72	75	54-132	3	30
2-Chlorophenol	1	U	1.	5	ug/l	95	100	71-114	5	30
4-Chlorophenyl-phenylether	2	U	2.	5	ug/l	98	97	77-114	1	30
Dibenzofuran	1	U	1.	5	ug/l	95	95	75-117	0	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	81	86	55-118	7	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	78	85	61-111	8	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	79	84	53-119	6	30
3,3'-Dichlorobenzidine	2	U	2.	5	ug/l	58	57	37-117	1	30
2,4-Dichlorophenol	1	U	1.	5	ug/l	103	103	77-117	0	30
2,4-Dimethylphenol	3	U	3.	10	ug/l	98	97	72-110	1	30
3,5-Dimethylphenol	3	U	3.	10	ug/l	103	106	70-130	3	30
4,6-Dinitro-2-methylphenol	5	U	5.	15	ug/l	104	108	65-126	4	30
2,4-Dinitrophenol	10	U	10.	30	ug/l	100	102	52-131	2	30
2,4-Dinitrotoluene	1	U	1.	5	ug/l	102	101	76-119	1	30
2,6-Dinitrotoluene	1	U	1.	5	ug/l	100	102	76-118	2	30
1,2-Diphenylhydrazine	1	U	1.	5	ug/l	97	102	68-127	5	30
Hexachlorobenzene	1	U	1.	5	ug/l	97	100	75-119	4	30
Hexachlorobutadiene	1	U	1.	5	ug/l	85	87	57-124	3	30
Hexachlorocyclopentadiene	5	U	5.	15	ug/l	56	54	36-118	3	30
Hexachloroethane	1	U	1.	5	ug/l	74	80	52-113	8	30
Isophorone	1	U	1.	5	ug/l	96	100	74-117	4	30
2-Methylphenol	1	U	1.	5	ug/l	92	98	58-110	7	30
4-Methylphenol	2	U	2.	5	ug/l	85	91	49-108	7	30
2-Nitroaniline	1	U	1.	5	ug/l	100	102	75-120	2	30
3-Nitroaniline	1	U	1.	5	ug/l	99	98	74-113	1	30
4-Nitroaniline	1	U	1.	5	ug/l	86	86	59-100	0	30
Nitrobenzene	1	U	1.	5	ug/l	93	98	75-109	6	30
2-Nitrophenol	1	U	1.	5	ug/l	98	99	76-118	1	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Nitrophenol	10	U	10.	30	ug/l	57	54	16-78	6	30
N-Nitroso-di-n-propylamine	1	U	1.	5	ug/l	86	93	69-110	8	30
N-Nitrosodiphenylamine	2	U	2.	5	ug/l	90	94	67-136	4	30
Pentachlorophenol	3	U	3.	15	ug/l	111*	112*	53-110	1	30
Phenol	1	U	1.	5	ug/l	51	61	21-67	18	30
2-phenoxy-Ethanol	50	U	50.	50	ug/l					
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	88	91	71-112	3	30
2,4,5-Trichlorophenol	1	U	1.	5	ug/l	98	100	79-107	2	30
2,4,6-Trichlorophenol	1	U	1.	5	ug/l	102	101	76-120	0	30
Batch number: 11293A16A	Sample number(s): 6441965-6441967									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	76		67-119		
Batch number: 11294B20A	Sample number(s): 6441972									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 11297B20A	Sample number(s): 6441971									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 112930023A	Sample number(s): 6441972									
4-Amino-2,6-Dinitrotoluene	0.30	U	0.30	0.60	ug/l	110	100	80-120	10	30
2-Amino-4,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	98	95	80-120	3	30
2,6-Diamino-4-nitrotoluene	0.20	U	0.20	0.60	ug/l	93	93	50-122	0	30
2,4-Diamino-6-nitrotoluene	0.20	U	0.20	0.60	ug/l	93	93	50-122	0	30
1,3-Dinitrobenzene	0.20	U	0.20	0.60	ug/l	100	99	72-117	1	30
2,4-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	94	92	80-120	2	30
2,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	80-120	0	30
HMX	0.65	U	0.65	2.0	ug/l	91	87	65-125	4	30
Nitrobenzene	0.20	U	0.20	0.60	ug/l	94	91	75-121	3	30
Nitroglycerin	5.2	U	5.2	15	ug/l	96	92	80-120	4	30
2-Nitrotoluene	0.20	U	0.20	0.60	ug/l	94	91	74-120	3	30
3-Nitrotoluene	0.40	U	0.40	1.2	ug/l	98	96	69-107	2	30
4-Nitrotoluene	0.60	U	0.60	1.2	ug/l	92	90	80-120	2	30
PETN	6.0	U	6.0	18	ug/l	100	100	80-120	0	30
RDX	0.20	U	0.20	0.60	ug/l	89	86	70-125	3	30
Tetryl	0.40	U	0.40	0.60	ug/l	81	80	31-148	1	30
1,3,5-Trinitrobenzene	0.20	U	0.20	0.60	ug/l	87	100	53-129	14	30
2,4,6-Trinitrotoluene	0.20	U	0.20	0.60	ug/l	100	98	76-109	2	30
Batch number: 112930018A	Sample number(s): 6441972									
20b Formaldehyde 8315A	10	U	10.	50	ug/l	92	96	69-130	4	30
Batch number: 112920031A	Sample number(s): 6441963-6441967									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	66	67	36-106	0	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	88		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	96		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112980001A	Sample number(s): 6441972									
Aroclor 5432	0.10	U	0.10	0.50	ug/l					

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Quality Control Summary

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Reported: 11/18/11 at 09:29 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Aroclor 5442	0.10	U	0.10	0.50	ug/l	64	62	35-84	3	30
Aroclor 5460	0.10	U	0.10	0.50	ug/l					
PCB-1016	0.10	U	0.10	0.50	ug/l	90	90	51-128	0	30
PCB-1221	0.10	U	0.10	0.50	ug/l					
PCB-1232	0.20	U	0.20	0.50	ug/l					
PCB-1242	0.10	U	0.10	0.50	ug/l					
PCB-1248	0.10	U	0.10	0.50	ug/l					
PCB-1254	0.10	U	0.10	0.50	ug/l					
PCB-1260	0.15	U	0.15	0.50	ug/l	100	104	56-135	4	30
PCB-1262	0.20	U	0.20	0.50	ug/l					
PCB-1268	0.16	U	0.16	0.50	ug/l					
Batch number: 112920034A	Sample number(s): 6441965-6441967									
Ethanol	100	U	100.	500	ug/kg	85		71-129		
Isopropanol	100	U	100.	500	ug/kg	89		75-125		
Methanol	100	U	100.	500	ug/kg	76		68-129		
Batch number: 112930029A	Sample number(s): 6441965-6441967									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	102		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	98		67-131		
Batch number: 112930031A	Sample number(s): 6441972									
Ethanol	200	U	200.	1,000	ug/l	100		78-116		
Isopropanol	200	U	200.	1,000	ug/l	100		75-125		
Methanol	200	U	200.	1,000	ug/l	104		76-122		
Batch number: 112970039A	Sample number(s): 6441972									
Diethylene glycol	20	U	20.	200	mg/l	105		67-126		
Ethylene glycol	20	U	20.	200	mg/l	80		78-136		
Propylene glycol	20	U	20.	200	mg/l	80		65-132		
Batch number: 112920027A	Sample number(s): 6441965-6441967									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	94		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	96		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	97		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	85		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	83		49-107		
Batch number: 112920028A	Sample number(s): 6441965-6441967									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	100		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	105		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		69-109		
Batch number: 112930011A	Sample number(s): 6441972									
m-Terphenyl	0.080	U	0.080	0.25	mg/l	104	106	61-108	2	20
o-Terphenyl	0.080	U	0.080	0.25	mg/l	108	110	75-125	2	20
p-Terphenyl	0.080	U	0.080	0.25	mg/l	104	108	63-110	4	20
Batch number: 112940018A	Sample number(s): 6441972									
EFH (C12-C14)	0.10	U	0.10	0.60	mg/l	114	100	63-121	13	30
EFH (C15-C20)	0.10	U	0.10	0.60	mg/l	108	103	72-124	5	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
EFH (C21-C30)	0.10 U	0.10	0.60	mg/l	85	85	64-123	0	30
EFH (C30 - C40)	0.10 U	0.10	0.60	mg/l	100	80	73-124	22	30
EFH (C8-C11)	0.10 U	0.10	0.60	mg/l	114*	100	43-107	13	30
Batch number: 112921848006	Sample number(s): 6441972								
Aluminum	0.0801 U	0.0801	0.200	mg/l	100	99	90-112	0	20
Boron	0.0022 U	0.0022	0.0500	mg/l	93	89	89-110	5	20
Calcium	0.0705 U	0.0705	0.200	mg/l	97	97	90-110	0	20
Iron	0.0141 U	0.0141	0.200	mg/l	101	101	90-112	0	20
Lithium	0.0076 U	0.0076	0.0200	mg/l	98	97	90-110	1	20
Magnesium	0.0067 U	0.0067	0.100	mg/l	99	100	90-110	1	20
Manganese	0.00046 J	0.00044	0.0050	mg/l	99	95	90-110	4	20
Phosphorus	0.0047 U	0.0047	0.100	mg/l	99	98	90-110	1	20
Potassium	0.0874 U	0.0874	0.500	mg/l	101	97	85-115	3	20
Sodium	0.0647 U	0.0647	1.00	mg/l	100	97	87-114	3	20
Strontium	0.00022 U	0.00022	0.0050	mg/l	99	94	90-110	5	20
Tin	0.0043 U	0.0043	0.0200	mg/l	95	94	90-110	1	20
Titanium	0.00046 U	0.00046	0.0100	mg/l	101	95	90-113	6	20
Zirconium	0.0042 U	0.0042	0.0500	mg/l	102	99	90-110	3	20
Batch number: 112926050003A	Sample number(s): 6441972								
Antimony	0.00042 U	0.00042	0.0010	mg/l	106	97	87-110	10	20
Arsenic	0.00095 U	0.00095	0.0020	mg/l	98	101	86-111	2	20
Beryllium	0.00013 U	0.00013	0.00050	mg/l	106	106	90-113	0	20
Cadmium	0.00020 U	0.00020	0.00050	mg/l	95	104	90-114	8	20
Chromium	0.00060 U	0.00060	0.0020	mg/l	102	107	90-118	5	20
Cobalt	0.00010 U	0.00010	0.00050	mg/l	102	101	87-113	1	20
Copper	0.00038 U	0.00038	0.0020	mg/l	105	103	90-113	1	20
Lead	0.000080 U	0.00008 0	0.0010	mg/l	105	104	90-115	0	20
Nickel	0.00050 U	0.00050	0.0020	mg/l	103	103	90-113	0	20
Silver	0.000098 U	0.00009 8	0.00050	mg/l	103	101	90-115	3	20
Thallium	0.00015 U	0.00015	0.00050	mg/l	106	97	89-116	9	20
Vanadium	0.00018 U	0.00018	0.00050	mg/l	104	106	89-116	2	20
Zinc	0.0040 U	0.0040	0.0150	mg/l	100	109	90-116	8	20
Batch number: 112926050003B	Sample number(s): 6441972								
Selenium	0.00027 U	0.00027	0.0020	mg/l	108	106	85-114	2	20
Batch number: 112926050003C	Sample number(s): 6441972								
Molybdenum	0.00025 U	0.00025	0.00050	mg/l	104	98	89-115	6	20
Batch number: 112926050003D	Sample number(s): 6441972								
Barium	0.00069 U	0.00069	0.0020	mg/l	99	98	88-113	1	20
Batch number: 112931026004A	Sample number(s): 6441963-6441967								
Antimony	0.0733 U	0.0733	0.198	mg/kg	75		40-227		
Arsenic	0.0792 U	0.0792	0.396	mg/kg	104		83-111		
Beryllium	0.0158 U	0.0158	0.0990	mg/kg	96		84-112		
Cadmium	0.0436 U	0.0436	0.0990	mg/kg	99		83-111		
Chromium	0.119 U	0.119	0.396	mg/kg	111		77-123		
Cobalt	0.0198 U	0.0198	0.0990	mg/kg	105		85-114		
Copper	0.117 J	0.0792	0.396	mg/kg	103		81-110		
Lead	0.0110 J	0.0101	0.198	mg/kg	100		84-112		
Nickel	0.0990 U	0.0990	0.396	mg/kg	100		81-110		
Silver	0.0141 U	0.0141	0.0990	mg/kg	104		83-112		
Thallium	0.0297 U	0.0297	0.0990	mg/kg	104		82-112		

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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Vanadium	0.195		0.0218	0.0990	mg/kg	101		76-110		
Zinc	0.554	U	0.554	2.97	mg/kg	98		82-110		
Batch number: 112931026004B	Sample number(s): 6441963-6441967									
Selenium	0.0574	U	0.0574	0.396	mg/kg	98		79-110		
Batch number: 112931026004C	Sample number(s): 6441963-6441967									
Molybdenum	0.0581	J	0.0495	0.0990	mg/kg	100		80-110		
Batch number: 112931026004D	Sample number(s): 6441963-6441967									
Barium	0.105	U	0.105	0.396	mg/kg	105		83-110		
Batch number: 112935708007	Sample number(s): 6441963-6441967									
Aluminum	5.99	U	5.99	19.8	mg/kg	90		40-127		
Boron	0.356	U	0.356	4.95	mg/kg	104		83-110		
Calcium	4.81	J	2.48	19.8	mg/kg	103		81-110		
Iron	9.83	J	2.58	19.8	mg/kg	86		47-129		
Lithium	0.61	U	0.61	2.0	mg/kg	101		80-120		
Magnesium	0.564	J	0.436	9.90	mg/kg	93		63-116		
Manganese	0.0356	U	0.0356	0.495	mg/kg	106		85-116		
Phosphorus	1.17	J	0.347	9.90	mg/kg	105		80-120		
Potassium	11.2	U	11.2	49.5	mg/kg	100		71-110		
Sodium	5.89	U	5.89	99.0	mg/kg	104		76-110		
Strontium	0.0248	U	0.0248	0.495	mg/kg	104		84-110		
Tin	1.40	J	0.317	9.90	mg/kg	100		86-120		
Titanium	0.0703	U	0.0703	0.990	mg/kg	91		80-120		
Zirconium	0.455	U	0.455	4.95	mg/kg	102		80-120		
Batch number: 112935711007	Sample number(s): 6441963-6441967									
Mercury	0.0069	U	0.0069	0.0980	mg/kg	101		83-119		
Batch number: 112945713004	Sample number(s): 6441972									
Mercury	0.000026 U		0.00002 6	0.00020	mg/l	101	96	80-120	5	20
Batch number: 11291196903A	Sample number(s): 6441972									
11b Anions by 300.0 - Fluoride	0.080	U	0.080	0.10	mg/l	109	108	90-110	1	20
11b Anions by 300.0 - Nitrate	0.050	U	0.050	0.10	mg/l	108	107	90-110	0	20
Batch number: 11292281101A	Sample number(s): 6441972									
7b Perchlorate EPA 314.0	0.70	U	0.70	2.0	ug/l	93	95	85-115	1	20
Batch number: 11292281401B	Sample number(s): 6441972									
3b Cr VI by EPA 7199	5.0	U	5.0	10.0	ug/l	105	107	90-110	2	20
Batch number: 11293102201B	Sample number(s): 6441965-6441967									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	85		80-120		
Batch number: 11293621202B	Sample number(s): 6441963-6441967									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	105		85-115		
Batch number: 11297117101B	Sample number(s): 6441972									
16b Cyanide by 9012B	0.0050	U	0.0050	0.010	mg/l	101	101	90-110	0	20
Batch number: 11298243201A	Sample number(s): 6441963-6441967									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	89		80-120		
Batch number: 11300621201A	Sample number(s): 6441963-6441967									

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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	110		90-110		
Batch number: 11294020001A	Sample number(s): 6441972									
17b pH by 9040B						100	100	90-110	0	3
Batch number: 11300039402A	Sample number(s): 6441963-6441965									
17a pH by 9045C						100		95-105		
Batch number: 11300039402B	Sample number(s): 6441966-6441967									
17a pH by 9045C						100		95-105		
Batch number: 11298162401B	Sample number(s): 6441963-6441967,6441970									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11292SLE026	Sample number(s): 6441963-6441967 UNSPK: P439922								
Acenaphthene	81	85	63-105	5	30				
Acenaphthylene	76	80	67-114	6	30				
Anthracene	84	86	73-115	3	30				
Benzo(a)anthracene	89	88	59-128	1	30				
Benzo(a)pyrene	81	81	58-142	0	30				
Benzo(b)fluoranthene	87	88	54-163	1	30				
Benzo(g,h,i)perylene	86	87	33-141	2	30				
Benzo(k)fluoranthene	85	88	57-153	3	30				
Butylbenzylphthalate	87	90	57-173	4	30				
Di-n-butylphthalate	89	89	65-148	0	30				
Chrysene	89	89	67-123	0	30				
Dibenz(a,h)anthracene	84	83	22-133	0	30				
Diethylphthalate	86	88	70-136	1	30				
Dimethylphthalate	87	90	74-118	4	30				
Bis(2-Ethylhexyl)phthalate	103	101	39-167	2	30				
Fluoranthene	88	90	51-149	2	30				
Fluorene	73	88	66-122	18	30				
Indeno(1,2,3-cd)pyrene	84	85	21-143	1	30				
1-Methylnaphthalene	75	80	72-123	6	30				
2-Methylnaphthalene	75	79	64-103	5	30				
Naphthalene	77	80	61-102	5	30				
N-Nitrosodimethylamine	85	90	48-113	6	30				
Di-n-octylphthalate	83	82	40-192	1	30				
Phenanthrene	81	85	62-122	5	30				
Pyrene	85	85	51-131	0	30				
Batch number: 11293SLB026	Sample number(s): 6441963-6441967 UNSPK: 6441963								
Aniline	72	74	18-116	2	30				
Benzidine	16*	15*	35-141	6	30				
Benzoic acid	26	32	10-173	6	30				
Benzyl alcohol	92	93	67-115	1	30				
4-Bromophenyl-phenylether	101	102	67-129	1	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Carbazole	96	96	64-120	0	30				
4-Chloro-3-methylphenol	91	91	62-122	0	30				
4-Chloroaniline	66	74	13-107	12	30				
bis(2-Chloroethoxy)methane	94	96	75-104	2	30				
bis(2-Chloroethyl)ether	89	91	60-116	2	30				
bis(2-Chloroisopropyl)ether	92	94	55-142	3	30				
2-Chloronaphthalene	88	92	50-141	5	30				
2-Chlorophenol	96	98	73-121	2	30				
4-Chlorophenyl-phenylether	98	99	80-109	1	30				
Dibenzofuran	95	96	71-112	2	30				
1,2-Dichlorobenzene	88	90	66-108	2	30				
1,3-Dichlorobenzene	88	89	63-109	2	30				
1,4-Dichlorobenzene	87	90	58-108	3	30				
3,3'-Dichlorobenzidine	72	75	28-109	4	30				
2,4-Dichlorophenol	96	97	66-123	1	30				
2,4-Dimethylphenol	94	93	68-118	0	30				
3,5-Dimethylphenol	112	117	71-127	4	30				
4,6-Dinitro-2-methylphenol	49	53	11-126	9	30				
2,4-Dinitrophenol	28	31	20-143	11	30				
2,4-Dinitrotoluene	95	96	56-129	1	30				
2,6-Dinitrotoluene	100	100	69-123	1	30				
1,2-Diphenylhydrazine	104	104	71-129	0	30				
Hexachlorobenzene	98	99	77-114	1	30				
Hexachlorobutadiene	95	98	62-120	3	30				
Hexachlorocyclopentadiene	66	65	10-153	2	30				
Hexachloroethane	87	87	57-109	0	30				
Isophorone	92	93	73-102	1	30				
2-Methylphenol	92	92	75-111	0	30				
4-Methylphenol	88	88	59-123	0	30				
2-Nitroaniline	97	98	67-125	2	30				
3-Nitroaniline	92	92	59-122	0	30				
4-Nitroaniline	78	82	41-109	4	30				
Nitrobenzene	97	97	57-125	0	30				
2-Nitrophenol	95	96	56-127	2	30				
4-Nitrophenol	87	90	37-129	3	30				
N-Nitroso-di-n-propylamine	85	85	60-116	1	30				
N-Nitrosodiphenylamine	101	103	71-122	2	30				
Pentachlorophenol	85	83	28-127	2	30				
Phenol	86	87	58-126	1	30				
1,2,4-Trichlorobenzene	94	96	72-115	2	30				
2,4,5-Trichlorophenol	100	101	58-129	2	30				
2,4,6-Trichlorophenol	102	102	56-134	0	30				
Batch number: 11293A16A	Sample number(s): 6441965-6441967 UNSPK: P437195								
9a TPH by EPA 8015B Gas C5-C12	77	76	39-118	9	30				
Batch number: 112920031A	Sample number(s): 6441963-6441967 UNSPK: P439922								
PCB-1016	72	65	29-146	11	50				
PCB-1260	83	75	39-149	11	50				
Batch number: 112920034A	Sample number(s): 6441965-6441967 UNSPK: P439920								
Ethanol	81	80	48-130	1	20				
Isopropanol	82	82	12-149	1	20				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Methanol	85	86	43-138	1	20				
Batch number: 112930029A	Sample number(s): 6441965-6441967 UNSPK: P435690								
Diethylene glycol	5*	8*	59-109	42*	20				
Ethylene glycol	47*	45*	63-107	6	20				
Propylene glycol	65	62*	63-107	5	20				
Batch number: 112930031A	Sample number(s): 6441972 UNSPK: P442022								
Ethanol	92	88	62-145	4	20				
Isopropanol	103	99	73-131	4	20				
Methanol	82	70	52-159	11	20				
Batch number: 112970039A	Sample number(s): 6441972 UNSPK: P443499								
Diethylene glycol	105	114	83-130	9	20				
Ethylene glycol	70*	90	89-125	25*	20				
Propylene glycol	75*	90*	91-128	18	20				
Batch number: 112920027A	Sample number(s): 6441965-6441967 UNSPK: P437195								
EFH (C12-C14)	82	89	49-123	8	20				
EFH (C15-C20)	81	98	49-123	13	20				
EFH (C21-C30)	102	117	49-123	7	20				
EFH (C30 - C40)	110	138*	49-123	8	20				
EFH (C8-C11)	0*	5*	49-123	10	20				
Batch number: 112920028A	Sample number(s): 6441965-6441967 UNSPK: P437195								
m-Terphenyl	97	98	75-125	2	20				
o-Terphenyl	102	103	75-125	1	20				
p-Terphenyl	95	97	75-125	2	20				
Batch number: 112931026004A	Sample number(s): 6441963-6441967 UNSPK: 6441965 BKG: 6441965								
Antimony	39*	46*	75-125	15	20	0.0865 J	0.0985 J	13 (1)	20
Arsenic	101	188*	75-125	24*	20	4.45	5.07	13	20
Beryllium	97	138*	75-125	22*	20	0.606	0.712	16	20
Cadmium	115	135*	75-125	16	20	0.0750 J	0.0520 J	36* (1)	20
Chromium	101	182*	75-125	25*	20	18.7	21.9	16	20
Cobalt	120	146*	75-125	20	20	5.19	5.67	9	20
Copper	114	159*	75-125	23*	20	6.58	7.09	7	20
Lead	112	187*	75-125	23*	20	5.71	6.61	15	20
Nickel	112	161*	75-125	22*	20	9.89	14.0	35*	20
Silver	119	138*	75-125	16	20	0.0292 J	0.0487 J	50* (1)	20
Thallium	113	151*	75-125	20	20	0.284	0.279	2 (1)	20
Vanadium	84	229*	75-125	28*	20	36.2	41.3	13	20
Zinc	62 (2)	187 (2)	75-125	20	20	50.2	50.8	1	20
Batch number: 112931026004B	Sample number(s): 6441963-6441967 UNSPK: 6441965 BKG: 6441965								
Selenium	113	135*	75-125	18	20	0.134 J	0.159 J	17 (1)	20
Batch number: 112931026004C	Sample number(s): 6441963-6441967 UNSPK: 6441965 BKG: 6441965								
Molybdenum	112	139*	75-125	23*	20	0.452	0.543	18 (1)	20
Batch number: 112931026004D	Sample number(s): 6441963-6441967 UNSPK: 6441965 BKG: 6441965								
Barium	103 (2)	326 (2)	75-125	24*	20	71.9	80.3	11	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 112935708007	Sample number(s): 6441963-6441967 UNSPK: 6441963 BKG: 6441963								
Aluminum	1463 (2)	1098 (2)	75-125	3	20	20,600	19,000	8	20
Boron	99	99	84-115	1	20	0.343 U	0.356 U	0 (1)	20
Calcium	153 (2)	171 (2)	75-125	2	20	2,760	2,740	0	20
Iron	437 (2)	-350 (2)	75-125	3	20	22,100	21,200	4	20
Lithium	98	98	82-114	1	20	20.5	19.0	7	20
Magnesium	153 (2)	108 (2)	75-125	2	20	4,790	4,460	7	20
Manganese	66 (2)	79 (2)	75-125	2	20	248	237	5	20
Phosphorus	109 (2)	107 (2)	75-125	0	20	433	459	6	20
Potassium	116	113	75-125	0	20	1,580	1,770	11	20
Sodium	97	97	75-125	1	20	90.1 J	88.3 J	2 (1)	20
Strontium	100	101	75-115	1	20	22.5	23.0	2	20
Tin	88	88	80-110	1	20	2.36 J	2.50 J	6 (1)	20
Titanium	211 (2)	231 (2)	75-125	2	20	963	945	2	20
Zirconium	97	97	81-110	1	20	6.75	6.86	2 (1)	20
Batch number: 112935711007	Sample number(s): 6441963-6441967 UNSPK: 6441967 BKG: 6441967								
Mercury	98	97	65-135	2	20	0.0439 J	0.0372 J	17 (1)	20
Batch number: 11293102201B	Sample number(s): 6441965-6441967 UNSPK: P437195 BKG: P437195								
16a Cyanide by 9012B	99		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11293621202B	Sample number(s): 6441963-6441967 UNSPK: 6441963 BKG: 6441963								
7a Perchlorate EPA 314.0	103		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11298243201A	Sample number(s): 6441963-6441967 UNSPK: 6441963 BKG: 6441963								
3a Cr VI by EPA 7199	96		75-125			0.46 J	0.65 J	36* (1)	20
Batch number: 11300621201A	Sample number(s): 6441963-6441967 UNSPK: 6441963 BKG: 6441963								
11a Anions by 300.0 - Fluoride	53*		80-120			1.9	2.4	22* (1)	20
Batch number: 11300039402A	Sample number(s): 6441963-6441965 BKG: P439922								
17a pH by 9045C						8.26	8.27	0	3
Batch number: 11300039402B	Sample number(s): 6441966-6441967 BKG: P443494								
17a pH by 9045C						6.51	6.54	0	3
Batch number: 11298162401B	Sample number(s): 6441963-6441967,6441970 BKG: P437195								
Moisture Content by 160.3						11.8	11.7	1	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11292SLE026

Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Surrogate Quality Control

6441963	97	82	88
6441964	99	83	85
6441965	107	87	94
6441966	94	83	90
6441967	95	81	89
Blank	94	83	90
LCS	101	84	88
MS	101	77	84
MSD	97	81	82
Limits:	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11292WAA026

	N-Nitrosodimethylamine-d6
6441968	127
6441969	105
6441972	104
Blank	117
LCS	120
LCSD	114
Limits:	50-150

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11293SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6441963	82	89	79	87	88	80
6441964	83	90	75	85	85	79
6441965	84	91	76	88	88	80
6441966	82	90	74	84	86	80
6441967	80	89	75	87	89	80
Blank	83	89	80	86	88	82
LCS	86	91	82	86	88	79
MS	84	91	82	88	90	82
MSD	85	92	82	90	93	82
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 21a NDMA by 1625C
Batch number: 11293SLE026

	N-Nitrosodimethylamine-d6
6441970	112
Blank	110
LCS	104
LCSD	110
Limits:	50-150

Analysis Name: 4b Select SVOC EPA 8270SIM
Batch number: 11297WAE026

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Surrogate Quality Control

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6441972	105	88	95
Blank	102	88	93
LCS	104	89	93
LCSD	105	89	92
Limits:	40-130	45-130	45-135

Analysis Name: 5b Semivolatiles by EPA 8270C
Batch number: 11297WAI026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6441972	60	38	90	82	82	104
Blank	61	41	90	85	88	102
LCS	69	48	89	86	87	97
LCSD	71	51	91	91	89	99
Limits:	20-130	20-120	30-130	40-130	45-130	45-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11293A16A

	Trifluorotoluene-F
6441965	86
6441966	87
6441967	87
Blank	92
LCS	93
MS	90
MSD	76
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11294B20A

	Trifluorotoluene-F
6441972	87
Blank	86
LCS	117
LCSD	113
Limits:	63-135

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11297B20A

	Trifluorotoluene-F
6441971	86
Blank	87
LCS	117
LCSD	113
Limits:	63-135

Analysis Name: 8a PCBs/PCTs by 8082

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Surrogate Quality Control

Batch number: 112920031A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6441963	90	95
6441964	87	95
6441965	93	90
6441966	88	90
6441967	95	84
Blank	86	94
LCS	94	102
LCSD	94	106
MS	90	97
MSD	86	91
Limits:	53-139	45-120

Analysis Name: 20b Formaldehyde 8315A
Batch number: 112930018A

	Butyraldehyde
6441972	91
Blank	86
LCS	94
LCSD	95
Limits:	45-145

Analysis Name: 15b Energetics by 8330A
Batch number: 112930023A

	2-Nitro-m-xylene
6441972	92
Blank	91
LCS	91
LCSD	92
Limits:	50-134

Analysis Name: 8b PCBs/PCTs by 8082
Batch number: 112980001A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6441972	105	97
Blank	101	104
LCS	101	84
LCSD	99	79
Limits:	30-150	30-150

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 112920027A

	Chlorobenzene	Orthoterphenyl
6441965	76	87
6441966	68	79
6441967	73	83
Blank	82	88

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Surrogate Quality Control

LCS	88	92
MS	77	86
MSD	80	90
Limits:	37-125	47-145

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112920028A

	n-Triacontane-d62
6441965	76
6441966	71
6441967	75
Blank	80
LCS	79
MS	79
MSD	79
Limits:	19-152

Analysis Name: 18a Alcohols by 8015B
Batch number: 112920034A

	Acetone
6441965	71
6441966	74
6441967	76
Blank	86
LCS	89
MS	80
MSD	78
Limits:	42-138

Analysis Name: 22b Terphenyls by 8015B
Batch number: 112930011A

	n-Triacontane-d62
6441972	75
Blank	76
LCS	78
LCSD	77
Limits:	17-138

Analysis Name: 19a Glycols by 8015B
Batch number: 112930029A

	Tetramethylene glycol
6441965	93
6441966	93
6441967	90
Blank	98
LCS	98
MS	92
MSD	90

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271993
Reported: 11/18/11 at 09:29 AM

Surrogate Quality Control

Limits: 29-137

Analysis Name: 18b Alcohols by 8015B
Batch number: 112930031A

	Acetone
6441972	98
Blank	101
LCS	104
MS	108
MSD	103
Limits:	54-147

Analysis Name: 9b TPH by EPA 8015B Oil/Diesel
Batch number: 112940018A

	Chlorobenzene	Orthoterphenyl
6441972	86	88
Blank	106	
LCS	130	101
LCSD	94	98
Limits:	28-152	52-131

Analysis Name: 19b Glycols by 8015B
Batch number: 112970039A

	Tetramethylene glycol
6441972	112
Blank	104
LCS	110
MS	110
MSD	114
Limits:	29-157

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13013 1271993 6441963-72

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS: *Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 8850 (10%)	TPH-GRO EPA 8015B $	SECONDARY FOR ALL LOCATIONS: **TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-013-SA5DS-SB-4.0-5.0	10.18.11	0910	SOIL	NONE	2- 16 oz Jars	X	X	X	X	X	X	X	X													
SL-015-SA5DS-SB-3.5-4.5	10.18.11	1020	SOIL	NONE	2- 16 oz Jars	X	X	X	X	X	X	X	X													
SL-020-SA7-SB-4.5	10.18.11	1220	SOIL	NONE	2-Encores										X											
SL-020-SA7-SB-4.0-5.0	10.18.11	1223	SOIL	NONE	3-16 oz Jars	X	X	X	X	X	X	X	X			X					X	X	X	X		*Pls use jar for SVOCs & PCBs
SL-020-SA7-SB-9.5	10.18.11	1433	SOIL	NONE	2-Encores										X											
SL-020-SA7-SB-9.0-10.0	10.18.11	1444	SOIL	NONE	1-SS Sleeve			X	X																	
SL-020-SA7-SB-9.0-10.0	10.18.11	1444	SOIL	NONE	2- 16 oz Jars	X	X			X	X	X	X			X					X	X	X	X		
SL-140-SA7-SB-3.5	10.18.11	0955	SOIL	NONE	2-Encores										X											
SL-140-SA7-SB-3.0-4.0	10.18.11	0950	SOIL	NONE	1-SS Sleeve			X	X																	
SL-140-SA7-SB-3.0-4.0	10.18.11	0950	SOIL	NONE	2- 16 oz Jars	X	X			X	X	X	X			X					X	X	X	X		
EB-SA7-SB-101811	10.18.11	1400	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-HA crew
TB-101811	10.18.11	0800	WATER	NONE	1-1 L Amber														X							
TB-101811	10.18.11	0800	SOIL	NONE	1-4 oz Jar														X							
TB-101811	10.18.11	0800	WATER	NONE	2-40 mL Vials										X											

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/18/2011 / 1630	10/19/11 0910	Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9858 6780, 6791, 5165	

13013 1271993 6441963-72

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X	
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	1-500 mL poly		X				X	X	X													
EB-SA5DS-SB-101811	10.18.11	1400	WATER	HNO3	1-500 mL poly	X																				
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NaOH	1-500 mL poly																X					DPT EB
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	1-250 mL glass													X								
EB-SA5DS-SB-101811	10.18.11	1400	WATER	HCL	11-40 mL vials										X									X		
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	4-40 mL vials												X						X			

Relinquished by: (Signature) — **Date/Time** 10/18/2011 / 1630 — **Received for Laboratory by: (Signature)** 10/19/11 0910

Received by: (Signature) — **Date/Time** — **Airbill No.(s)** 8767 9858 6780, 6791, 5165

Laboratory: Lancaster Laboratories, Inc.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

October 31, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/19/2011
Group Number: 1271995
SDG: DX149
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-013-SA5DS-SB-4.0-5.0 Soil	6441984
SL-015-SA5DS-SB-3.5-4.5 Soil	6441985
SL-020-SA7-SB-4.0-5.0 Soil	6441986
SL-020-SA7-SB-9.0-10.0 Soil	6441987
SL-140-SA7-SB-3.0-4.0 Soil	6441988
EB-SA5DS-SB-101811 Water	6441989

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love
Group Leader

Lancaster Laboratories

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Analysis Report

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441984
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD013 SDG#: DX149-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441984
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD013 SDG#: DX149-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0484 U	0.0484	1.10	1
11031	12378-PeCDD	40321-76-4	0.0766 JBQ	0.0315	5.48	1
11031	123478-HxCDD	39227-28-6	0.0251 JBQ	0.0250	5.48	1
11031	123678-HxCDD	57653-85-7	0.0758 J	0.0267	5.48	1
11031	123789-HxCDD	19408-74-3	0.113 JB	0.0254	5.48	1
11031	1234678-HpCDD	35822-46-9	0.263 JBQ	0.0256	5.48	1
11031	OCDD	3268-87-9	0.429 JB	0.0279	11.0	1
11031	2378-TCDF	51207-31-9	0.0307 JQ	0.0263	1.10	1
11031	12378-PeCDF	57117-41-6	0.0766 JBQ	0.0172	5.48	1
11031	23478-PeCDF	57117-31-4	0.0965 JBQ	0.0161	5.48	1
11031	123478-HxCDF	70648-26-9	0.0358 JBQ	0.0157	5.48	1
11031	123678-HxCDF	57117-44-9	0.0671 JB	0.0146	5.48	1
11031	123789-HxCDF	72918-21-9	0.0840 JBQ	0.0165	5.48	1
11031	234678-HxCDF	60851-34-5	0.0424 JB	0.0139	5.48	1
11031	1234678-HpCDF	67562-39-4	0.108 JB	0.0117	5.48	1
11031	1234789-HpCDF	55673-89-7	0.0406 JBQ	0.0169	5.48	1
11031	OCDF	39001-02-0	0.141 JBQ	0.0332	11.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	87	32 - 141
13C12-123678-HxCDD	88	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	89	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	78	29 - 147
13C12-1234678-HpCDF	92	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	82	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-013-SA5DS-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441984
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD013 SDG#: DX149-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-013-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-013-SA5DS-SB-4.0-5.0

LLI Sample # SW 6441984
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:10

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD013 SDG#: DX149-15

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 09:52	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441985
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD015 SDG#: DX149-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	9.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441985
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD015 SDG#: DX149-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0480 JQ	0.0419	1.09	1
11031	12378-PeCDD	40321-76-4	0.176 JBQ	0.0423	5.44	1
11031	123478-HxCDD	39227-28-6	0.0750 JBQ	0.0280	5.44	1
11031	123678-HxCDD	57653-85-7	0.199 J	0.0290	5.44	1
11031	123789-HxCDD	19408-74-3	0.264 JBQ	0.0292	5.44	1
11031	1234678-HpCDD	35822-46-9	0.414 JBQ	0.0291	5.44	1
11031	OCDD	3268-87-9	2.44 JB	0.0239	10.9	1
11031	2378-TCDF	51207-31-9	0.0938 JQ	0.0325	1.09	1
11031	12378-PeCDF	57117-41-6	0.193 JBQ	0.0199	5.44	1
11031	23478-PeCDF	57117-31-4	0.182 JBQ	0.0192	5.44	1
11031	123478-HxCDF	70648-26-9	0.132 JBQ	0.0221	5.44	1
11031	123678-HxCDF	57117-44-9	0.117 JBQ	0.0199	5.44	1
11031	123789-HxCDF	72918-21-9	0.182 JBQ	0.0225	5.44	1
11031	234678-HxCDF	60851-34-5	0.0756 JBQ	0.0180	5.44	1
11031	1234678-HpCDF	67562-39-4	0.115 JB	0.0137	5.44	1
11031	1234789-HpCDF	55673-89-7	0.0561 JB	0.0195	5.44	1
11031	OCDF	39001-02-0	0.233 JB	0.0376	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	85	25 - 164
13C12-12378-PeCDD	89	25 - 181
13C12-123478-HxCDD	101	32 - 141
13C12-123678-HxCDD	104	28 - 130
13C12-123789-HxCDD	99	28 - 130
13C12-1234678-HpCDD	106	23 - 140
13C12-OCDD	118	17 - 157
13C12-2378-TCDF	85	24 - 169
13C12-12378-PeCDF	92	24 - 185
13C12-23478-PeCDF	87	21 - 178
13C12-123478-HxCDF	83	26 - 152
13C12-123678-HxCDF	88	26 - 123
13C12-234678-HxCDF	96	28 - 136
13C12-123789-HxCDF	90	29 - 147
13C12-1234678-HpCDF	110	28 - 143
13C12-1234789-HpCDF	92	26 - 138
13C12-OCDF	100	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441985
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD015 SDG#: DX149-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA5DS-SB-3.5-4.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA5DS-SB-3.5-4.5

LLI Sample # SW 6441985
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 10:20

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD015 SDG#: DX149-16

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 10:48	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441986
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD204 SDG#: DX149-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441986
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD204 SDG#: DX149-17

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.141	JQ	0.0460	1.03	1
11031	12378-PeCDD	40321-76-4	0.250	JBQ	0.0416	5.15	1
11031	123478-HxCDD	39227-28-6	0.0621	JB	0.0356	5.15	1
11031	123678-HxCDD	57653-85-7	0.313	JQ	0.0347	5.15	1
11031	123789-HxCDD	19408-74-3	0.199	JB	0.0343	5.15	1
11031	1234678-HpCDD	35822-46-9	3.76	JB	0.0446	5.15	1
11031	OCDD	3268-87-9	41.7	B	0.0458	10.3	1
11031	2378-TCDF	51207-31-9	0.0709	J	0.0483	1.03	1
11031	12378-PeCDF	57117-41-6	0.375	JBQ	0.0292	5.15	1
11031	23478-PeCDF	57117-31-4	0.405	JBQ	0.0290	5.15	1
11031	123478-HxCDF	70648-26-9	0.456	JB	0.0345	5.15	1
11031	123678-HxCDF	57117-44-9	0.130	JB	0.0304	5.15	1
11031	123789-HxCDF	72918-21-9	0.0967	JBQ	0.0334	5.15	1
11031	234678-HxCDF	60851-34-5	0.151	JB	0.0298	5.15	1
11031	1234678-HpCDF	67562-39-4	0.954	JB	0.0232	5.15	1
11031	1234789-HpCDF	55673-89-7	0.112	JBQ	0.0358	5.15	1
11031	OCDF	39001-02-0	1.73	JB	0.0436	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	77	25 - 164
13C12-12378-PeCDD	82	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	92	23 - 140
13C12-OCDD	104	17 - 157
13C12-2378-TCDF	77	24 - 169
13C12-12378-PeCDF	84	24 - 185
13C12-23478-PeCDF	78	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	82	29 - 147
13C12-1234678-HpCDF	96	28 - 143
13C12-1234789-HpCDF	78	26 - 138
13C12-OCDF	87	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441986
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD204 SDG#: DX149-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-020-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-4.0-5.0

LLI Sample # SW 6441986
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 12:23

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD204 SDG#: DX149-17

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 14:48	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441987
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD209 SDG#: DX149-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	14.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441987
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD209 SDG#: DX149-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0416 U	0.0416	1.14	1
11031	12378-PeCDD	40321-76-4	0.117 JBQ	0.0400	5.71	1
11031	123478-HxCDD	39227-28-6	0.0248 U	0.0248	5.71	1
11031	123678-HxCDD	57653-85-7	0.0385 JQ	0.0264	5.71	1
11031	123789-HxCDD	19408-74-3	0.0668 JB	0.0262	5.71	1
11031	1234678-HpCDD	35822-46-9	0.492 JB	0.0289	5.71	1
11031	OCDD	3268-87-9	2.78 JB	0.0346	11.4	1
11031	2378-TCDF	51207-31-9	0.0367 JQ	0.0328	1.14	1
11031	12378-PeCDF	57117-41-6	0.163 JB	0.0203	5.71	1
11031	23478-PeCDF	57117-31-4	0.145 JB	0.0192	5.71	1
11031	123478-HxCDF	70648-26-9	0.0784 JB	0.0196	5.71	1
11031	123678-HxCDF	57117-44-9	0.0799 JBQ	0.0179	5.71	1
11031	123789-HxCDF	72918-21-9	0.0791 JBQ	0.0195	5.71	1
11031	234678-HxCDF	60851-34-5	0.0421 JBQ	0.0162	5.71	1
11031	1234678-HpCDF	67562-39-4	0.124 JB	0.0144	5.71	1
11031	1234789-HpCDF	55673-89-7	0.0384 JB	0.0204	5.71	1
11031	OCDF	39001-02-0	0.188 JB	0.0387	11.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	79	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	89	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	89	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	82	24 - 185
13C12-23478-PeCDF	77	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	84	28 - 136
13C12-123789-HxCDF	82	29 - 147
13C12-1234678-HpCDF	90	28 - 143
13C12-1234789-HpCDF	80	26 - 138
13C12-OCDF	84	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-020-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441987
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD209 SDG#: DX149-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-020-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-020-SA7-SB-9.0-10.0

LLI Sample # SW 6441987
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:44

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD209 SDG#: DX149-18

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 15:44	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441988
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD140 SDG#: DX149-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	9.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441988
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD140 SDG#: DX149-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0506 U	0.0506	1.08	1
11031	12378-PeCDD	40321-76-4	0.0517 JBQ	0.0343	5.38	1
11031	123478-HxCDD	39227-28-6	0.0354 JBQ	0.0225	5.38	1
11031	123678-HxCDD	57653-85-7	0.0432 JQ	0.0229	5.38	1
11031	123789-HxCDD	19408-74-3	0.0726 JBQ	0.0223	5.38	1
11031	1234678-HpCDD	35822-46-9	0.381 JBQ	0.0273	5.38	1
11031	OCDD	3268-87-9	1.58 JB	0.0281	10.8	1
11031	2378-TCDF	51207-31-9	0.0325 U	0.0325	1.08	1
11031	12378-PeCDF	57117-41-6	0.0563 JBQ	0.0177	5.38	1
11031	23478-PeCDF	57117-31-4	0.0830 JBQ	0.0178	5.38	1
11031	123478-HxCDF	70648-26-9	0.0184 U	0.0184	5.38	1
11031	123678-HxCDF	57117-44-9	0.0285 JBQ	0.0158	5.38	1
11031	123789-HxCDF	72918-21-9	0.0377 JBQ	0.0170	5.38	1
11031	234678-HxCDF	60851-34-5	0.0408 JBQ	0.0146	5.38	1
11031	1234678-HpCDF	67562-39-4	0.0982 JB	0.0129	5.38	1
11031	1234789-HpCDF	55673-89-7	0.0737 JB	0.0200	5.38	1
11031	OCDF	39001-02-0	0.131 JB	0.0389	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	80	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	88	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	93	23 - 140
13C12-OCDD	101	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	84	24 - 185
13C12-23478-PeCDF	77	21 - 178
13C12-123478-HxCDF	65	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	82	29 - 147
13C12-1234678-HpCDF	95	28 - 143
13C12-1234789-HpCDF	78	26 - 138
13C12-OCDF	84	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-140-SA7-SB-3.0-4.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441988
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD140 SDG#: DX149-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-140-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-140-SA7-SB-3.0-4.0

LLI Sample # SW 6441988
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 09:50

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD140 SDG#: DX149-19

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11294002	10/25/2011 16:41	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11294002	10/21/2011 14:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11298162401B	10/25/2011 18:57	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA5DS-SB-101811 Water
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441989
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DEB18 SDG#: DX149-20EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.275	U	0.275	2.04	1
10915	12378-PeCDD	40321-76-4	0.332	JQ	0.230	10.2	1
10915	123478-HxCDD	39227-28-6	0.219	U	0.219	10.2	1
10915	123678-HxCDD	57653-85-7	0.269	JBQ	0.225	10.2	1
10915	123789-HxCDD	19408-74-3	0.264	JB	0.221	10.2	1
10915	1234678-HpCDD	35822-46-9	2.72	JB	0.215	10.2	1
10915	OCDD	3268-87-9	5.70	JB	0.291	20.4	1
10915	2378-TCDF	51207-31-9	0.173	U	0.173	2.04	1
10915	12378-PeCDF	57117-41-6	0.161	JBQ	0.139	10.2	1
10915	23478-PeCDF	57117-31-4	0.124	U	0.124	10.2	1
10915	123478-HxCDF	70648-26-9	0.500	JBQ	0.127	10.2	1
10915	123678-HxCDF	57117-44-9	0.297	JBQ	0.126	10.2	1
10915	123789-HxCDF	72918-21-9	0.364	JBQ	0.130	10.2	1
10915	234678-HxCDF	60851-34-5	0.370	JBQ	0.119	10.2	1
10915	1234678-HpCDF	67562-39-4	2.10	JBQ	0.118	10.2	1
10915	1234789-HpCDF	55673-89-7	0.403	JBQ	0.133	10.2	1
10915	OCDF	39001-02-0	1.39	JB	0.363	20.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	82	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	87	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	80	21 - 178
13C12-123478-HxCDF	74	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	86	29 - 147
13C12-1234678-HpCDF	73	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	74	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **EB-SA5DS-SB-101811 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA5DS-SB-101811

LLI Sample # WW 6441989
LLI Group # 1271995
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/18/2011 14:00

Submitted: 10/19/2011 09:10
Reported: 10/31/2011 12:03

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

DEB18 SDG#: DX149-20EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11297002	10/26/2011 05:10	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11297002	10/24/2011 09:45	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271995
Reported: 10/31/11 at 12:03 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11298162401B	Sample number(s): 6441984-6441988								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11294002	Sample number(s): 6441984-6441988								
2378-TCDD	0.0609 U	0.0609	1.00	ng/kg	107		67-158		
12378-PeCDD	0.0460 J	0.0441	5.00	ng/kg	105		70-142		
123478-HxCDD	0.0460 J	0.0278	5.00	ng/kg	100		70-164		
123678-HxCDD	0.0276 U	0.0276	5.00	ng/kg	94		76-134		
123789-HxCDD	0.0516 J	0.0279	5.00	ng/kg	102		64-162		
1234678-HpCDD	0.267 J	0.0317	5.00	ng/kg	100		70-140		
OCDD	0.461 J	0.0245	10.0	ng/kg	95		78-144		
2378-TCDF	0.0429 U	0.0429	1.00	ng/kg	97		75-158		
12378-PeCDF	0.0382 J	0.0220	5.00	ng/kg	102		80-134		
23478-PeCDF	0.0374 J	0.0203	5.00	ng/kg	96		68-160		
123478-HxCDF	0.0843 J	0.0241	5.00	ng/kg	97		72-134		
123678-HxCDF	0.0224 J	0.0214	5.00	ng/kg	98		84-130		
123789-HxCDF	0.0575 J	0.0180	5.00	ng/kg	98		78-130		
234678-HxCDF	0.0541 J	0.0162	5.00	ng/kg	96		70-156		
1234678-HpCDF	0.154 J	0.0152	5.00	ng/kg	92		82-122		
1234789-HpCDF	0.0824 J	0.0190	5.00	ng/kg	96		78-138		
OCDF	0.172 J	0.0394	10.0	ng/kg	97		63-170		
Batch number: 11297002	Sample number(s): 6441989								
2378-TCDD	0.534 U	0.534	2.00	pg/l	108		67-158		
12378-PeCDD	0.463 U	0.463	10.0	pg/l	109		70-142		
123478-HxCDD	0.338 U	0.338	10.0	pg/l	102		70-164		
123678-HxCDD	0.372 J	0.333	10.0	pg/l	99		76-134		
123789-HxCDD	0.989 J	0.344	10.0	pg/l	107		64-162		
1234678-HpCDD	3.78 J	0.374	10.0	pg/l	105		70-140		
OCDD	6.96 J	0.424	20.0	pg/l	104		78-144		
2378-TCDF	0.339 J	0.324	2.00	pg/l	97		75-158		
12378-PeCDF	0.262 J	0.229	10.0	pg/l	102		80-134		
23478-PeCDF	0.327 J	0.200	10.0	pg/l	99		68-160		
123478-HxCDF	0.588 J	0.209	10.0	pg/l	103		72-134		
123678-HxCDF	0.410 J	0.208	10.0	pg/l	105		84-130		
123789-HxCDF	0.976 J	0.229	10.0	pg/l	102		78-130		
234678-HxCDF	0.342 J	0.198	10.0	pg/l	99		70-156		
1234678-HpCDF	1.54 J	0.203	10.0	pg/l	98		82-122		
1234789-HpCDF	0.445 J	0.233	10.0	pg/l	104		78-138		
OCDF	2.32 J	0.508	20.0	pg/l	103		63-170		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271995
Reported: 10/31/11 at 12:03 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11298162401B	Sample number(s): 6441984-6441988					BKG: P437195			
Moisture Content by 160.3						11.8	11.7	1	20
Batch number: 11294002	Sample number(s): 6441984-6441988 UNSPK: P435711								
2378-TCDD	109	105	67-158	3	25				
12378-PeCDD	105	104	70-142	0	25				
123478-HxCDD	98	98	70-164	1	25				
123678-HxCDD	93	95	76-134	3	25				
123789-HxCDD	100	102	64-162	3	25				
1234678-HpCDD	98	99	70-140	3	25				
OCDD	96	95	78-144	1	25				
2378-TCDF	98	97	75-158	0	25				
12378-PeCDF	101	102	80-134	2	25				
23478-PeCDF	96	93	68-160	2	25				
123478-HxCDF	100	97	72-134	2	25				
123678-HxCDF	98	98	84-130	0	25				
123789-HxCDF	100	98	78-130	0	25				
234678-HxCDF	95	95	70-156	2	25				
1234678-HpCDF	90	90	82-122	1	25				
1234789-HpCDF	96	96	78-138	1	25				
OCDF	97	95	63-170	1	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11294002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6441984	72	74	70	76	79	78
6441985	85	87	83	88	96	90
6441986	77	78	70	78	76	82
6441987	74	77	69	76	84	82
6441988	74	77	65	77	81	82
Blank	86	88	61	70	88	96
MS	76	80	51	59	84	85
MSD	72	79	50	54	81	84
OPR	74	77	60	69	78	83
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6441984	92	76	82	76	87	88
6441985	110	92	100	89	101	104

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1271995
Reported: 10/31/11 at 12:03 PM

Surrogate Quality Control

6441986	96	78	87	82	83	85
6441987	90	80	84	79	89	89
6441988	95	78	84	80	89	88
Blank	92	93	100	92	92	97
MS	77	83	88	81	90	89
MSD	72	83	92	79	83	84
OPR	88	82	87	81	86	87
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6441984	84	89	95	72	78
6441985	99	106	118	85	92
6441986	84	92	104	77	84
6441987	86	89	95	76	82
6441988	86	93	101	73	84
Blank	96	108	118	82	92
MS	89	95	102	78	84
MSD	85	92	103	72	79
OPR	86	95	103	73	81
Limits:	28-130	23-140	17-157	24-169	24-185

Analysis Name: 10b Dioxin/Furan by EPA 1613B
Batch number: 11297002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6441989	82	80	74	76	79	86
Blank	54	55	50	50	53	54
OPR	65	64	62	62	65	73
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6441989	73	76	74	77	78	83
Blank	51	52	49	52	52	57
OPR	65	63	62	62	66	68
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6441989	79	79	76	87	81
Blank	53	54	51	57	54
OPR	67	68	66	67	66
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1271995 6441984-89

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetrelin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS									SECONDARY FOR ALL LOCATIONS										Other Instructions and Notes
						*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonel EPA 8270	
SL-013-SA5DS-SB-4.0-5.0	10.18.11	0910	SOIL	NONE	2- 16 oz Jars	X	X	X	X	X	X	X	X												
SL-015-SA5DS-SB-3.5-4.5	10.18.11	1020	SOIL	NONE	2- 16 oz Jars	X	X	X	X	X	X	X	X												
SL-020-SA7-SB-4.5	10.18.11	1220	SOIL	NONE	2-Encores										X										
SL-020-SA7-SB-4.0-5.0	10.18.11	1223	SOIL	NONE	3-16 oz Jars	X	X	X	X	X	X	X	X			X					X	X	X	X	*Pls use jar for SVOCs & PCBs
SL-020-SA7-SB-9.5	10.18.11	1433	SOIL	NONE	2-Encores										X										
SL-020-SA7-SB-9.0-10.0	10.18.11	1444	SOIL	NONE	1-SS Sleeve			X	X																
SL-020-SA7-SB-9.0-10.0	10.18.11	1444	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X					X	X	X	X	
SL-140-SA7-SB-3.5	10.18.11	0955	SOIL	NONE	2-Encores										X										
SL-140-SA7-SB-3.0-4.0	10.18.11	0950	SOIL	NONE	1-SS Sleeve			X	X																
SL-140-SA7-SB-3.0-4.0	10.18.11	0950	SOIL	NONE	2- 16 oz Jars	X	X			X	X	X	X			X					X	X	X	X	
EB-SA7-SB-101811	10.18.11	1400	WATER	NONE	1-1 L Amber														X						HGL ASTM II WATER-HA crew
TB-101811	10.18.11	0800	WATER	NONE	1-1 L Amber														X						
TB-101811	10.18.11	0800	SOIL	NONE	1-4 oz Jar														X						
TB-101811	10.18.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	
	10/18/2011 / 1630		10/19/11 0910
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9858 6780, 6791, 5165	

Laboratory:
Lancaster Laboratories, Inc.

13013 1271995 6441984-89

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 5 (SA5) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS										SECONDARY FOR ALL LOCATIONS										Other Instructions and Notes
						*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6860 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X	
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	1-500 mL poly		X				X	X	X													
EB-SA5DS-SB-101811	10.18.11	1400	WATER	HNO3	1-500 mL poly	X																				
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NaOH	1-500 mL poly																X					DPT EB
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	1-250 mL glass													X								
EB-SA5DS-SB-101811	10.18.11	1400	WATER	HCL	11-40 mL vials										X									X		
EB-SA5DS-SB-101811	10.18.11	1400	WATER	NONE	4-40 mL vials												X						X			

Relinquished by: (Signature) | **Date/Time** 10/18/2011 / 1630 | **Received for Laboratory by: (Signature)** 10/19/11 0910

Received by: (Signature) | **Date/Time** | **Airbill No.(s)** 8767 9858 6780, 6791, 5165

Laboratory: Lancaster Laboratories, Inc.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 18, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/20/2011
Group Number: 1272257
SDG: DE272
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-016-SA5DS-SB-4.0-5.0 Soil	6443490
SL-143-SA7-SB-5.0-6.0 Soil	6443491
SL-143-SA7-SB-9.0-10.0 Soil	6443492
SL-142-SA7-SB-2.0-3.0 Soil	6443493
SL-142-SA7-SB-7.0-8.0 Soil	6443494
EB-SA7-SB-101911 Water	6443495
TB-101911 Water	6443496
TB-101911 Sand	6443497
TB-101911 Water	6443498
EB-SA7-SB-101911 Water	6443499

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443490
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7201 SDG#: DE272-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	540		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	U	180	540		1
04688	Benzyl alcohol	100-51-6	180	U	180	540		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	73	U	73	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	73	U	73	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	540		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	540		1
04688	Phenol	108-95-2	18	U	18	180		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443490
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7201 SDG#: DE272-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.71	U	0.71	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19		1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8		1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19		1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.4	U	6.4	19		1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8		1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8		1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19		1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8		1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8		1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.8		1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	21,500		6.52	21.5		1
07914	Boron	7440-42-8	2.00	J	0.388	5.39		1
01650	Calcium	7440-70-2	3,090		2.69	21.5		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443490
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7201 SDG#: DE272-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	27,000		2.81	21.5		1
01656	Lithium	7439-93-2	19.9		0.67	2.2		1
01657	Magnesium	7439-95-4	5,280		0.474	10.8		1
06958	Manganese	7439-96-5	303		0.0388	0.539		1
10145	Phosphorus	7723-14-0	432		0.377	10.8		1
01662	Potassium	7440-09-7	1,690		12.2	53.9		1
01667	Sodium	7440-23-5	110		6.41	108		1
07968	Strontium	7440-24-6	27.5		0.0269	0.539		1
06969	Tin	7440-31-5	2.95	J	0.345	10.8		1
06970	Titanium	7440-32-6	1,480		0.0765	1.08		1
10146	Zirconium	7440-67-7	13.0		0.496	5.39		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.243		0.0797	0.215		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	5.58		0.0862	0.431		2
06126	Barium	7440-39-3	65.0		0.114	0.431		2
06127	Beryllium	7440-41-7	0.712		0.0172	0.108		2
06128	Cadmium	7440-43-9	0.119		0.0474	0.108		2
06131	Chromium	7440-47-3	36.8		0.129	0.431		2
06132	Cobalt	7440-48-4	6.94		0.0215	0.108		2
06133	Copper	7440-50-8	6.80		0.0862	0.431		2
06135	Lead	7439-92-1	5.59		0.0110	0.215		2
06138	Molybdenum	7439-98-7	0.538		0.0539	0.108		2
06139	Nickel	7440-02-0	12.6		0.108	0.431		2
06141	Selenium	7782-49-2	0.154	J	0.0625	0.431		2
06142	Silver	7440-22-4	0.0268	J	0.0153	0.108		2
06145	Thallium	7440-28-0	0.222		0.0323	0.108		2
06148	Vanadium	7440-62-2	66.2		0.0237	0.108		2
06149	Zinc	7440-66-6	50.7		0.603	3.23		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073	U	0.0073	0.104		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.5		0.87	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8	U	9.8	32.6		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.56	J	0.22	1.1		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443490
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7201 SDG#: DE272-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	7.00	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	%	
11624	Moisture Content by 160.3	n.a.	8.1	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 20:00	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 11:11	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112970027A	10/31/2011 22:38	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112970027A	10/25/2011 12:00	Olivia I Santiago	1
01643	Aluminum	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
07914	Boron	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01654	Iron	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01656	Lithium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
10145	Phosphorus	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
07968	Strontium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
06969	Tin	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
06970	Titanium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
10146	Zirconium	SW-846 6010B	1	112975708004	10/25/2011 14:30	Eric L Eby	1
06124	Antimony	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026002D	10/26/2011 04:58	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443490
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7201 SDG#: DE272-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026002C	10/26/2011 04:58	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026002B	10/26/2011 04:58	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026002A	10/26/2011 04:58	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711002	10/25/2011 16:09	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708004	10/24/2011 21:53	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026002	10/24/2011 21:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711002	10/25/2011 01:40	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 11:20	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201A	11/03/2011 15:36	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 15:59	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201A	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result
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Lancaster Laboratories

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Analysis Report

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/kg		ug/kg	ug/kg	ug/kg	
06192	Acetone	67-64-1	7.5	U	7.5	9.0		1.05
06192	Benzene	71-43-2	0.11	U	0.11	4.5		1.05
06192	Bromobenzene	108-86-1	0.15	U	0.15	4.5		1.05
06192	Bromochloromethane	74-97-5	0.37	U	0.37	4.5		1.05
06192	Bromodichloromethane	75-27-4	0.09	U	0.09	4.5		1.05
06192	Bromoform	75-25-2	0.45	U	0.45	4.5		1.05
06192	Bromomethane	74-83-9	0.28	U	0.28	4.5		1.05
06192	2-Butanone	78-93-3	1.4	U	1.4	9.0		1.05
06192	n-Butylbenzene	104-51-8	0.14	U	0.14	4.5		1.05
06192	sec-Butylbenzene	135-98-8	0.07	U	0.07	4.5		1.05
06192	tert-Butylbenzene	98-06-6	0.18	U	0.18	4.5		1.05
06192	Carbon Tetrachloride	56-23-5	0.16	U	0.16	4.5		1.05
06192	Chlorobenzene	108-90-7	0.12	U	0.12	4.5		1.05
06192	Chloroethane	75-00-3	0.15	U	0.15	4.5		1.05
06192	2-Chloroethyl Vinyl Ether	110-75-8	0.34	U	0.34	4.5		1.05
06192	Chloroform	67-66-3	0.14	J	0.14	4.5		1.05
06192	Chloromethane	74-87-3	0.37	U	0.37	4.5		1.05
06192	2-Chlorotoluene	95-49-8	0.16	U	0.16	4.5		1.05
06192	4-Chlorotoluene	106-43-4	0.16	U	0.16	4.5		1.05
06192	Chlorotrifluoroethene	79-38-9	0.56	U	0.56	5.6		1.05
06192	1,2-Dibromo-3-chloropropane	96-12-8	0.79	U	0.79	4.5		1.05
06192	Dibromochloromethane	124-48-1	0.22	U	0.22	4.5		1.05
06192	1,2-Dibromoethane	106-93-4	0.19	U	0.19	4.5		1.05
06192	Dibromomethane	74-95-3	0.27	U	0.27	4.5		1.05
06192	1,2-Dichlorobenzene	95-50-1	0.10	U	0.10	4.5		1.05
06192	1,3-Dichlorobenzene	541-73-1	0.14	U	0.14	4.5		1.05
06192	1,4-Dichlorobenzene	106-46-7	0.18	U	0.18	4.5		1.05
06192	Dichlorodifluoromethane	75-71-8	0.14	U	0.14	4.5		1.05
06192	1,1-Dichloroethane	75-34-3	0.11	U	0.11	4.5		1.05
06192	1,2-Dichloroethane	107-06-2	0.17	U	0.17	4.5		1.05
06192	1,1-Dichloroethene	75-35-4	0.44	U	0.44	4.5		1.05
06192	cis-1,2-Dichloroethene	156-59-2	0.21	U	0.21	4.5		1.05
06192	trans-1,2-Dichloroethene	156-60-5	0.14	U	0.14	4.5		1.05
06192	1,2-Dichloropropane	78-87-5	0.19	U	0.19	4.5		1.05
06192	1,3-Dichloropropane	142-28-9	0.09	U	0.09	4.5		1.05
06192	2,2-Dichloropropane	594-20-7	0.19	U	0.19	4.5		1.05
06192	1,1-Dichloropropene	563-58-6	0.15	U	0.15	4.5		1.05
06192	cis-1,3-Dichloropropene	10061-01-5	0.18	U	0.18	4.5		1.05
06192	trans-1,3-Dichloropropene	10061-02-6	0.19	U	0.19	4.5		1.05
06192	Ethylbenzene	100-41-4	0.07	U	0.07	4.5		1.05
06192	Freon 113	76-13-1	0.12	U	0.12	4.5		1.05
06192	Freon 133a	75-88-7	0.56	U	0.56	5.6		1.05
06192	Hexachlorobutadiene	87-68-3	0.16	U	0.16	4.5		1.05
06192	2-Hexanone	591-78-6	1.8	U	1.8	9.0		1.05
06192	Isopropylbenzene	98-82-8	0.07	U	0.07	4.5		1.05
06192	p-Isopropyltoluene	99-87-6	0.12	U	0.12	4.5		1.05
06192	Methyl Tertiary Butyl Ether	1634-04-4	0.24	U	0.24	4.5		1.05
06192	4-Methyl-2-pentanone	108-10-1	0.44	U	0.44	9.0		1.05
06192	Methylene Chloride	75-09-2	0.78	J	0.27	4.5		1.05
06192	n-Propylbenzene	103-65-1	0.08	U	0.08	4.5		1.05

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Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
06192	Styrene	100-42-5	0.11	U	0.11	4.5		1.05
06192	1,1,1,2-Tetrachloroethane	630-20-6	0.12	U	0.12	4.5		1.05
06192	1,1,2,2-Tetrachloroethane	79-34-5	0.26	U	0.26	4.5		1.05
06192	Tetrachloroethene	127-18-4	0.22	U	0.22	4.5		1.05
06192	Toluene	108-88-3	0.21	J	0.09	4.5		1.05
06192	1,2,3-Trichlorobenzene	87-61-6	0.16	U	0.16	4.5		1.05
06192	1,2,4-Trichlorobenzene	120-82-1	0.20	U	0.20	4.5		1.05
06192	1,1,1-Trichloroethane	71-55-6	0.22	U	0.22	4.5		1.05
06192	1,1,2-Trichloroethane	79-00-5	0.30	U	0.30	4.5		1.05
06192	Trichloroethene	79-01-6	0.17	U	0.17	4.5		1.05
06192	Trichlorofluoromethane	75-69-4	0.33	U	0.33	4.5		1.05
06192	1,2,3-Trichloropropane	96-18-4	0.37	U	0.37	4.5		1.05
06192	1,2,4-Trimethylbenzene	95-63-6	0.45	U	0.45	4.5		1.05
06192	1,3,5-Trimethylbenzene	108-67-8	0.11	U	0.11	4.5		1.05
06192	Vinyl Chloride	75-01-4	0.22	U	0.22	4.5		1.05
06192	m+p-Xylene	179601-23-1	0.19	U	0.19	4.5		1.05
06192	o-Xylene	95-47-6	0.19	U	0.19	4.5		1.05
GC/MS Volatiles	**SW-846 8260B SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10326	1,4-Dioxane	123-91-1	6.5	U	6.5	20		30.64
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	17.7	U	17.7	35.4		1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500		1
04688	Benzoic acid	65-85-0	180	U	180	530		1
04688	Benzyl alcohol	100-51-6	180	U	180	530		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180		1
04688	4-Chloroaniline	106-47-8	70	U	70	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180		1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530		1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100		1

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Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	ug/kg	
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	70	U	70	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	35	U	35	180		1
04688	4-Methylphenol	106-44-5	35	U	35	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	35	U	35	180		1
04688	4-Nitroaniline	100-01-6	70	U	70	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	530		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	530		1
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180		1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/kg		ug/kg	ug/kg	ug/kg	
10138	Acenaphthene	83-32-9	0.70	U	0.70	1.7		1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.7		1
10138	Anthracene	120-12-7	0.35	U	0.35	1.7		1
10138	Benzo(a)anthracene	56-55-3	0.70	U	0.70	1.7		1
10138	Benzo(a)pyrene	50-32-8	0.70	U	0.70	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	0.70	U	0.70	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	0.70	U	0.70	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	0.70	U	0.70	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.3	U	6.3	19		1
10138	Di-n-butylphthalate	84-74-2	6.3	U	6.3	19		1
10138	Chrysene	218-01-9	0.35	U	0.35	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.70	U	0.70	1.7		1
10138	Diethylphthalate	84-66-2	6.3	U	6.3	19		1
10138	Dimethylphthalate	131-11-3	6.3	U	6.3	19		1

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Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.3	U	6.3	19		1
10138	Fluoranthene	206-44-0	0.70	U	0.70	1.7		1
10138	Fluorene	86-73-7	0.70	U	0.70	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.70	U	0.70	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.70	U	0.70	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.70	U	0.70	1.7		1
10138	Naphthalene	91-20-3	0.70	U	0.70	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.70	U	0.70	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.3	U	6.3	19		1
10138	Phenanthrene	85-01-8	0.70	U	0.70	1.7		1
10138	Pyrene	129-00-0	0.70	U	0.70	1.7		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.3	J	0.2	1.2		27.11
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	4-Amino-2,6-Dinitrotoluene	19406-51-0	64	U	64	130	10000000	1
10132	2-Amino-4,6-Dinitrotoluene	35572-78-2	43	U	43	130	10000000	1
10132	2,6-Diamino-4-nitrotoluene	59229-75-3	85	U	85	260	10000000	1
10132	2,4-Diamino-6-nitrotoluene	6629-29-4	85	U	85	260	10000000	1
10132	1,3-Dinitrobenzene	99-65-0	43	U	43	130	10000000	1
10132	2,4-Dinitrotoluene	121-14-2	43	U	43	130	10000000	1
10132	2,6-Dinitrotoluene	606-20-2	43	U	43	130	10000000	1
10132	HMX	2691-41-0	110	U	110	320	10000000	1
10132	Nitrobenzene	98-95-3	43	U	43	130	10000000	1
10132	Nitroglycerin	55-63-0	850	U	850	2,600	10000000	1
10132	2-Nitrotoluene	88-72-2	85	U	85	130	10000000	1
10132	3-Nitrotoluene	99-08-1	110	U	110	130	10000000	1
10132	4-Nitrotoluene	99-99-0	85	U	85	130	10000000	1
10132	PETN	78-11-5	850	U	850	2,600	10000000	1
10132	RDX	121-82-4	53	U	53	130	10000000	1
10132	Tetryl	479-45-8	65	U	65	130	10000000	1

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Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	1,3,5-Trinitrobenzene	99-35-4	43	U	43	130	10000000	1
10132	2,4,6-Trinitrotoluene	118-96-7	43	U	43	130	10000000	1
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5		1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8		1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8		1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8		1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8		1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8		1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8		1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8		1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8		1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530		1
10501	Isopropanol	67-63-0	110	U	110	530		1
10501	Methanol	67-56-1	110	U	110	530		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11		1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11		1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.67	J	0.43	1.3		1
10199	EFH (C15-C20)	n.a.	1.0	J	0.43	1.3		1
10199	EFH (C21-C30)	n.a.	3.8		0.43	1.3		1
10199	EFH (C30 - C40)	n.a.	6.8		0.43	1.3		1
10199	EFH (C8-C11)	n.a.	0.43	U	0.43	1.3		1

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Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	24,000		6.26	20.7		1
07914	Boron	7440-42-8	0.372	U	0.372	5.17		1
01650	Calcium	7440-70-2	2,750		2.58	20.7		1
01654	Iron	7439-89-6	23,200		2.70	20.7		1
01656	Lithium	7439-93-2	25.5		0.64	2.1		1
01657	Magnesium	7439-95-4	4,610		0.455	10.3		1
06958	Manganese	7439-96-5	285		0.0372	0.517		1
10145	Phosphorus	7723-14-0	192		0.362	10.3		1
01662	Potassium	7440-09-7	1,490		11.7	51.7		1
01667	Sodium	7440-23-5	95.7	J	6.15	103		1
07968	Strontium	7440-24-6	17.7		0.0258	0.517		1
06969	Tin	7440-31-5	2.77	J	0.331	10.3		1
06970	Titanium	7440-32-6	1,300		0.0734	1.03		1
10146	Zirconium	7440-67-7	3.80	J	0.476	5.17		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.154	J	0.0773	0.209		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	7.10		0.0835	0.418		2
06126	Barium	7440-39-3	113		0.111	0.418		2
06127	Beryllium	7440-41-7	1.14		0.0167	0.104		2
06128	Cadmium	7440-43-9	0.0555	J	0.0459	0.104		2
06131	Chromium	7440-47-3	24.6		0.125	0.418		2
06132	Cobalt	7440-48-4	7.74		0.0209	0.104		2
06133	Copper	7440-50-8	8.20		0.0835	0.418		2
06135	Lead	7439-92-1	7.87		0.0106	0.209		2
06138	Molybdenum	7439-98-7	1.24		0.0522	0.104		2
06139	Nickel	7440-02-0	14.8		0.104	0.418		2
06141	Selenium	7782-49-2	0.197	J	0.0606	0.418		2
06142	Silver	7440-22-4	0.0661	J	0.0148	0.104		2
06145	Thallium	7440-28-0	0.272		0.0313	0.104		2
06148	Vanadium	7440-62-2	48.5		0.0230	0.104		2
06149	Zinc	7440-66-6	58.8		0.585	3.13		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0081	J	0.0073	0.104		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.2		0.84	1.1		1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.4	J	0.84	1.6		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.6	U	9.6	31.9		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.56	J	0.21	1.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

CAT No.	Analysis Name		CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry		**SW-846 9012B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B		57-12-5	0.19	U	0.19	0.52		1
		SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C		n.a.	7.07		0.0100	0.0100		1
Wet Chemistry		**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3		n.a.	6.1		0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-143-SA7-SB-5.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
06192	1a Volatile Organics EPA 8260B	SW-846 8260B	1	B112981AA	10/25/2011	16:25	Chelsea B Eastep	1.05
10326	14a 1,4-Dioxane by 8260B SIM	SW-846 8260B SIM	1	E112981AA	10/25/2011	10:45	Jason M Long	30.64
08390	GC/MS - HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011	16:56	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	1	201129325922	10/20/2011	17:09	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	2	201129325922	10/20/2011	17:09	Larry E Bevins	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035	1	201129325922	10/20/2011	16:56	Larry E Bevins	n.a.
11622	21a NDMA by 1625C	EPA 1625C	1	11298SLB026	11/02/2011	22:40	Matthew S Woods	1
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011	21:16	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011	11:43	Joseph M Gambler	1
11630	NDMA Soil Microwave	SW-846 3546	1	11298SLB026	10/26/2011	02:00	Sherry L Morrow	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011	11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011	10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/26/2011	20:36	Laura M Krieger	27.11
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011	16:55	Larry E Bevins	n.a.
10132	15a Energetics by 8330A	SW-846 8330A	1	113020012A	11/02/2011	00:24	James H Place	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	112980025A	10/27/2011	23:15	James H Place	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112970027A	10/31/2011	23:34	Jessica L Miller	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112970027A	10/25/2011 12:00	Olivia I Santiago	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	112980025A	10/27/2011 13:00	Kelli M Barto	1
11137	Energetics Extraction	SW-846 8330	1	113020012A	10/31/2011 09:40	Kerrie A Freeburn	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112930033A	10/20/2011 22:03	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/25/2011 23:42	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112940009A	10/24/2011 22:26	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/28/2011 22:26	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	2	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112940009A	10/21/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112930033A	10/20/2011 20:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
07914	Boron	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01654	Iron	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01656	Lithium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
10145	Phosphorus	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
07968	Strontium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
06969	Tin	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
06970	Titanium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
10146	Zirconium	SW-846 6010B	1	112975708004	10/25/2011 14:34	Eric L Eby	1
06124	Antimony	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026002D	10/26/2011 05:22	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026002C	10/26/2011 05:22	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026002B	10/26/2011 05:22	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026002A	10/26/2011 05:22	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711002	10/25/2011 16:15	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708004	10/24/2011 21:53	Annamaria Stipkovits	1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443491
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7202 SDG#: DE272-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026002	10/24/2011 21:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711002	10/25/2011 01:40	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 12:04	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11300621201A	10/28/2011 12:04	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201A	11/03/2011 16:39	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 16:12	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:35	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201A	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/kg		ug/kg	ug/kg	ug/kg	
06192	Acetone	67-64-1	7.7	U	7.7	9.2		1.09
06192	Benzene	71-43-2	0.12	U	0.12	4.6		1.09
06192	Bromobenzene	108-86-1	0.15	U	0.15	4.6		1.09
06192	Bromochloromethane	74-97-5	0.38	U	0.38	4.6		1.09
06192	Bromodichloromethane	75-27-4	0.09	U	0.09	4.6		1.09
06192	Bromoform	75-25-2	0.46	U	0.46	4.6		1.09
06192	Bromomethane	74-83-9	0.29	U	0.29	4.6		1.09
06192	2-Butanone	78-93-3	1.4	U	1.4	9.2		1.09
06192	n-Butylbenzene	104-51-8	0.14	U	0.14	4.6		1.09
06192	sec-Butylbenzene	135-98-8	0.07	U	0.07	4.6		1.09
06192	tert-Butylbenzene	98-06-6	0.18	U	0.18	4.6		1.09
06192	Carbon Tetrachloride	56-23-5	0.16	U	0.16	4.6		1.09
06192	Chlorobenzene	108-90-7	0.13	U	0.13	4.6		1.09
06192	Chloroethane	75-00-3	0.15	U	0.15	4.6		1.09
06192	2-Chloroethyl Vinyl Ether	110-75-8	0.35	U	0.35	4.6		1.09
06192	Chloroform	67-66-3	0.15	J	0.14	4.6		1.09
06192	Chloromethane	74-87-3	0.38	U	0.38	4.6		1.09
06192	2-Chlorotoluene	95-49-8	0.16	U	0.16	4.6		1.09
06192	4-Chlorotoluene	106-43-4	0.16	U	0.16	4.6		1.09
06192	Chlorotrifluoroethene	79-38-9	0.58	U	0.58	5.8		1.09
06192	1,2-Dibromo-3-chloropropane	96-12-8	0.81	U	0.81	4.6		1.09
06192	Dibromochloromethane	124-48-1	0.23	U	0.23	4.6		1.09
06192	1,2-Dibromoethane	106-93-4	0.20	U	0.20	4.6		1.09
06192	Dibromomethane	74-95-3	0.28	U	0.28	4.6		1.09
06192	1,2-Dichlorobenzene	95-50-1	0.10	U	0.10	4.6		1.09
06192	1,3-Dichlorobenzene	541-73-1	0.14	U	0.14	4.6		1.09
06192	1,4-Dichlorobenzene	106-46-7	0.18	U	0.18	4.6		1.09
06192	Dichlorodifluoromethane	75-71-8	0.14	U	0.14	4.6		1.09
06192	1,1-Dichloroethane	75-34-3	0.12	U	0.12	4.6		1.09
06192	1,2-Dichloroethane	107-06-2	0.17	U	0.17	4.6		1.09
06192	1,1-Dichloroethene	75-35-4	0.45	U	0.45	4.6		1.09
06192	cis-1,2-Dichloroethene	156-59-2	0.22	U	0.22	4.6		1.09
06192	trans-1,2-Dichloroethene	156-60-5	0.14	U	0.14	4.6		1.09
06192	1,2-Dichloropropane	78-87-5	0.20	U	0.20	4.6		1.09
06192	1,3-Dichloropropane	142-28-9	0.09	U	0.09	4.6		1.09
06192	2,2-Dichloropropane	594-20-7	0.20	U	0.20	4.6		1.09
06192	1,1-Dichloropropene	563-58-6	0.15	U	0.15	4.6		1.09
06192	cis-1,3-Dichloropropene	10061-01-5	0.18	U	0.18	4.6		1.09
06192	trans-1,3-Dichloropropene	10061-02-6	0.20	U	0.20	4.6		1.09
06192	Ethylbenzene	100-41-4	0.07	U	0.07	4.6		1.09
06192	Freon 113	76-13-1	0.13	U	0.13	4.6		1.09
06192	Freon 133a	75-88-7	0.58	U	0.58	5.8		1.09
06192	Hexachlorobutadiene	87-68-3	0.16	U	0.16	4.6		1.09
06192	2-Hexanone	591-78-6	1.8	U	1.8	9.2		1.09
06192	Isopropylbenzene	98-82-8	0.07	U	0.07	4.6		1.09
06192	p-Isopropyltoluene	99-87-6	0.13	U	0.13	4.6		1.09
06192	Methyl Tertiary Butyl Ether	1634-04-4	0.24	U	0.24	4.6		1.09
06192	4-Methyl-2-pentanone	108-10-1	0.45	U	0.45	9.2		1.09
06192	Methylene Chloride	75-09-2	0.99	J	0.28	4.6		1.09
06192	n-Propylbenzene	103-65-1	0.08	U	0.08	4.6		1.09

*=This limit was used in the evaluation of the final result
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Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
06192	Styrene	100-42-5	0.12	U	0.12	4.6		1.09
06192	1,1,1,2-Tetrachloroethane	630-20-6	0.13	U	0.13	4.6		1.09
06192	1,1,2,2-Tetrachloroethane	79-34-5	0.27	U	0.27	4.6		1.09
06192	Tetrachloroethene	127-18-4	0.23	U	0.23	4.6		1.09
06192	Toluene	108-88-3	0.21	J	0.09	4.6		1.09
06192	1,2,3-Trichlorobenzene	87-61-6	0.16	U	0.16	4.6		1.09
06192	1,2,4-Trichlorobenzene	120-82-1	0.21	U	0.21	4.6		1.09
06192	1,1,1-Trichloroethane	71-55-6	0.23	U	0.23	4.6		1.09
06192	1,1,2-Trichloroethane	79-00-5	0.31	U	0.31	4.6		1.09
06192	Trichloroethene	79-01-6	0.17	U	0.17	4.6		1.09
06192	Trichlorofluoromethane	75-69-4	0.33	U	0.33	4.6		1.09
06192	1,2,3-Trichloropropane	96-18-4	0.38	U	0.38	4.6		1.09
06192	1,2,4-Trimethylbenzene	95-63-6	0.46	U	0.46	4.6		1.09
06192	1,3,5-Trimethylbenzene	108-67-8	0.12	U	0.12	4.6		1.09
06192	Vinyl Chloride	75-01-4	0.23	U	0.23	4.6		1.09
06192	m+p-Xylene	179601-23-1	0.20	U	0.20	4.6		1.09
06192	o-Xylene	95-47-6	0.20	U	0.20	4.6		1.09
GC/MS Volatiles	**SW-846 8260B SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10326	1,4-Dioxane	123-91-1	6.3	U	6.3	19		29.83
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	17.4	U	17.4	34.9		1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500		1
04688	Benzoic acid	65-85-0	180	U	180	530		1
04688	Benzyl alcohol	100-51-6	180	U	180	530		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180		1
04688	4-Chloroaniline	106-47-8	71	U	71	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180		1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530		1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100		1

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Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	ug/kg	
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	35	U	35	180		1
04688	4-Methylphenol	106-44-5	35	U	35	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	35	U	35	180		1
04688	4-Nitroaniline	100-01-6	71	U	71	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	530		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	530		1
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180		1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/kg		ug/kg	ug/kg	ug/kg	
10138	Acenaphthene	83-32-9	0.70	U	0.70	1.7		1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.7		1
10138	Anthracene	120-12-7	0.35	U	0.35	1.7		1
10138	Benzo(a)anthracene	56-55-3	0.70	U	0.70	1.7		1
10138	Benzo(a)pyrene	50-32-8	0.70	U	0.70	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	0.70	U	0.70	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	0.70	U	0.70	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	0.70	U	0.70	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.3	U	6.3	19		1
10138	Di-n-butylphthalate	84-74-2	6.3	U	6.3	19		1
10138	Chrysene	218-01-9	0.35	U	0.35	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.70	U	0.70	1.7		1
10138	Diethylphthalate	84-66-2	6.3	U	6.3	19		1
10138	Dimethylphthalate	131-11-3	6.3	U	6.3	19		1

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SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
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E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	8.4	J	6.3	19		1
10138	Fluoranthene	206-44-0	0.70	U	0.70	1.7		1
10138	Fluorene	86-73-7	0.70	U	0.70	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.70	U	0.70	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.70	U	0.70	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.70	U	0.70	1.7		1
10138	Naphthalene	91-20-3	0.70	U	0.70	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.70	U	0.70	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.3	U	6.3	19		1
10138	Phenanthrene	85-01-8	0.70	U	0.70	1.7		1
10138	Pyrene	129-00-0	0.70	U	0.70	1.7		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.3	U	0.3	1.4		32.3
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	4-Amino-2,6-Dinitrotoluene	19406-51-0	62	U	62	120	10000000	1
10132	2-Amino-4,6-Dinitrotoluene	35572-78-2	42	U	42	120	10000000	1
10132	2,6-Diamino-4-nitrotoluene	59229-75-3	83	U	83	250	10000000	1
10132	2,4-Diamino-6-nitrotoluene	6629-29-4	83	U	83	250	10000000	1
10132	1,3-Dinitrobenzene	99-65-0	42	U	42	120	10000000	1
10132	2,4-Dinitrotoluene	121-14-2	42	U	42	120	10000000	1
10132	2,6-Dinitrotoluene	606-20-2	42	U	42	120	10000000	1
10132	HMX	2691-41-0	100	U	100	310	10000000	1
10132	Nitrobenzene	98-95-3	42	U	42	120	10000000	1
10132	Nitroglycerin	55-63-0	830	U	830	2,500	10000000	1
10132	2-Nitrotoluene	88-72-2	83	U	83	120	10000000	1
10132	3-Nitrotoluene	99-08-1	100	U	100	120	10000000	1
10132	4-Nitrotoluene	99-99-0	83	U	83	120	10000000	1
10132	PETN	78-11-5	830	U	830	2,500	10000000	1
10132	RDX	121-82-4	52	U	52	120	10000000	1
10132	Tetryl	479-45-8	64	U	64	120	10000000	1

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SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
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E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10132	1,3,5-Trinitrobenzene	99-35-4	42	U	42	120	10000000	1
10132	2,4,6-Trinitrotoluene	118-96-7	42	U	42	120	10000000	1
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5		1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8		1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8		1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8		1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8		1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8		1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8		1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8		1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8		1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530		1
10501	Isopropanol	67-63-0	110	U	110	530		1
10501	Methanol	67-56-1	110	U	110	530		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11		1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11		1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3		1
10199	EFH (C15-C20)	n.a.	0.50	J	0.42	1.3		1
10199	EFH (C21-C30)	n.a.	2.3		0.42	1.3		1
10199	EFH (C30 - C40)	n.a.	3.6		0.42	1.3		1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3		1

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SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
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E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	20,100		6.29	20.8		1
07914	Boron	7440-42-8	0.975	J	0.374	5.20		1
01650	Calcium	7440-70-2	2,110		2.60	20.8		1
01654	Iron	7439-89-6	20,500		2.71	20.8		1
01656	Lithium	7439-93-2	28.5		0.64	2.1		1
01657	Magnesium	7439-95-4	4,030		0.457	10.4		1
06958	Manganese	7439-96-5	161		0.0374	0.520		1
10145	Phosphorus	7723-14-0	137		0.364	10.4		1
01662	Potassium	7440-09-7	1,250		11.7	52.0		1
01667	Sodium	7440-23-5	106		6.19	104		1
07968	Strontium	7440-24-6	15.8		0.0260	0.520		1
06969	Tin	7440-31-5	3.03	J	0.333	10.4		1
06970	Titanium	7440-32-6	1,220		0.0738	1.04		1
10146	Zirconium	7440-67-7	3.23	J	0.478	5.20		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.189	J	0.0762	0.206		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	7.25		0.0824	0.412		2
06126	Barium	7440-39-3	95.3		0.109	0.412		2
06127	Beryllium	7440-41-7	0.980		0.0165	0.103		2
06128	Cadmium	7440-43-9	0.0453	U	0.0453	0.103		2
06131	Chromium	7440-47-3	27.0		0.124	0.412		2
06132	Cobalt	7440-48-4	5.25		0.0206	0.103		2
06133	Copper	7440-50-8	7.13		0.0824	0.412		2
06135	Lead	7439-92-1	7.73		0.0105	0.206		2
06138	Molybdenum	7439-98-7	2.08		0.0515	0.103		2
06139	Nickel	7440-02-0	13.9		0.103	0.412		2
06141	Selenium	7782-49-2	0.223	J	0.0597	0.412		2
06142	Silver	7440-22-4	0.0815	J	0.0146	0.103		2
06145	Thallium	7440-28-0	0.239		0.0309	0.103		2
06148	Vanadium	7440-62-2	53.8		0.0227	0.103		2
06149	Zinc	7440-66-6	54.7		0.577	3.09		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073	U	0.0073	0.104		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.5		0.85	1.1		1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.4	J	0.85	1.6		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.5	U	9.5	31.8		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.81	J	0.21	1.1		1

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SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

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14420 Albemarle Point Place
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E7203 SDG#: DE272-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19	U	0.19	0.53		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.85		0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.7		0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-143-SA7-SB-9.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06192	1a Volatile Organics EPA 8260B	SW-846 8260B	1	B112981AA	10/25/2011 16:48	Chelsea B Eastep	1.09
10326	14a 1,4-Dioxane by 8260B SIM	SW-846 8260B SIM	1	E112981AA	10/25/2011 11:05	Jason M Long	29.83
08390	GC/MS - HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:00	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:09	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	2	201129325922	10/20/2011 17:09	Larry E Bevins	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035	1	201129325922	10/20/2011 17:01	Larry E Bevins	n.a.
11622	21a NDMA by 1625C	EPA 1625C	1	11298SLB026	11/02/2011 23:37	Matthew S Woods	1
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 21:41	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 13:22	Joseph M Gambler	1
11630	NDMA Soil Microwave	SW-846 3546	1	11298SLB026	10/26/2011 02:00	Sherry L Morrow	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/26/2011 21:14	Laura M Krieger	32.3
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:00	Larry E Bevins	n.a.
10132	15a Energetics by 8330A	SW-846 8330A	1	113020012A	11/02/2011 02:31	James H Place	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	112980025A	10/27/2011 23:43	James H Place	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112970027A	10/31/2011 23:53	Jessica L Miller	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7203 SDG#: DE272-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112970027A	10/25/2011 12:00	Olivia I Santiago	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	112980025A	10/27/2011 13:00	Kelli M Barto	1
11137	Energetics Extraction	SW-846 8330	1	113020012A	10/31/2011 09:40	Kerrie A Freeburn	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112930033A	10/20/2011 22:19	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/25/2011 23:55	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112940009A	10/24/2011 20:58	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/28/2011 22:50	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	2	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112940009A	10/21/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112930033A	10/20/2011 20:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
07914	Boron	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01654	Iron	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01656	Lithium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
10145	Phosphorus	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
07968	Strontium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
06969	Tin	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
06970	Titanium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
10146	Zirconium	SW-846 6010B	1	112975708004	10/25/2011 14:38	Eric L Eby	1
06124	Antimony	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026002D	10/26/2011 05:25	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026002C	10/26/2011 05:25	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026002B	10/26/2011 05:25	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026002A	10/26/2011 05:25	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711002	10/25/2011 16:16	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708004	10/24/2011 21:53	Annamaria Stipkovits	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443492
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7203 SDG#: DE272-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026002	10/24/2011 21:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711002	10/25/2011 01:40	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 12:19	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11300621201A	10/28/2011 12:19	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201A	11/03/2011 17:21	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11298243201A	10/26/2011 16:19	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:41	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201A	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	520		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500		1
04688	Benzoic acid	65-85-0	170	U	170	520		1
04688	Benzyl alcohol	100-51-6	170	U	170	520		1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170		1
04688	Carbazole	86-74-8	17	U	17	170		1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170		1
04688	4-Chloroaniline	106-47-8	69	U	69	170		1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170		1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170		1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170		1
04688	2-Chlorophenol	95-57-8	17	U	17	170		1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170		1
04688	Dibenzofuran	132-64-9	17	U	17	170		1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170		1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170		1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170		1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350		1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170		1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170		1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520		1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000		1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170		1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170		1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	18	J	17	350		1
04688	Hexachlorobenzene	118-74-1	17	U	17	170		1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170		1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520		1
04688	Hexachloroethane	67-72-1	17	U	17	170		1
04688	Isophorone	78-59-1	17	U	17	170		1
04688	2-Methylphenol	95-48-7	35	U	35	170		1
04688	4-Methylphenol	106-44-5	35	U	35	170		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	17	U	17	170		1
04688	3-Nitroaniline	99-09-2	35	U	35	170		1
04688	4-Nitroaniline	100-01-6	69	U	69	170		1
04688	Nitrobenzene	98-95-3	17	U	17	170		1
04688	2-Nitrophenol	88-75-5	17	U	17	170		1
04688	4-Nitrophenol	100-02-7	170	U	170	520		1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170		1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	170	U	170	520		1

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Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	17	U	17	170		1
04688	Tetralin	119-64-2	170	U	170	170		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170		1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170		1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.68	U	0.68	1.7		1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7		1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7		1
10138	Benzo(a)anthracene	56-55-3	0.68	U	0.68	1.7		1
10138	Benzo(a)pyrene	50-32-8	0.68	U	0.68	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	0.87	J	0.68	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	0.68	U	0.68	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	1.9		0.68	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.1	U	6.1	18		1
10138	Di-n-butylphthalate	84-74-2	6.1	U	6.1	18		1
10138	Chrysene	218-01-9	0.85	J	0.34	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.68	U	0.68	1.7		1
10138	Diethylphthalate	84-66-2	6.1	U	6.1	18		1
10138	Dimethylphthalate	131-11-3	6.1	U	6.1	18		1
10138	Fluoranthene	206-44-0	1.1	J	0.68	1.7		1
10138	Fluorene	86-73-7	0.68	U	0.68	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.68	U	0.68	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7		1
10138	Naphthalene	91-20-3	0.68	U	0.68	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.1	U	6.1	18		1
10138	Phenanthrene	85-01-8	0.68	U	0.68	1.7		1
10138	Pyrene	129-00-0	0.89	J	0.68	1.7		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	J	0.2	1.1		26.32
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4		1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4		1
10225	Aroclor 5460	11126-42-4	9.5		1.0	3.4		1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8		1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8		1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8		1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8		1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	11		0.34	1.8		1
10225	PCB-1260	11096-82-5	3.9		0.41	1.8		1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8		1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520		1
10501	Isopropanol	67-63-0	100	U	100	520		1
10501	Methanol	67-56-1	100	U	100	520		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10		1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10		1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.6		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.6		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.6		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.56	J	0.42	1.2		1
10199	EFH (C15-C20)	n.a.	1.0	J	0.42	1.2		1
10199	EFH (C21-C30)	n.a.	5.2		0.42	1.2		1
10199	EFH (C30 - C40)	n.a.	9.1		0.42	1.2		1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.2		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,800		6.17	20.4		1
07914	Boron	7440-42-8	1.61	J	0.367	5.10		1
01650	Calcium	7440-70-2	2,840		2.55	20.4		1
01654	Iron	7439-89-6	21,000		2.66	20.4		1
01656	Lithium	7439-93-2	30.7		0.63	2.0		1
01657	Magnesium	7439-95-4	4,800		0.449	10.2		1
06958	Manganese	7439-96-5	333		0.0367	0.510		1
10145	Phosphorus	7723-14-0	410		0.357	10.2		1
01662	Potassium	7440-09-7	2,990		11.5	51.0		1
01667	Sodium	7440-23-5	90.5	J	6.07	102		1
07968	Strontium	7440-24-6	20.3		0.0255	0.510		1
06969	Tin	7440-31-5	2.79	J	0.326	10.2		1
06970	Titanium	7440-32-6	1,220		0.0724	1.02		1
10146	Zirconium	7440-67-7	2.77	J	0.469	5.10		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.102	J	0.0755	0.204		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	4.42		0.0816	0.408		2
06126	Barium	7440-39-3	93.4		0.108	0.408		2
06127	Beryllium	7440-41-7	0.548		0.0163	0.102		2
06128	Cadmium	7440-43-9	0.148		0.0449	0.102		2
06131	Chromium	7440-47-3	17.6		0.122	0.408		2
06132	Cobalt	7440-48-4	5.56		0.0204	0.102		2
06133	Copper	7440-50-8	7.54		0.0816	0.408		2
06135	Lead	7439-92-1	5.27		0.0104	0.204		2
06138	Molybdenum	7439-98-7	0.523		0.0510	0.102		2
06139	Nickel	7440-02-0	10.5		0.102	0.408		2
06141	Selenium	7782-49-2	0.130	J	0.0592	0.408		2
06142	Silver	7440-22-4	0.0294	J	0.0145	0.102		2
06145	Thallium	7440-28-0	0.259		0.0306	0.102		2
06148	Vanadium	7440-62-2	34.2		0.0224	0.102		2
06149	Zinc	7440-66-6	54.9		0.571	3.06		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0069	U	0.0069	0.0985		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.9		0.84	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.2		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.31	J	0.21	1.0		1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18	U	0.18	0.51		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.89		0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	3.9		0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.							

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Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-142-SA7-SB-2.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08390	GC/MS - HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:04	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:09	Larry E Bevins	n.a.
07320	GC/MS - LL DIH2O Encore Prep	SW-846 5035	2	201129325922	10/20/2011 17:09	Larry E Bevins	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035	1	201129325922	10/20/2011 17:05	Larry E Bevins	n.a.
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 22:06	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 13:56	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/27/2011 17:10	Laura M Krieger	26.32
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:05	Larry E Bevins	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112970027A	11/01/2011 00:12	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112970027A	10/25/2011 12:00	Olivia I Santiago	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112930033A	10/20/2011 22:35	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 00:07	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112940009A	10/24/2011 22:04	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/28/2011 23:14	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	2	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112940009A	10/21/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112930033A	10/20/2011 20:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
07914	Boron	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01654	Iron	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01656	Lithium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
10145	Phosphorus	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
07968	Strontium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
06969	Tin	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
06970	Titanium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443493
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7204 SDG#: DE272-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10146	Zirconium	SW-846 6010B	1	112975708004	10/25/2011 14:41	Eric L Eby	1
06124	Antimony	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026002D	10/26/2011 05:28	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026002C	10/26/2011 05:28	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026002B	10/26/2011 05:28	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026002A	10/26/2011 05:28	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711002	10/25/2011 16:20	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708004	10/24/2011 21:53	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026002	10/24/2011 21:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711002	10/25/2011 01:40	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 12:34	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201A	11/03/2011 17:42	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 16:39	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:42	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201A	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	530		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500		1
04688	Benzoic acid	65-85-0	180	U	180	530		1
04688	Benzyl alcohol	100-51-6	180	U	180	530		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180		1
04688	4-Chloroaniline	106-47-8	70	U	70	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180		1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530		1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	70	U	70	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	35	U	35	180		1
04688	4-Methylphenol	106-44-5	35	U	35	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	35	U	35	180		1
04688	4-Nitroaniline	100-01-6	70	U	70	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	530		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	530		1
04688	Phenol	108-95-2	18	U	18	180		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180		1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7		1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.7		1
10138	Anthracene	120-12-7	0.35	U	0.35	1.7		1
10138	Benzo(a)anthracene	56-55-3	1.0	J	0.69	1.7		1
10138	Benzo(a)pyrene	50-32-8	0.77	J	0.69	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	3.0		0.69	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	0.76	J	0.69	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	2.8		0.69	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	19		1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19		1
10138	Chrysene	218-01-9	1.9		0.35	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.69	U	0.69	1.7		1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19		1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	150		6.2	19		1
10138	Fluoranthene	206-44-0	2.2		0.69	1.7		1
10138	Fluorene	86-73-7	0.92	J	0.69	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	U	0.69	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7		1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19		1
10138	Phenanthrene	85-01-8	0.90	J	0.69	1.7		1
10138	Pyrene	129-00-0	1.4	J	0.69	1.7		1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1		25
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5		1
10225	Aroclor 5460	11126-42-4	3.0	J	1.1	3.5		1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8		1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8		1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8		1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8		1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	5.9		0.35	1.8		1
10225	PCB-1260	11096-82-5	1.6	J	0.41	1.8		1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8		1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530		1
10501	Isopropanol	67-63-0	110	U	110	530		1
10501	Methanol	67-56-1	110	U	110	530		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11		1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11		1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3		1
10199	EFH (C15-C20)	n.a.	2.6		0.42	1.3		1
10199	EFH (C21-C30)	n.a.	10		0.42	1.3		1
10199	EFH (C30 - C40)	n.a.	20		0.42	1.3		1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,000		6.14	20.3		1
07914	Boron	7440-42-8	0.916	J	0.366	5.08		1
01650	Calcium	7440-70-2	2,580		2.54	20.3		1
01654	Iron	7439-89-6	19,700		2.65	20.3		1
01656	Lithium	7439-93-2	25.4		0.63	2.0		1
01657	Magnesium	7439-95-4	3,850		0.447	10.2		1
06958	Manganese	7439-96-5	228		0.0366	0.508		1
10145	Phosphorus	7723-14-0	268		0.355	10.2		1
01662	Potassium	7440-09-7	2,300		11.5	50.8		1
01667	Sodium	7440-23-5	95.8	J	6.04	102		1
07968	Strontium	7440-24-6	16.2		0.0254	0.508		1
06969	Tin	7440-31-5	2.75	J	0.325	10.2		1
06970	Titanium	7440-32-6	1,050		0.0721	1.02		1
10146	Zirconium	7440-67-7	2.78	J	0.467	5.08		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0774 U	0.0774	0.209		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.35	0.0836	0.418		2
06126	Barium	7440-39-3	78.2	0.111	0.418		2
06127	Beryllium	7440-41-7	0.552	0.0167	0.105		2
06128	Cadmium	7440-43-9	0.128	0.0460	0.105		2
06131	Chromium	7440-47-3	14.6	0.125	0.418		2
06132	Cobalt	7440-48-4	4.48	0.0209	0.105		2
06133	Copper	7440-50-8	6.22	0.0836	0.418		2
06135	Lead	7439-92-1	8.15	0.0107	0.209		2
06138	Molybdenum	7439-98-7	0.645	0.0523	0.105		2
06139	Nickel	7440-02-0	8.55	0.105	0.418		2
06141	Selenium	7782-49-2	0.362 J	0.0606	0.418		2
06142	Silver	7440-22-4	0.0484 J	0.0148	0.105		2
06145	Thallium	7440-28-0	0.187	0.0314	0.105		2
06148	Vanadium	7440-62-2	28.7	0.0230	0.105		2
06149	Zinc	7440-66-6	52.3	0.585	3.14		2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0231 J	0.0070	0.0991		1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.0	0.85	1.1		1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.5 U	9.5	31.7		1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.49 J	0.21	1.0		1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19 U	0.19	0.52		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.51	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.3	0.50	0.50		1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-142-SA7-SB-5.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 22:32	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 14:28	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/26/2011 21:52	Laura M Krieger	25
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129325922	10/20/2011 17:07	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129325922	10/20/2011 17:07	Larry E Bevins	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112970027A	11/01/2011 00:30	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112970027A	10/25/2011 12:00	Olivia I Santiago	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112930033A	10/20/2011 22:52	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 00:20	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112940009A	10/24/2011 22:48	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/28/2011 23:38	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	2	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112940009A	10/21/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112930033A	10/20/2011 20:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
07914	Boron	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01654	Iron	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01656	Lithium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
10145	Phosphorus	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
07968	Strontium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
06969	Tin	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
06970	Titanium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
10146	Zirconium	SW-846 6010B	1	112975708004	10/25/2011 14:45	Eric L Eby	1
06124	Antimony	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026002D	10/26/2011 05:31	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443494
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7205 SDG#: DE272-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026002C	10/26/2011 05:31	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026002B	10/26/2011 05:31	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026002A	10/26/2011 05:31	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711002	10/25/2011 16:21	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708004	10/24/2011 21:53	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026002	10/24/2011 21:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711002	10/25/2011 01:40	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11300621201A	10/28/2011 12:48	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201A	11/03/2011 18:03	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11298243201A	10/26/2011 16:52	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:43	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11300621201A	10/27/2011 06:55	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201A	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039402B	10/27/2011 10:30	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11298243201A	10/25/2011 09:10	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

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Analysis Report

Sample Description: **EB-SA7-SB-101911 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443495
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7206 SDG#: DE272-06EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	3.66	0.527	1.05		1

N-nitrosodimethylamine was detected in the method blank at a concentration of .887 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11297WAC026	11/02/2011 18:54	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11297WAC026	10/24/2011 14:20	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: TB-101911 Water
SSFL Area IV Collocated Soil Sampling
TB-101911

LLI Sample # WW 6443496
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 08:00

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7207 SDG#: DE272-07TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles EPA 1625C			ng/l	ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	0.860 J	0.495	0.990		1

N-nitrosodimethylamine was detected in the method blank at a concentration of .887 ng/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11297WAC026	11/02/2011 19:12	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11297WAC026	10/24/2011 14:20	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101911 Sand
SSFL Area IV Collocated Soil Sampling
TB-101911

LLI Sample # SW 6443497
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 08:00

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7208 SDG#: DE272-08TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		ng/kg		ng/kg	ng/kg	ng/kg	
11622	N-Nitrosodimethylamine	62-75-9	16.6	U	16.6	33.1		1
Wet Chemistry	**EPA 160.3 modified**		%		%	%	%	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11298SLB026	11/02/2011 23:56	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11298SLB026	10/26/2011 02:00	Sherry L Morrow	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-101911 Water
SSFL Area IV Collocated Soil Sampling
TB-101911

LLI Sample # WW 6443498
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 08:00

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7209 SDG#: DE272-09TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	ug/l	
10904	Acetone	67-64-1	6	U	6	20		1
10904	Benzene	71-43-2	0.5	U	0.5	5		1
10904	Bromobenzene	108-86-1	1	U	1	5		1
10904	Bromochloromethane	74-97-5	1	U	1	5		1
10904	Bromodichloromethane	75-27-4	1	U	1	5		1
10904	Bromoform	75-25-2	1	U	1	5		1
10904	Bromomethane	74-83-9	1	U	1	5		1
10904	2-Butanone	78-93-3	3	U	3	10		1
10904	n-Butylbenzene	104-51-8	1	U	1	5		1
10904	sec-Butylbenzene	135-98-8	1	U	1	5		1
10904	tert-Butylbenzene	98-06-6	1	U	1	5		1
10904	Carbon Tetrachloride	56-23-5	1	U	1	5		1
10904	Chlorobenzene	108-90-7	0.8	U	0.8	5		1
10904	Chloroethane	75-00-3	1	U	1	5		1
10904	2-Chloroethyl Vinyl Ether	110-75-8	2	U	2	10		1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.							
10904	Chloroform	67-66-3	0.8	U	0.8	5		1
10904	Chloromethane	74-87-3	1	U	1	5		1
10904	2-Chlorotoluene	95-49-8	1	U	1	5		1
10904	4-Chlorotoluene	106-43-4	1	U	1	5		1
10904	Chlorotrifluoroethene	79-38-9	2	U	2	5		1
10904	1,2-Dibromo-3-chloropropane	96-12-8	2	U	2	5		1
10904	Dibromochloromethane	124-48-1	1	U	1	5		1
10904	1,2-Dibromoethane	106-93-4	1	U	1	5		1
10904	Dibromomethane	74-95-3	1	U	1	5		1
10904	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
10904	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
10904	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
10904	Dichlorodifluoromethane	75-71-8	2	U	2	5		1
10904	1,1-Dichloroethane	75-34-3	1	U	1	5		1
10904	1,2-Dichloroethane	107-06-2	1	U	1	5		1
10904	1,1-Dichloroethene	75-35-4	0.8	U	0.8	5		1
10904	cis-1,2-Dichloroethene	156-59-2	0.8	U	0.8	5		1
10904	trans-1,2-Dichloroethene	156-60-5	0.8	U	0.8	5		1
10904	1,2-Dichloropropane	78-87-5	1	U	1	5		1
10904	1,3-Dichloropropane	142-28-9	1	U	1	5		1
10904	2,2-Dichloropropane	594-20-7	1	U	1	5		1
10904	1,1-Dichloropropene	563-58-6	1	U	1	5		1
10904	cis-1,3-Dichloropropene	10061-01-5	1	U	1	5		1
10904	trans-1,3-Dichloropropene	10061-02-6	1	U	1	5		1
10904	Ethylbenzene	100-41-4	0.8	U	0.8	5		1
10904	Freon 113	76-13-1	2	U	2	10		1
10904	Freon 133a	75-88-7	2	U	2	5		1
10904	Hexachlorobutadiene	87-68-3	2	U	2	5		1
10904	2-Hexanone	591-78-6	3	U	3	10		1
10904	Isopropylbenzene	98-82-8	1	U	1	5		1
10904	p-Isopropyltoluene	99-87-6	1	U	1	5		1
10904	Methyl Tertiary Butyl Ether	1634-04-4	0.5	U	0.5	5		1
10904	4-Methyl-2-pentanone	108-10-1	3	U	3	10		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: TB-101911 Water
SSFL Area IV Collocated Soil Sampling
TB-101911

LLI Sample # WW 6443498
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 08:00

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7209 SDG#: DE272-09TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	ug/l	
10904	Methylene Chloride	75-09-2	2	U	2	5		1
10904	n-Propylbenzene	103-65-1	1	U	1	5		1
10904	Styrene	100-42-5	1	U	1	5		1
10904	1,1,1,2-Tetrachloroethane	630-20-6	1	U	1	5		1
10904	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	5		1
10904	Tetrachloroethene	127-18-4	0.8	U	0.8	5		1
10904	Toluene	108-88-3	0.7	U	0.7	5		1
10904	1,2,3-Trichlorobenzene	87-61-6	1	U	1	5		1
10904	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
10904	1,1,1-Trichloroethane	71-55-6	0.8	U	0.8	5		1
10904	1,1,2-Trichloroethane	79-00-5	0.8	U	0.8	5		1
10904	Trichloroethene	79-01-6	1	U	1	5		1
10904	Trichlorofluoromethane	75-69-4	2	U	2	5		1
10904	1,2,3-Trichloropropane	96-18-4	1	U	1	5		1
10904	1,2,4-Trimethylbenzene	95-63-6	1	U	1	5		1
10904	1,3,5-Trimethylbenzene	108-67-8	1	U	1	5		1
10904	Vinyl Chloride	75-01-4	1	U	1	5		1
10904	m+p-Xylene	179601-23-1	0.8	U	0.8	5		1
10904	o-Xylene	95-47-6	0.8	U	0.8	5		1
GC/MS Volatiles	**SW-846 8260B SIM**		ug/l		ug/l	ug/l	ug/l	
00527	1,4-Dioxane	123-91-1	0.5	U	0.5	2.0		1
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10904	1b Volatile Organics EPA8260B	SW-846 8260B	1	Y112992AA	10/26/2011	12:35	Nicholas R Rossi	1
00527	14b 1,4-Dioxane by 8260B SIM	SW-846 8260B SIM	1	E112972AA	10/24/2011	19:39	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E112972AA	10/24/2011	19:39	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y112992AA	10/26/2011	12:35	Nicholas R Rossi	1
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11297B20A	10/25/2011	11:42	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11297B20A	10/25/2011	11:42	Marie D John	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	ug/l	
10904	Acetone	67-64-1	6	U	6	20		1
10904	Benzene	71-43-2	0.5	U	0.5	5		1
10904	Bromobenzene	108-86-1	1	U	1	5		1
10904	Bromochloromethane	74-97-5	1	U	1	5		1
10904	Bromodichloromethane	75-27-4	1	U	1	5		1
10904	Bromoform	75-25-2	1	U	1	5		1
10904	Bromomethane	74-83-9	1	U	1	5		1
10904	2-Butanone	78-93-3	3	U	3	10		1
10904	n-Butylbenzene	104-51-8	1	U	1	5		1
10904	sec-Butylbenzene	135-98-8	1	U	1	5		1
10904	tert-Butylbenzene	98-06-6	1	U	1	5		1
10904	Carbon Tetrachloride	56-23-5	1	U	1	5		1
10904	Chlorobenzene	108-90-7	0.8	U	0.8	5		1
10904	Chloroethane	75-00-3	1	U	1	5		1
10904	2-Chloroethyl Vinyl Ether	110-75-8	2	U	2	10		1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.							
10904	Chloroform	67-66-3	0.8	U	0.8	5		1
10904	Chloromethane	74-87-3	1	U	1	5		1
10904	2-Chlorotoluene	95-49-8	1	U	1	5		1
10904	4-Chlorotoluene	106-43-4	1	U	1	5		1
10904	Chlorotrifluoroethene	79-38-9	2	U	2	5		1
10904	1,2-Dibromo-3-chloropropane	96-12-8	2	U	2	5		1
10904	Dibromochloromethane	124-48-1	1	U	1	5		1
10904	1,2-Dibromoethane	106-93-4	1	U	1	5		1
10904	Dibromomethane	74-95-3	1	U	1	5		1
10904	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
10904	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
10904	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
10904	Dichlorodifluoromethane	75-71-8	2	U	2	5		1
10904	1,1-Dichloroethane	75-34-3	1	U	1	5		1
10904	1,2-Dichloroethane	107-06-2	1	U	1	5		1
10904	1,1-Dichloroethene	75-35-4	0.8	U	0.8	5		1
10904	cis-1,2-Dichloroethene	156-59-2	0.8	U	0.8	5		1
10904	trans-1,2-Dichloroethene	156-60-5	0.8	U	0.8	5		1
10904	1,2-Dichloropropane	78-87-5	1	U	1	5		1
10904	1,3-Dichloropropane	142-28-9	1	U	1	5		1
10904	2,2-Dichloropropane	594-20-7	1	U	1	5		1
10904	1,1-Dichloropropene	563-58-6	1	U	1	5		1
10904	cis-1,3-Dichloropropene	10061-01-5	1	U	1	5		1
10904	trans-1,3-Dichloropropene	10061-02-6	1	U	1	5		1
10904	Ethylbenzene	100-41-4	0.8	U	0.8	5		1
10904	Freon 113	76-13-1	2	U	2	10		1
10904	Freon 133a	75-88-7	2	U	2	5		1
10904	Hexachlorobutadiene	87-68-3	2	U	2	5		1
10904	2-Hexanone	591-78-6	3	U	3	10		1
10904	Isopropylbenzene	98-82-8	1	U	1	5		1
10904	p-Isopropyltoluene	99-87-6	1	U	1	5		1
10904	Methyl Tertiary Butyl Ether	1634-04-4	0.5	U	0.5	5		1
10904	4-Methyl-2-pentanone	108-10-1	3	U	3	10		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10904	Methylene Chloride	75-09-2	5	J	2	5		1
10904	n-Propylbenzene	103-65-1	1	U	1	5		1
10904	Styrene	100-42-5	1	U	1	5		1
10904	1,1,1,2-Tetrachloroethane	630-20-6	1	U	1	5		1
10904	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	5		1
10904	Tetrachloroethene	127-18-4	0.8	U	0.8	5		1
10904	Toluene	108-88-3	0.7	U	0.7	5		1
10904	1,2,3-Trichlorobenzene	87-61-6	1	U	1	5		1
10904	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
10904	1,1,1-Trichloroethane	71-55-6	0.8	U	0.8	5		1
10904	1,1,2-Trichloroethane	79-00-5	0.8	U	0.8	5		1
10904	Trichloroethene	79-01-6	1	U	1	5		1
10904	Trichlorofluoromethane	75-69-4	2	U	2	5		1
10904	1,2,3-Trichloropropane	96-18-4	1	U	1	5		1
10904	1,2,4-Trimethylbenzene	95-63-6	1	U	1	5		1
10904	1,3,5-Trimethylbenzene	108-67-8	1	U	1	5		1
10904	Vinyl Chloride	75-01-4	1	U	1	5		1
10904	m+p-Xylene	179601-23-1	0.8	U	0.8	5		1
10904	o-Xylene	95-47-6	0.8	U	0.8	5		1
GC/MS Volatiles	**SW-846 8260B SIM**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
00527	1,4-Dioxane	123-91-1	0.5	U	0.5	2.0		1
GC/MS Semivolatiles	**EPA 1625C**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	4.55		0.500	1.00		1

N-Nitrosodimethylamine was detected in the method blank at a concentration of .887 ng/l. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and N-Nitrosodimethylamine was again detected in the re-analysis of the sample. The data reported here is from the initial extraction of the sample.

GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04678	Aniline	62-53-3	1	U	1	5		1
04678	Benzidine	92-87-5	20	U	20	60		1
04678	Benzoic acid	65-85-0	6	U	6	15		1
04678	Benzyl alcohol	100-51-6	5	U	5	15		1
04678	4-Bromophenyl-phenylether	101-55-3	1	U	1	5		1
04678	2-butoxy-Ethanol	111-76-2	50	U	50	50		1
04678	Carbazole	86-74-8	1	U	1	5		1
04678	4-Chloro-3-methylphenol	59-50-7	1	U	1	5		1
04678	4-Chloroaniline	106-47-8	1	U	1	5		1
04678	bis(2-Chloroethoxy)methane	111-91-1	1	U	1	5		1
04678	bis(2-Chloroethyl)ether	111-44-4	1	U	1	5		1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	1	U	1	5		1
04678	2-Chloronaphthalene	91-58-7	2	U	2	5		1
04678	2-Chlorophenol	95-57-8	1	U	1	5		1
04678	4-Chlorophenyl-phenylether	7005-72-3	2	U	2	5		1
04678	Dibenzofuran	132-64-9	1	U	1	5		1
04678	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	ug/l	ug/l	
04678	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
04678	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
04678	3,3'-Dichlorobenzidine	91-94-1	2	U	2	5		1
04678	2,4-Dichlorophenol	120-83-2	1	U	1	5		1
04678	2,4-Dimethylphenol	105-67-9	3	U	3	10		1
04678	3,5-Dimethylphenol	108-68-9	3	U	3	10		1
04678	4,6-Dinitro-2-methylphenol	534-52-1	5	U	5	15		1
04678	2,4-Dinitrophenol	51-28-5	10	U	10	30		1
04678	2,4-Dinitrotoluene	121-14-2	1	U	1	5		1
04678	2,6-Dinitrotoluene	606-20-2	1	U	1	5		1
04678	1,2-Diphenylhydrazine	122-66-7	1	U	1	5		1
04678	Hexachlorobenzene	118-74-1	1	U	1	5		1
04678	Hexachlorobutadiene	87-68-3	1	U	1	5		1
04678	Hexachlorocyclopentadiene	77-47-4	5	U	5	15		1
04678	Hexachloroethane	67-72-1	1	U	1	5		1
04678	Isophorone	78-59-1	1	U	1	5		1
04678	2-Methylphenol	95-48-7	1	U	1	5		1
04678	4-Methylphenol	106-44-5	2	U	2	5		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04678	2-Nitroaniline	88-74-4	1	U	1	5		1
04678	3-Nitroaniline	99-09-2	1	U	1	5		1
04678	4-Nitroaniline	100-01-6	1	U	1	5		1
04678	Nitrobenzene	98-95-3	1	U	1	5		1
04678	2-Nitrophenol	88-75-5	1	U	1	5		1
04678	4-Nitrophenol	100-02-7	10	U	10	30		1
04678	N-Nitroso-di-n-propylamine	621-64-7	1	U	1	5		1
04678	N-Nitrosodiphenylamine	86-30-6	2	U	2	5		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04678	Pentachlorophenol	87-86-5	3	U	3	15		1
04678	Phenol	108-95-2	1	U	1	5		1
04678	2-phenoxy-Ethanol	122-99-6	50	U	50	50		1
04678	Tetralin	119-64-2	5	U	5	5		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
04678	2,4,5-Trichlorophenol	95-95-4	1	U	1	5		1
04678	2,4,6-Trichlorophenol	88-06-2	1	U	1	5		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/l		ug/l	ug/l	ug/l	
10137	Acenaphthene	83-32-9	0.011	U	0.011	0.053		1
10137	Acenaphthylene	208-96-8	0.011	U	0.011	0.053		1
10137	Anthracene	120-12-7	0.011	U	0.011	0.053		1
10137	Benzo(a)anthracene	56-55-3	0.011	U	0.011	0.053		1
10137	Benzo(a)pyrene	50-32-8	0.011	U	0.011	0.053		1

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Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10137	Benzo(b)fluoranthene	205-99-2	0.011	U	0.011	0.053		1
10137	Benzo(g,h,i)perylene	191-24-2	0.011	U	0.011	0.053		1
10137	Benzo(k)fluoranthene	207-08-9	0.011	U	0.011	0.053		1
10137	Butylbenzylphthalate	85-68-7	0.053	U	0.053	1.1		1
10137	Di-n-butylphthalate	84-74-2	0.27	J	0.053	1.1		1
10137	Chrysene	218-01-9	0.011	U	0.011	0.053		1
10137	Dibenz(a,h)anthracene	53-70-3	0.011	U	0.011	0.053		1
10137	Diethylphthalate	84-66-2	0.19	J	0.053	1.1		1
10137	Dimethylphthalate	131-11-3	0.053	U	0.053	1.1		1
10137	Bis(2-Ethylhexyl)phthalate	117-81-7	0.16	J	0.053	1.1		1
10137	Fluoranthene	206-44-0	0.011	U	0.011	0.053		1
10137	Fluorene	86-73-7	0.011	U	0.011	0.053		1
10137	Indeno(1,2,3-cd)pyrene	193-39-5	0.011	U	0.011	0.053		1
10137	1-Methylnaphthalene	90-12-0	0.011	U	0.011	0.053		1
10137	2-Methylnaphthalene	91-57-6	0.011	U	0.011	0.053		1
10137	Naphthalene	91-20-3	0.039	J	0.032	0.053		1
10137	N-Nitrosodimethylamine	62-75-9	0.011	U	0.011	0.053		1
10137	Di-n-octylphthalate	117-84-0	0.096	J	0.053	1.1		1
10137	Phenanthrene	85-01-8	0.032	U	0.032	0.053		1
10137	Pyrene	129-00-0	0.011	U	0.011	0.053		1

The recoveries of dimethylphthalate and butylbenzylphthalate were outside of QC limits in the LCS/LCSD. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed between the two extractions. The data reported here is from the initial extracion of the sample.

Di-n-octylphthalate was detected in the method blank at a concentration of .094 ug/l. The blank value was not subtracted from the analytical result. Di-n-octylphthalate was not detected in the re-extraction of the sample.

Reporting limits were raised due to limited sample volume.

GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1
Explosives	**SW-846 8330A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10131	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.30	U	0.30	0.60	10000000	1
10131	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Diamino-4-nitrotoluene	59229-75-3	0.20	U	0.20	0.60	10000000	1
10131	2,4-Diamino-6-nitrotoluene	6629-29-4	0.20	U	0.20	0.60	10000000	1
10131	1,3-Dinitrobenzene	99-65-0	0.20	U	0.20	0.60	10000000	1
10131	2,4-Dinitrotoluene	121-14-2	0.20	U	0.20	0.60	10000000	1

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Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		ug/l		ug/l	ug/l	ug/l	
10131	2,6-Dinitrotoluene	606-20-2	0.20	U	0.20	0.60	10000000	1
10131	HMX	2691-41-0	0.65	U	0.65	2.0	10000000	1
10131	Nitrobenzene	98-95-3	0.20	U	0.20	0.60	10000000	1
10131	Nitroglycerin	55-63-0	5.2	U	5.2	15	10000000	1
10131	2-Nitrotoluene	88-72-2	0.20	U	0.20	0.60	10000000	1
10131	3-Nitrotoluene	99-08-1	0.40	U	0.40	1.2	10000000	1
10131	4-Nitrotoluene	99-99-0	0.60	U	0.60	1.2	10000000	1
10131	PETN	78-11-5	6.0	U	6.0	18	10000000	1
10131	RDX	121-82-4	0.99		0.20	0.60	10000000	1
10131	Tetryl	479-45-8	0.40	U	0.40	0.60	10000000	1
10131	1,3,5-Trinitrobenzene	99-35-4	0.20	U	0.20	0.60	10000000	1
10131	2,4,6-Trinitrotoluene	118-96-7	0.20	U	0.20	0.60	10000000	1
HPLC Organics	**SW-846 8315A**		ug/l		ug/l	ug/l	ug/l	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50		1
Pesticides/PCBs	**SW-846 8082**		ug/l		ug/l	ug/l	ug/l	
10227	Aroclor 5432	63496-31-1	0.11	U	0.11	0.55		1
10227	Aroclor 5442	12642-23-8	0.11	U	0.11	0.55		1
10227	Aroclor 5460	11126-42-4	0.11	U	0.11	0.55		1
10227	PCB-1016	12674-11-2	0.11	U	0.11	0.55		1
10227	PCB-1221	11104-28-2	0.11	U	0.11	0.55		1
10227	PCB-1232	11141-16-5	0.22	U	0.22	0.55		1
10227	PCB-1242	53469-21-9	0.11	U	0.11	0.55		1
10227	PCB-1248	12672-29-6	0.11	U	0.11	0.55		1
10227	PCB-1254	11097-69-1	0.11	U	0.11	0.55		1
10227	PCB-1260	11096-82-5	0.16	U	0.16	0.55		1
10227	PCB-1262	37324-23-5	0.22	U	0.22	0.55		1
10227	PCB-1268	11100-14-4	0.18	U	0.18	0.55		1
GC Miscellaneous	**SW-846 8015B**		ug/l		ug/l	ug/l	ug/l	
06624	Ethanol	64-17-5	200	U	200	1,000		1
06624	Isopropanol	67-63-0	200	U	200	1,000		1
06624	Methanol	67-56-1	200	U	200	1,000		1

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Sample Description: **EB-SA7-SB-101911 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

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CDM Federal Programs Corp.
14420 Albemarle Point Place
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E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015B modified**		mg/l		mg/l	mg/l	mg/l	
08278	Diethylene glycol	111-46-6	20	U	20	200		1
08278	Ethylene glycol	107-21-1	20	U	20	200		1
08278	Propylene glycol	57-55-6	20	U	20	200		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		mg/l		mg/l	mg/l	mg/l	
10319	m-Terphenyl	92-06-8	0.085	U	0.085	0.27		1
10319	o-Terphenyl	84-15-1	0.085	U	0.085	0.27		1
10319	p-Terphenyl	92-94-4	0.085	U	0.085	0.27		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		mg/l		mg/l	mg/l	mg/l	
10365	EFH (C12-C14)	n.a.	0.10	U	0.10	0.61		1
10365	EFH (C15-C20)	n.a.	0.10	U	0.10	0.61		1
10365	EFH (C21-C30)	n.a.	0.10	U	0.10	0.61		1
10365	EFH (C30 - C40)	n.a.	0.10	U	0.10	0.61		1
10365	EFH (C8-C11)	n.a.	0.10	U	0.10	0.61		1
Metals	**SW-846 6010B**		mg/l		mg/l	mg/l	mg/l	
01743	Aluminum	7429-90-5	0.0801	U	0.0801	0.200		1
08014	Boron	7440-42-8	0.0088	J	0.0022	0.0500		1
01750	Calcium	7440-70-2	0.0705	U	0.0705	0.200		1
01754	Iron	7439-89-6	0.0141	U	0.0141	0.200		1
01756	Lithium	7439-93-2	0.0076	U	0.0076	0.0200		1
01757	Magnesium	7439-95-4	0.0067	U	0.0067	0.100		1
07058	Manganese	7439-96-5	0.00044	U	0.00044	0.0050		1
10143	Phosphorus	7723-14-0	0.0055	J	0.0047	0.100		1
01762	Potassium	7440-09-7	0.0874	U	0.0874	0.500		1
01767	Sodium	7440-23-5	0.0647	U	0.0647	1.00		1
08068	Strontium	7440-24-6	0.00056	J	0.00022	0.0050		1
07069	Tin	7440-31-5	0.0043	U	0.0043	0.0200		1
07070	Titanium	7440-32-6	0.00063	J	0.00046	0.0100		1
10144	Zirconium	7440-67-7	0.0042	U	0.0042	0.0500		1
	SW-846 6020		mg/l		mg/l	mg/l	mg/l	
06024	Antimony	7440-36-0	0.00042	U	0.00042	0.0010		1
06025	Arsenic	7440-38-2	0.00095	U	0.00095	0.0020		1
06026	Barium	7440-39-3	0.00069	U	0.00069	0.0020		1
06027	Beryllium	7440-41-7	0.00013	U	0.00013	0.00050		1
06028	Cadmium	7440-43-9	0.00020	U	0.00020	0.00050		1
06031	Chromium	7440-47-3	0.00060	U	0.00060	0.0020		1
06032	Cobalt	7440-48-4	0.00010	U	0.00010	0.00050		1
06033	Copper	7440-50-8	0.00038	U	0.00038	0.0020		1
06035	Lead	7439-92-1	0.00012	J	0.000080	0.0010		1
06038	Molybdenum	7439-98-7	0.00025	U	0.00025	0.00050		1
06039	Nickel	7440-02-0	0.00050	U	0.00050	0.0020		1
06041	Selenium	7782-49-2	0.00027	U	0.00027	0.0020		1

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Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06042	Silver	7440-22-4	0.000098 U	0.000098	0.00050		1
06045	Thallium	7440-28-0	0.00015 U	0.00015	0.00050		1
06048	Vanadium	7440-62-2	0.00018 U	0.00018	0.00050		1
06049	Zinc	7440-66-6	0.0040 U	0.0040	0.0150		1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000026 U	0.000026	0.00020		1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
01504	11b Anions by 300.0 - Fluoride	16984-48-8	0.080 U	0.080	0.10		1
00368	11b Anions by 300.0 - Nitrate	14797-55-8	0.050 U	0.050	0.10		1
	EPA 314.0		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06019	7b Perchlorate EPA 314.0	14797-73-0	0.70 U	0.70	2.0		1
	SW-846 7199		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
06467	3b Cr VI by EPA 7199	18540-29-9	5.0 U	5.0	10.0		1
	SW-846 9012B		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
08255	16b Cyanide by 9012B	57-12-5	0.0050 U	0.0050	0.010		1
	SW-846 9040B		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00200	17b pH by 9040B	n.a.	5.5	0.010	0.010		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10904	1b Volatile Organics EPA8260B	SW-846 8260B	1	Y112992AA	10/26/2011 12:55	Nicholas R Rossi	1
00527	14b 1,4-Dioxane by 8260B SIM	SW-846 8260B SIM	1	E112972AA	10/24/2011 19:59	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E112972AA	10/24/2011 19:59	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y112992AA	10/26/2011 12:55	Nicholas R Rossi	1
10962	21b NDMA by 1625C	EPA 1625C	1	11297WAC026	11/02/2011 19:32	Matthew S Woods	1
04678	5b Semivolatiles by 8270C	SW-846 8270C	1	11297WAI026	10/26/2011 19:35	Holly Berry	1
10137	4b Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11297WAE026	10/25/2011 10:39	Joseph M Gambler	1

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Sample Description: **EB-SA7-SB-101911 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
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Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

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E7210 SDG#: DE272-10EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00813	BNA Water Extraction	SW-846 3510C	1	11297WAI026	10/25/2011 09:00	Cynthia J Salvatori	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	11297WAE026	10/24/2011 17:00	JoElla L Rice	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11297WAC026	10/24/2011 14:20	Wanda F Oswald	1
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11294B20A	10/24/2011 14:29	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11294B20A	10/24/2011 14:29	Catherine J Schwarz	1
10131	15b Energetics by 8330A	SW-846 8330A	1	112930023A	10/27/2011 11:31	Michele D Hamilton	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	112930018A	10/21/2011 19:35	James H Place	1
10227	8b PCBs/PCTs by 8082	SW-846 8082	1	112980001A	11/01/2011 03:57	Jessica L Miller	1
11117	PCB Waters Extraction	SW-846 3510C	1	112980001A	10/25/2011 16:55	JoElla L Rice	1
01013	Formaldehyde Extraction	SW-846 8315A	1	112930018A	10/21/2011 09:15	Denise L Trimby	1
11122	Energetics Extraction	SW-846 8330	1	112930023A	10/21/2011 09:30	Kerrie A Freeburn	1
06624	18b Alcohols by 8015B	SW-846 8015B	1	112930031A	10/21/2011 22:04	Elizabeth J Marin	1
08278	19b Glycols by 8015B	SW-846 8015B modified	1	112970039A	10/24/2011 23:22	Tyler O Griffin	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	112970009A	11/02/2011 11:46	Robert Brown	1
10365	9b TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	112940018A	10/25/2011 14:01	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	112940018A	10/22/2011 10:50	Denise L Trimby	1
10304	Terphenyls water prep	SW-846 3510C	1	112970009A	10/24/2011 00:00	Bronson L Cole	1
01743	Aluminum	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
08014	Boron	SW-846 6010B	1	112991848003	11/01/2011 10:45	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
01754	Iron	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
01756	Lithium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
01757	Magnesium	SW-846 6010B	1	112991848003	11/01/2011 10:45	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
10143	Phosphorus	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
01762	Potassium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
01767	Sodium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
08068	Strontium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
07069	Tin	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
07070	Titanium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
10144	Zirconium	SW-846 6010B	1	112991848003	10/28/2011 18:35	John P Hook	1
06024	Antimony	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06025	Arsenic	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06026	Barium	SW-846 6020	1	112996050005D	11/01/2011 06:29	Choon Y Tian	1
06027	Beryllium	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06028	Cadmium	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06031	Chromium	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06032	Cobalt	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06033	Copper	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06035	Lead	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06038	Molybdenum	SW-846 6020	1	112996050005C	11/01/2011 06:29	Choon Y Tian	1
06039	Nickel	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06041	Selenium	SW-846 6020	1	112996050005B	11/01/2011 06:29	Choon Y Tian	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: **EB-SA7-SB-101911 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443499
LLI Group # 1272257
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/18/2011 09:41

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7210 SDG#: DE272-10EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06042	Silver	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06045	Thallium	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06048	Vanadium	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
06049	Zinc	SW-846 6020	1	112996050005A	11/01/2011 06:29	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	112945713004	10/25/2011 12:54	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	112991848003	10/27/2011 09:19	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	112996050005	10/27/2011 09:17	Denise K Conners	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	112945713004	10/21/2011 16:31	Nelli S Markaryan	1
01504	11b Anions by 300.0 - Fluoride	EPA 300.0	1	11293196903C	10/21/2011 14:40	Ashley M Adams	1
00368	11b Anions by 300.0 - Nitrate	EPA 300.0	1	11293196903C	10/21/2011 14:40	Ashley M Adams	1
06019	7b Perchlorate EPA 314.0	EPA 314.0	3	11293281101A	11/15/2011 10:56	Elyse P Brunstetter	1
06467	3b Cr VI by EPA 7199	SW-846 7199	1	11293281401A	10/20/2011 10:46	Elyse P Brunstetter	1
08255	16b Cyanide by 9012B	SW-846 9012B	1	11300117101B	10/28/2011 08:32	K Robert Caulfeild-James	1
08256	Cyanide Water Distillation	SW-846 9012B	1	11300117101B	10/27/2011 10:15	Nancy J Shoop	1
00200	17b pH by 9040B	SW-846 9040B	1	11294020001A	10/21/2011 20:30	Luz M Groff	1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B112981AA	Sample number(s): 6443491-6443492									
Acetone	6.7	U	6.7	8.0	ug/kg	111	111	32-209	0	30
Benzene	0.10	U	0.10	4.0	ug/kg	111	106	80-120	5	30
Bromobenzene	0.13	U	0.13	4.0	ug/kg	101	97	79-120	4	30
Bromochloromethane	0.33	U	0.33	4.0	ug/kg	107	103	79-124	5	30
Bromodichloromethane	0.08	U	0.08	4.0	ug/kg	101	96	78-120	5	30
Bromoform	0.40	U	0.40	4.0	ug/kg	99	97	70-120	2	30
Bromomethane	0.25	U	0.25	4.0	ug/kg	91	86	32-162	6	30
2-Butanone	1.2	U	1.2	8.0	ug/kg	104	105	46-153	1	30
n-Butylbenzene	0.12	U	0.12	4.0	ug/kg	106	103	72-120	4	30
sec-Butylbenzene	0.06	U	0.06	4.0	ug/kg	107	102	75-120	5	30
tert-Butylbenzene	0.16	U	0.16	4.0	ug/kg	105	101	75-120	4	30
Carbon Tetrachloride	0.14	U	0.14	4.0	ug/kg	110	105	69-122	5	30
Chlorobenzene	0.11	U	0.11	4.0	ug/kg	107	102	80-120	5	30
Chloroethane	0.13	U	0.13	4.0	ug/kg	86	81	37-154	6	30
2-Chloroethyl Vinyl Ether	0.30	U	0.30	4.0	ug/kg	102	102	43-146	0	30
Chloroform	0.22	J	0.12	4.0	ug/kg	106	102	80-120	4	30
Chloromethane	0.33	U	0.33	4.0	ug/kg	101	103	54-132	2	30
2-Chlorotoluene	0.14	U	0.14	4.0	ug/kg	103	99	78-120	4	30
4-Chlorotoluene	0.14	U	0.14	4.0	ug/kg	104	102	79-120	2	30
Chlorotrifluoroethene	0.50	U	0.50	5.0	ug/kg	122	112	22-131	9	30
1,2-Dibromo-3-chloropropane	0.70	U	0.70	4.0	ug/kg	93	93	58-120	0	30
Dibromochloromethane	0.20	U	0.20	4.0	ug/kg	101	97	77-120	4	30
1,2-Dibromoethane	0.17	U	0.17	4.0	ug/kg	103	101	80-120	2	30
Dibromomethane	0.24	U	0.24	4.0	ug/kg	105	99	80-120	6	30
1,2-Dichlorobenzene	0.09	U	0.09	4.0	ug/kg	103	100	79-120	4	30
1,3-Dichlorobenzene	0.12	U	0.12	4.0	ug/kg	102	97	78-120	5	30
1,4-Dichlorobenzene	0.16	U	0.16	4.0	ug/kg	102	98	79-120	4	30
Dichlorodifluoromethane	0.12	U	0.12	4.0	ug/kg	114	106	20-120	7	30
1,1-Dichloroethane	0.10	U	0.10	4.0	ug/kg	110	105	80-120	5	30
1,2-Dichloroethane	0.15	U	0.15	4.0	ug/kg	105	101	71-129	4	30
1,1-Dichloroethene	0.39	U	0.39	4.0	ug/kg	126*	119	73-123	6	30
cis-1,2-Dichloroethene	0.19	U	0.19	4.0	ug/kg	110	104	80-120	6	30
trans-1,2-Dichloroethene	0.12	U	0.12	4.0	ug/kg	117	111	79-120	6	30
1,2-Dichloropropane	0.17	U	0.17	4.0	ug/kg	107	104	80-120	3	30
1,3-Dichloropropane	0.08	U	0.08	4.0	ug/kg	104	101	80-120	2	30
2,2-Dichloropropane	0.17	U	0.17	4.0	ug/kg	110	104	72-123	5	30
1,1-Dichloropropene	0.13	U	0.13	4.0	ug/kg	113	108	77-120	5	30
cis-1,3-Dichloropropene	0.16	U	0.16	4.0	ug/kg	102	99	80-120	3	30
trans-1,3-Dichloropropene	0.17	U	0.17	4.0	ug/kg	99	97	77-120	3	30
Ethylbenzene	0.06	U	0.06	4.0	ug/kg	108	104	80-120	4	30
Freon 113	0.11	U	0.11	4.0	ug/kg	134*	126	61-126	6	30
Freon 133a	0.50	U	0.50	5.0	ug/kg	129*	123*	78-120	5	30
Hexachlorobutadiene	0.14	U	0.14	4.0	ug/kg	107	104	57-120	4	30
2-Hexanone	1.6	U	1.6	8.0	ug/kg	105	107	45-155	2	30
Isopropylbenzene	0.06	U	0.06	4.0	ug/kg	110	105	76-120	5	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
p-Isopropyltoluene	0.11	U	0.11	4.0	ug/kg	107	102	75-120	5	30
Methyl Tertiary Butyl Ether	0.21	U	0.21	4.0	ug/kg	108	106	74-121	2	30
4-Methyl-2-pentanone	0.39	U	0.39	8.0	ug/kg	111	113	61-134	2	30
Methylene Chloride	0.76	J	0.24	4.0	ug/kg	111	106	76-124	5	30
n-Propylbenzene	0.07	U	0.07	4.0	ug/kg	106	102	77-120	4	30
Styrene	0.10	U	0.10	4.0	ug/kg	108	104	76-120	4	30
1,1,1,2-Tetrachloroethane	0.11	U	0.11	4.0	ug/kg	104	99	80-120	6	30
1,1,2,2-Tetrachloroethane	0.23	U	0.23	4.0	ug/kg	94	92	71-123	2	30
Tetrachloroethene	0.20	U	0.20	4.0	ug/kg	117	112	77-120	5	30
Toluene	0.08	U	0.08	4.0	ug/kg	108	102	80-120	5	30
1,2,3-Trichlorobenzene	0.14	U	0.14	4.0	ug/kg	100	97	64-120	4	30
1,2,4-Trichlorobenzene	0.18	U	0.18	4.0	ug/kg	101	97	68-120	3	30
1,1,1-Trichloroethane	0.20	U	0.20	4.0	ug/kg	104	99	71-125	5	30
1,1,2-Trichloroethane	0.27	U	0.27	4.0	ug/kg	105	101	80-120	5	30
Trichloroethene	0.15	U	0.15	4.0	ug/kg	109	104	80-120	5	30
Trichlorofluoromethane	0.29	U	0.29	4.0	ug/kg	110	103	58-133	6	30
1,2,3-Trichloropropane	0.33	U	0.33	4.0	ug/kg	95	95	71-123	0	30
1,2,4-Trimethylbenzene	0.40	U	0.40	4.0	ug/kg	104	100	79-120	4	30
1,3,5-Trimethylbenzene	0.10	U	0.10	4.0	ug/kg	105	101	78-120	4	30
Vinyl Chloride	0.20	U	0.20	4.0	ug/kg	110	105	53-120	5	30
m+p-Xylene	0.17	U	0.17	4.0	ug/kg	110	105	80-120	5	30
o-Xylene	0.17	U	0.17	4.0	ug/kg	106	104	80-120	3	30
Batch number: E112972AA	Sample number(s): 6443498-6443499									
1,4-Dioxane	0.5	U	0.5	2.0	ug/l	112		80-123		
Batch number: E112981AA	Sample number(s): 6443491-6443492									
1,4-Dioxane	5.0	U	5.0	15	ug/kg	94	90	70-130	4	30
Batch number: Y112992AA	Sample number(s): 6443498-6443499									
Acetone	6	U	6.	20	ug/l	83	64	49-234	26	30
Benzene	0.5	U	0.5	5	ug/l	93	92	79-120	1	30
Bromobenzene	1	U	1.	5	ug/l	88	95	80-120	7	30
Bromochloromethane	1	U	1.	5	ug/l	95	95	80-120	1	30
Bromodichloromethane	1	U	1.	5	ug/l	97	97	80-120	0	30
Bromoform	1	U	1.	5	ug/l	99	95	61-120	4	30
Bromomethane	1	U	1.	5	ug/l	101	106	44-120	5	30
2-Butanone	3	U	3.	10	ug/l	94	78	66-151	18	30
n-Butylbenzene	1	U	1.	5	ug/l	89	98	74-120	9	30
sec-Butylbenzene	1	U	1.	5	ug/l	91	100	78-120	9	30
tert-Butylbenzene	1	U	1.	5	ug/l	86	93	80-120	8	30
Carbon Tetrachloride	1	U	1.	5	ug/l	102	103	75-123	1	30
Chlorobenzene	0.8	U	0.8	5	ug/l	94	95	80-120	1	30
Chloroethane	1	U	1.	5	ug/l	104	111	49-129	7	30
2-Chloroethyl Vinyl Ether	2	U	2.	10	ug/l	107	106	56-129	0	30
Chloroform	0.8	U	0.8	5	ug/l	100	97	77-122	3	30
Chloromethane	1	U	1.	5	ug/l	101	112	60-129	11	30
2-Chlorotoluene	1	U	1.	5	ug/l	89	95	80-120	7	30
4-Chlorotoluene	1	U	1.	5	ug/l	89	96	80-120	7	30
Chlorotrifluoroethene	2	U	2.	5	ug/l	87	86	38-136	1	30
1,2-Dibromo-3-chloropropane	2	U	2.	5	ug/l	92	97	56-126	5	30
Dibromochloromethane	1	U	1.	5	ug/l	98	96	80-120	1	30
1,2-Dibromoethane	1	U	1.	5	ug/l	95	93	80-120	2	30
Dibromomethane	1	U	1.	5	ug/l	98	95	80-120	3	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	90	95	80-120	6	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	90	95	80-120	6	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	91	96	80-120	5	30
Dichlorodifluoromethane	2	U	2.	5	ug/l	89	93	47-120	5	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethane	1	U	1.	5	ug/l	97	96	79-120	1	30
1,2-Dichloroethane	1	U	1.	5	ug/l	105	102	70-130	2	30
1,1-Dichloroethene	0.8	U	0.8	5	ug/l	92	98	74-123	6	30
cis-1,2-Dichloroethene	0.8	U	0.8	5	ug/l	95	91	80-120	4	30
trans-1,2-Dichloroethene	0.8	U	0.8	5	ug/l	92	90	80-120	2	30
1,2-Dichloropropane	1	U	1.	5	ug/l	95	94	78-120	0	30
1,3-Dichloropropane	1	U	1.	5	ug/l	97	96	80-120	1	30
2,2-Dichloropropane	1	U	1.	5	ug/l	101	102	77-124	1	30
1,1-Dichloropropene	1	U	1.	5	ug/l	95	95	80-120	0	30
cis-1,3-Dichloropropene	1	U	1.	5	ug/l	94	95	80-120	1	30
trans-1,3-Dichloropropene	1	U	1.	5	ug/l	96	96	79-120	0	30
Ethylbenzene	0.8	U	0.8	5	ug/l	94	94	79-120	0	30
Freon 113	2	U	2.	10	ug/l	95	100	69-128	6	30
Freon 133a	2	U	2.	5	ug/l	91	93	77-120	2	30
Hexachlorobutadiene	2	U	2.	5	ug/l	75	86	58-120	14	30
2-Hexanone	3	U	3.	10	ug/l	99	94	65-136	5	30
Isopropylbenzene	1	U	1.	5	ug/l	95	96	77-120	1	30
p-Isopropyltoluene	1	U	1.	5	ug/l	92	101	80-120	9	30
Methyl Tertiary Butyl Ether	0.5	U	0.5	5	ug/l	96	94	76-120	2	30
4-Methyl-2-pentanone	3	U	3.	10	ug/l	94	91	70-121	2	30
Methylene Chloride	2	U	2.	5	ug/l	96	93	80-120	3	30
n-Propylbenzene	1	U	1.	5	ug/l	91	98	80-120	8	30
Styrene	1	U	1.	5	ug/l	94	93	80-120	1	30
1,1,1,2-Tetrachloroethane	1	U	1.	5	ug/l	97	96	80-120	1	30
1,1,2,2-Tetrachloroethane	1	U	1.	5	ug/l	86	90	71-120	4	30
Tetrachloroethene	0.8	U	0.8	5	ug/l	98	102	80-121	3	30
Toluene	0.7	U	0.7	5	ug/l	91	92	79-120	1	30
1,2,3-Trichlorobenzene	1	U	1.	5	ug/l	76	97	65-120	24	30
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	80	93	67-120	15	30
1,1,1-Trichloroethane	0.8	U	0.8	5	ug/l	87	89	75-127	2	30
1,1,2-Trichloroethane	0.8	U	0.8	5	ug/l	95	93	80-120	2	30
Trichloroethene	1	U	1.	5	ug/l	96	97	80-120	1	30
Trichlorofluoromethane	2	U	2.	5	ug/l	99	102	64-129	3	30
1,2,3-Trichloropropane	1	U	1.	5	ug/l	92	100	80-120	8	30
1,2,4-Trimethylbenzene	1	U	1.	5	ug/l	91	100	74-120	9	30
1,3,5-Trimethylbenzene	1	U	1.	5	ug/l	92	100	75-120	8	30
Vinyl Chloride	1	U	1.	5	ug/l	96	101	65-125	5	30
m+p-Xylene	0.8	U	0.8	5	ug/l	94	94	80-120	0	30
o-Xylene	0.8	U	0.8	5	ug/l	92	91	80-120	0	30
Batch number: 11295SLA026	Sample number(s): 6443490-6443494									
Aniline	170 U		170.	500	ug/kg	63		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	43		15-121		
Benzoic acid	170 U		170.	500	ug/kg	85		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	93		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	95		73-114		
Carbazole	17	U	17.	170	ug/kg	101		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	100		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	42		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	92		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	87		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	85		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	71		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	92		72-112		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	96		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	93		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	85		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	82		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	83		74-106		
3,3'-Dichlorobenzidine	100	U	100.	330	ug/kg	33		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	97		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	95		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	100		83-120		
4,6-Dinitro-2-methylphenol	170	U	170.	500	ug/kg	77		46-120		
2,4-Dinitrophenol	330	U	330.	1,000	ug/kg	76		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	105		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	103		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	96		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	100		75-117		
Hexachlorobenzene	17	U	17.	170	ug/kg	96		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	87		65-117		
Hexachlorocyclopentadiene	170	U	170.	500	ug/kg	84		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	82		61-109		
Isophorone	17	U	17.	170	ug/kg	92		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	93		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	93		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	102		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	96		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	81		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	91		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	89		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	100		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	85		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	100		67-141		
Pentachlorophenol	170	U	170.	500	ug/kg	100		51-117		
Phenol	17	U	17.	170	ug/kg	96		58-112		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	90		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	97		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	101		78-111		
Batch number: 11295SLC026	Sample number(s): 6443490-6443494									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	89		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	81		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	88		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	93		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	86		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	91		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	106		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	94		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	86		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	86		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	94		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	104		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	87		68-125		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dimethylphthalate	6.0	U	6.0	18	ug/kg	89		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	96		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	91		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	90		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	103		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	86		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	94		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	99		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	88		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	95		72-119		
Batch number: 11297WAC026	Sample number(s): 6443495-6443496,6443499									
N-Nitrosodimethylamine	0.887	J	0.500	1.00	ng/l	102	94	70-130	8	30
Batch number: 11297WAE026	Sample number(s): 6443499									
Acenaphthene	0.010	U	0.010	0.050	ug/l	96	101	74-109	5	30
Acenaphthylene	0.010	U	0.010	0.050	ug/l	93	95	70-110	2	30
Anthracene	0.010	U	0.010	0.050	ug/l	97	99	66-111	2	30
Benzo(a)anthracene	0.010	U	0.010	0.050	ug/l	101	102	72-114	1	30
Benzo(a)pyrene	0.010	U	0.010	0.050	ug/l	93	93	60-127	0	30
Benzo(b)fluoranthene	0.010	U	0.010	0.050	ug/l	98	99	58-151	1	30
Benzo(g,h,i)perylene	0.010	U	0.010	0.050	ug/l	112	113	57-131	1	30
Benzo(k)fluoranthene	0.010	U	0.010	0.050	ug/l	99	99	59-130	0	30
Butylbenzylphthalate	0.050	U	0.050	1.0	ug/l	22*	21*	40-138	4	30
Di-n-butylphthalate	0.050	U	0.050	1.0	ug/l	60	61	56-148	2	30
Chrysene	0.010	U	0.010	0.050	ug/l	100	102	76-116	1	30
Dibenz(a,h)anthracene	0.010	U	0.010	0.050	ug/l	111	111	55-134	1	30
Diethylphthalate	0.050	U	0.050	1.0	ug/l	48	47	37-148	2	30
Dimethylphthalate	0.050	U	0.050	1.0	ug/l	10*	10*	40-119	2	30
Bis(2-Ethylhexyl)phthalate	0.050	U	0.050	1.0	ug/l	106	103	57-154	3	30
Fluoranthene	0.010	U	0.010	0.050	ug/l	97	98	75-116	2	30
Fluorene	0.010	U	0.010	0.050	ug/l	101	101	75-114	0	30
Indeno(1,2,3-cd)pyrene	0.010	U	0.010	0.050	ug/l	109	110	53-158	1	30
1-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	92	93	71-117	0	30
2-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	91	92	75-115	1	30
Naphthalene	0.030	U	0.030	0.050	ug/l	92	93	72-109	1	30
N-Nitrosodimethylamine	0.010	U	0.010	0.050	ug/l	64	65	36-89	1	30
Di-n-octylphthalate	0.094	J	0.050	1.0	ug/l	96	96	57-145	1	30
Phenanthrene	0.030	U	0.030	0.050	ug/l	94	96	76-111	2	30
Pyrene	0.010	U	0.010	0.050	ug/l	104	104	69-118	0	30
Batch number: 11297WAI026	Sample number(s): 6443499									
Aniline	1	U	1.	5	ug/l	74	78	38-116	5	30
Benzidine	20	U	20.	60	ug/l	52	48	34-117	7	30
Benzoic acid	6	U	6.	15	ug/l	44	47	10-69	8	30
Benzyl alcohol	5	U	5.	15	ug/l	84	88	66-97	5	30
4-Bromophenyl-phenylether	1	U	1.	5	ug/l	95	101	75-115	5	30
2-butoxy-Ethanol	50	U	50.	50	ug/l					
Carbazole	1	U	1.	5	ug/l	99	101	75-120	2	30
4-Chloro-3-methylphenol	1	U	1.	5	ug/l	101	102	70-123	1	30
4-Chloroaniline	1	U	1.	5	ug/l	63	59	24-128	6	30
bis(2-Chloroethoxy)methane	1	U	1.	5	ug/l	99	102	74-124	3	30
bis(2-Chloroethyl)ether	1	U	1.	5	ug/l	88	95	77-108	8	30
bis(2-Chloroisopropyl)ether	1	U	1.	5	ug/l	84	93	62-127	10	30
2-Chloronaphthalene	2	U	2.	5	ug/l	72	75	54-132	3	30
2-Chlorophenol	1	U	1.	5	ug/l	95	100	71-114	5	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	2	U	2.	5	ug/l	98	97	77-114	1	30
Dibenzofuran	1	U	1.	5	ug/l	95	95	75-117	0	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	81	86	55-118	7	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	78	85	61-111	8	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	79	84	53-119	6	30
3,3'-Dichlorobenzidine	2	U	2.	5	ug/l	58	57	37-117	1	30
2,4-Dichlorophenol	1	U	1.	5	ug/l	103	103	77-117	0	30
2,4-Dimethylphenol	3	U	3.	10	ug/l	98	97	72-110	1	30
3,5-Dimethylphenol	3	U	3.	10	ug/l	103	106	70-130	3	30
4,6-Dinitro-2-methylphenol	5	U	5.	15	ug/l	104	108	65-126	4	30
2,4-Dinitrophenol	10	U	10.	30	ug/l	100	102	52-131	2	30
2,4-Dinitrotoluene	1	U	1.	5	ug/l	102	101	76-119	1	30
2,6-Dinitrotoluene	1	U	1.	5	ug/l	100	102	76-118	2	30
1,2-Diphenylhydrazine	1	U	1.	5	ug/l	97	102	68-127	5	30
Hexachlorobenzene	1	U	1.	5	ug/l	97	100	75-119	4	30
Hexachlorobutadiene	1	U	1.	5	ug/l	85	87	57-124	3	30
Hexachlorocyclopentadiene	5	U	5.	15	ug/l	56	54	36-118	3	30
Hexachloroethane	1	U	1.	5	ug/l	74	80	52-113	8	30
Isophorone	1	U	1.	5	ug/l	96	100	74-117	4	30
2-Methylphenol	1	U	1.	5	ug/l	92	98	58-110	7	30
4-Methylphenol	2	U	2.	5	ug/l	85	91	49-108	7	30
2-Nitroaniline	1	U	1.	5	ug/l	100	102	75-120	2	30
3-Nitroaniline	1	U	1.	5	ug/l	99	98	74-113	1	30
4-Nitroaniline	1	U	1.	5	ug/l	86	86	59-100	0	30
Nitrobenzene	1	U	1.	5	ug/l	93	98	75-109	6	30
2-Nitrophenol	1	U	1.	5	ug/l	98	99	76-118	1	30
4-Nitrophenol	10	U	10.	30	ug/l	57	54	16-78	6	30
N-Nitroso-di-n-propylamine	1	U	1.	5	ug/l	86	93	69-110	8	30
N-Nitrosodiphenylamine	2	U	2.	5	ug/l	90	94	67-136	4	30
Pentachlorophenol	3	U	3.	15	ug/l	111*	112*	53-110	1	30
Phenol	1	U	1.	5	ug/l	51	61	21-67	18	30
2-phenoxy-Ethanol	50	U	50.	50	ug/l					
Tetralin	5	U	5.	5	ug/l					
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	88	91	71-112	3	30
2,4,5-Trichlorophenol	1	U	1.	5	ug/l	98	100	79-107	2	30
2,4,6-Trichlorophenol	1	U	1.	5	ug/l	102	101	76-120	0	30
Batch number: 11298SLB026	Sample number(s): 6443491-6443492,6443497									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	97		70-130		
Batch number: 11294B20A	Sample number(s): 6443499									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 11297B20A	Sample number(s): 6443498									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 11299A16A	Sample number(s): 6443491-6443494									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	74	75	67-119	2	30
Batch number: 112930023A	Sample number(s): 6443499									
4-Amino-2,6-Dinitrotoluene	0.30	U	0.30	0.60	ug/l	110	100	80-120	10	30
2-Amino-4,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	98	95	80-120	3	30
2,6-Diamino-4-nitrotoluene	0.20	U	0.20	0.60	ug/l	93	93	50-122	0	30
2,4-Diamino-6-nitrotoluene	0.20	U	0.20	0.60	ug/l	93	93	50-122	0	30
1,3-Dinitrobenzene	0.20	U	0.20	0.60	ug/l	100	99	72-117	1	30
2,4-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	94	92	80-120	2	30
2,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	80-120	0	30
HMX	0.65	U	0.65	2.0	ug/l	91	87	65-125	4	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrobenzene	0.20	U	0.20	0.60	ug/l	94	91	75-121	3	30
Nitroglycerin	5.2	U	5.2	15	ug/l	96	92	80-120	4	30
2-Nitrotoluene	0.20	U	0.20	0.60	ug/l	94	91	74-120	3	30
3-Nitrotoluene	0.40	U	0.40	1.2	ug/l	98	96	69-107	2	30
4-Nitrotoluene	0.60	U	0.60	1.2	ug/l	92	90	80-120	2	30
PETN	6.0	U	6.0	18	ug/l	100	100	80-120	0	30
RDX	0.20	U	0.20	0.60	ug/l	89	86	70-125	3	30
Tetryl	0.40	U	0.40	0.60	ug/l	81	80	31-148	1	30
1,3,5-Trinitrobenzene	0.20	U	0.20	0.60	ug/l	87	100	53-129	14	30
2,4,6-Trinitrotoluene	0.20	U	0.20	0.60	ug/l	100	98	76-109	2	30
Batch number: 113020012A	Sample number(s): 6443491-6443492									
4-Amino-2,6-Dinitrotoluene	60	U	60.	120	ug/kg	107		80-120		
2-Amino-4,6-Dinitrotoluene	40	U	40.	120	ug/kg	104		80-120		
2,6-Diamino-4-nitrotoluene	80	U	80.	240	ug/kg	93	88	54-134	5	30
2,4-Diamino-6-nitrotoluene	80	U	80.	240	ug/kg	92	88	54-134	5	30
1,3-Dinitrobenzene	40	U	40.	120	ug/kg	107		51-171		
2,4-Dinitrotoluene	40	U	40.	120	ug/kg	99		72-135		
2,6-Dinitrotoluene	40	U	40.	120	ug/kg	103		80-120		
HMX	100 U		100.	300	ug/kg	90		74-130		
Nitrobenzene	40	U	40.	120	ug/kg	96		80-120		
Nitroglycerin	800 U		800.	2,400	ug/kg	94		80-120		
2-Nitrotoluene	80	U	80.	120	ug/kg	98		78-128		
3-Nitrotoluene	100 U		100.	120	ug/kg	102		73-127		
4-Nitrotoluene	80	U	80.	120	ug/kg	95		80-120		
PETN	800 U		800.	2,400	ug/kg	104		80-120		
RDX	50	U	50.	120	ug/kg	106		75-131		
Tetryl	61	U	61.	120	ug/kg	114		70-168		
1,3,5-Trinitrobenzene	40	U	40.	120	ug/kg	107		77-137		
2,4,6-Trinitrotoluene	40	U	40.	120	ug/kg	108		80-120		
Batch number: 112930018A	Sample number(s): 6443499									
20b Formaldehyde 8315A	10	U	10.	50	ug/l	92	96	69-130	4	30
Batch number: 112980025A	Sample number(s): 6443491-6443492									
20a Formaldehyde 8315A	600 U		600.	1,500	ug/kg	113		80-126		
Batch number: 112970027A	Sample number(s): 6443490-6443494									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	73	70	36-106	5	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	72		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	92		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112980001A	Sample number(s): 6443499									
Aroclor 5432	0.10	U	0.10	0.50	ug/l					

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Aroclor 5442	0.10	U	0.10	0.50	ug/l	64	62	35-84	3	30
Aroclor 5460	0.10	U	0.10	0.50	ug/l					
PCB-1016	0.10	U	0.10	0.50	ug/l	90	90	51-128	0	30
PCB-1221	0.10	U	0.10	0.50	ug/l					
PCB-1232	0.20	U	0.20	0.50	ug/l					
PCB-1242	0.10	U	0.10	0.50	ug/l					
PCB-1248	0.10	U	0.10	0.50	ug/l					
PCB-1254	0.10	U	0.10	0.50	ug/l					
PCB-1260	0.15	U	0.15	0.50	ug/l	100	104	56-135	4	30
PCB-1262	0.20	U	0.20	0.50	ug/l					
PCB-1268	0.16	U	0.16	0.50	ug/l					
Batch number: 112930031A	Sample number(s): 6443499									
Ethanol	200	U	200.	1,000	ug/l	100		78-116		
Isopropanol	200	U	200.	1,000	ug/l	100		75-125		
Methanol	200	U	200.	1,000	ug/l	104		76-122		
Batch number: 112930033A	Sample number(s): 6443491-6443494									
Ethanol	100	U	100.	500	ug/kg	95		71-129		
Isopropanol	100	U	100.	500	ug/kg	97		75-125		
Methanol	100	U	100.	500	ug/kg	92		68-129		
Batch number: 112970039A	Sample number(s): 6443499									
Diethylene glycol	20	U	20.	200	mg/l	105		67-126		
Ethylene glycol	20	U	20.	200	mg/l	80		78-136		
Propylene glycol	20	U	20.	200	mg/l	80		65-132		
Batch number: 112980042A	Sample number(s): 6443491-6443494									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	106		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	99		67-131		
Batch number: 112940009A	Sample number(s): 6443491-6443494									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	95		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	108		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	88		69-109		
Batch number: 112940018A	Sample number(s): 6443499									
EFH (C12-C14)	0.10	U	0.10	0.60	mg/l	114	100	63-121	13	30
EFH (C15-C20)	0.10	U	0.10	0.60	mg/l	108	103	72-124	5	30
EFH (C21-C30)	0.10	U	0.10	0.60	mg/l	85	85	64-123	0	30
EFH (C30 - C40)	0.10	U	0.10	0.60	mg/l	100	80	73-124	22	30
EFH (C8-C11)	0.10	U	0.10	0.60	mg/l	114*	100	43-107	13	30
Batch number: 112970009A	Sample number(s): 6443499									
m-Terphenyl	0.080	U	0.080	0.25	mg/l	106	106	61-108	0	20
o-Terphenyl	0.080	U	0.080	0.25	mg/l	106	106	75-125	0	20
p-Terphenyl	0.080	U	0.080	0.25	mg/l	108	106	63-110	2	20
Batch number: 113000011A	Sample number(s): 6443491-6443494									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	96		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	99		75-128		

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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	99		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	84		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	88		49-107		
Batch number: 112945713004	Sample number(s): 6443499									
Mercury	0.000026 U		0.00002 6	0.00020	mg/l	101	96	80-120	5	20
Batch number: 112971026002A	Sample number(s): 6443490-6443494									
Antimony	0.0740	U	0.0740	0.200	mg/kg	122		40-227		
Arsenic	0.0800	U	0.0800	0.400	mg/kg	101		83-111		
Beryllium	0.0160	U	0.0160	0.100	mg/kg	101		84-112		
Cadmium	0.0440	U	0.0440	0.100	mg/kg	100		83-111		
Chromium	0.120	U	0.120	0.400	mg/kg	113		77-123		
Cobalt	0.0200	U	0.0200	0.100	mg/kg	105		85-114		
Copper	0.0800	U	0.0800	0.400	mg/kg	105		81-110		
Lead	0.0102	U	0.0102	0.200	mg/kg	101		84-112		
Nickel	0.100	U	0.100	0.400	mg/kg	99		81-110		
Silver	0.0142	U	0.0142	0.100	mg/kg	103		83-112		
Thallium	0.0300	U	0.0300	0.100	mg/kg	101		82-112		
Vanadium	0.0220	U	0.0220	0.100	mg/kg	108		76-110		
Zinc	0.560	U	0.560	3.00	mg/kg	99		82-110		
Batch number: 112971026002B	Sample number(s): 6443490-6443494									
Selenium	0.0580	U	0.0580	0.400	mg/kg	101		79-110		
Batch number: 112971026002C	Sample number(s): 6443490-6443494									
Molybdenum	0.0500	U	0.0500	0.100	mg/kg	104		80-110		
Batch number: 112971026002D	Sample number(s): 6443490-6443494									
Barium	0.106	U	0.106	0.400	mg/kg	102		83-110		
Batch number: 112975708004	Sample number(s): 6443490-6443494									
Aluminum	6.96	J	6.05	20.0	mg/kg	86		40-127		
Boron	0.360	U	0.360	5.00	mg/kg	99		83-110		
Calcium	4.01	J	2.50	20.0	mg/kg	98		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	94		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	101		80-120		
Magnesium	1.57	J	0.440	10.0	mg/kg	89		63-116		
Manganese	0.0360	U	0.0360	0.500	mg/kg	106		85-116		
Phosphorus	0.992	J	0.350	10.0	mg/kg	105		80-120		
Potassium	11.3	U	11.3	50.0	mg/kg	98		71-110		
Sodium	5.95	U	5.95	100	mg/kg	101		76-110		
Strontium	0.0250	U	0.0250	0.500	mg/kg	102		84-110		
Tin	1.31	J	0.320	10.0	mg/kg	96		86-120		
Titanium	0.0710	U	0.0710	1.00	mg/kg	88		80-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	105		80-120		
Batch number: 112975711002	Sample number(s): 6443490-6443494									
Mercury	0.0069	U	0.0069	0.0984	mg/kg	115		83-119		
Batch number: 112991848003	Sample number(s): 6443499									
Aluminum	0.0801	U	0.0801	0.200	mg/l	104	102	90-112	2	20
Boron	0.0024	J	0.0022	0.0500	mg/l	96	97	89-110	1	20
Calcium	0.0765	J	0.0705	0.200	mg/l	100	100	90-110	0	20
Iron	0.0246	J	0.0141	0.200	mg/l	99	97	90-112	2	20
Lithium	0.0076	U	0.0076	0.0200	mg/l	100	100	90-110	0	20
Magnesium	0.0171	J	0.0067	0.100	mg/l	101	101	90-110	1	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Manganese	0.00044 U	0.00044	0.0050	mg/l	104	103	90-110	2	20
Phosphorus	0.0047 U	0.0047	0.100	mg/l	99	99	90-110	1	20
Potassium	0.0874 U	0.0874	0.500	mg/l	95	96	85-115	1	20
Sodium	0.0647 U	0.0647	1.00	mg/l	99	99	87-114	0	20
Strontium	0.00028 J	0.00022	0.0050	mg/l	104	103	90-110	1	20
Tin	0.0043 U	0.0043	0.0200	mg/l	100	99	90-110	1	20
Titanium	0.00046 U	0.00046	0.0100	mg/l	101	100	90-113	2	20
Zirconium	0.0042 U	0.0042	0.0500	mg/l	102	101	90-110	0	20
Batch number: 112996050005A	Sample number(s): 6443499								
Antimony	0.00042 U	0.00042	0.0010	mg/l	99	106	87-110	8	20
Arsenic	0.00095 U	0.00095	0.0020	mg/l	105	101	86-111	4	20
Beryllium	0.00013 U	0.00013	0.00050	mg/l	110	106	90-113	4	20
Cadmium	0.00020 U	0.00020	0.00050	mg/l	107	104	90-114	3	20
Chromium	0.00060 U	0.00060	0.0020	mg/l	104	105	90-118	1	20
Cobalt	0.00010 U	0.00010	0.00050	mg/l	108	109	87-113	1	20
Copper	0.00038 U	0.00038	0.0020	mg/l	110	111	90-113	0	20
Lead	0.000080 U	0.00008 0	0.0010	mg/l	106	106	90-115	1	20
Nickel	0.00050 U	0.00050	0.0020	mg/l	105	107	90-113	1	20
Silver	0.000098 U	0.00009 8	0.00050	mg/l	106	108	90-115	2	20
Thallium	0.00015 U	0.00015	0.00050	mg/l	106	102	89-116	4	20
Vanadium	0.00018 U	0.00018	0.00050	mg/l	103	104	89-116	2	20
Zinc	0.0040 U	0.0040	0.0150	mg/l	104	102	90-116	2	20
Batch number: 112996050005B	Sample number(s): 6443499								
Selenium	0.00027 U	0.00027	0.0020	mg/l	107	105	85-114	2	20
Batch number: 112996050005C	Sample number(s): 6443499								
Molybdenum	0.00025 U	0.00025	0.00050	mg/l	102	104	89-115	2	20
Batch number: 112996050005D	Sample number(s): 6443499								
Barium	0.00069 U	0.00069	0.0020	mg/l	99	104	88-113	4	20
Batch number: 11293196903C	Sample number(s): 6443499								
11b Anions by 300.0 - Fluoride	0.080 U	0.080	0.10	mg/l	100	98	90-110	2	20
11b Anions by 300.0 - Nitrate	0.050 U	0.050	0.10	mg/l	100	100	90-110	0	20
Batch number: 11293281101A	Sample number(s): 6443499								
7b Perchlorate EPA 314.0	0.70 U	0.70	2.0	ug/l	90	96	85-115	7	20
Batch number: 11293281401A	Sample number(s): 6443499								
3b Cr VI by EPA 7199	5.0 U	5.0	10.0	ug/l	100	105	90-110	5	20
Batch number: 11298243201A	Sample number(s): 6443490-6443494								
3a Cr VI by EPA 7199	0.20 U	0.20	1.0	mg/kg	89		80-120		
Batch number: 11298621201A	Sample number(s): 6443490-6443494								
7a Perchlorate EPA 314.0	9.0 U	9.0	30.0	ug/kg	99		85-115		
Batch number: 11300102201A	Sample number(s): 6443491-6443494								
16a Cyanide by 9012B	0.18 U	0.18	0.50	mg/kg	96		80-120		
Batch number: 11300117101B	Sample number(s): 6443499								
16b Cyanide by 9012B	0.0050 U	0.0050	0.010	mg/l	100	102	90-110	2	20
Batch number: 11300621201A	Sample number(s): 6443490-6443494								

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Quality Control Summary

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Reported: 11/18/11 at 09:41 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	110		90-110		
11a Anions by 300.0 - Nitrate	0.80	U	0.80	1.5	mg/kg	100		90-110		
Batch number: 11294020001A	Sample number(s): 6443499									
17b pH by 9040B						100	100	90-110	0	3
Batch number: 11300039402B	Sample number(s): 6443490-6443494									
17a pH by 9045C						100		95-105		
Batch number: 11301162401A	Sample number(s): 6443490,6443493-6443494,6443497									
Moisture Content by 160.3						99		80-120		
Batch number: 11315162401A	Sample number(s): 6443491-6443492									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: E112972AA	Sample number(s): 6443498-6443499 UNSPK: P444104								
1,4-Dioxane	104	111	73-138	5	30				
Batch number: 11295SLA026	Sample number(s): 6443490-6443494 UNSPK: 6443490								
Aniline	65	74	18-116	13	30				
Benzidine	0*	0*	35-141	0	30				
Benzoic acid	74	58	10-173	25	30				
Benzyl alcohol	90	94	67-115	5	30				
4-Bromophenyl-phenylether	92	96	67-129	4	30				
Carbazole	92	98	64-120	6	30				
4-Chloro-3-methylphenol	94	99	62-122	6	30				
4-Chloroaniline	55	70	13-107	24	30				
bis(2-Chloroethoxy)methane	93	98	75-104	6	30				
bis(2-Chloroethyl)ether	88	90	60-116	2	30				
bis(2-Chloroisopropyl)ether	84	86	55-142	2	30				
2-Chloronaphthalene	71	74	50-141	4	30				
2-Chlorophenol	94	97	73-121	3	30				
4-Chlorophenyl-phenylether	94	97	80-109	3	30				
Dibenzofuran	91	96	71-112	5	30				
1,2-Dichlorobenzene	85	87	66-108	2	30				
1,3-Dichlorobenzene	85	86	63-109	1	30				
1,4-Dichlorobenzene	85	86	58-108	2	30				
3,3'-Dichlorobenzidine	39	55	28-109	33*	30				
2,4-Dichlorophenol	97	100	66-123	3	30				
2,4-Dimethylphenol	93	98	68-118	5	30				
3,5-Dimethylphenol	98	104	71-127	5	30				
4,6-Dinitro-2-methylphenol	80	46	11-126	53*	30				
2,4-Dinitrophenol	65	20	20-143	104*	30				
2,4-Dinitrotoluene	98	100	56-129	2	30				
2,6-Dinitrotoluene	97	101	69-123	4	30				
1,2-Diphenylhydrazine	94	97	71-129	3	30				
bis(2-Ethylhexyl)phthalate	92	97	63-122	5	30				

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Hexachlorobenzene	91	96	77-114	5	30				
Hexachlorobutadiene	86	91	62-120	6	30				
Hexachlorocyclopentadiene	87	86	10-153	1	30				
Hexachloroethane	84	84	57-109	0	30				
Isophorone	89	94	73-102	5	30				
2-Methylphenol	95	97	75-111	2	30				
4-Methylphenol	93	95	59-123	1	30				
2-Nitroaniline	98	101	67-125	3	30				
3-Nitroaniline	93	100	59-122	7	30				
4-Nitroaniline	81	89	41-109	10	30				
Nitrobenzene	89	95	57-125	7	30				
2-Nitrophenol	90	91	56-127	2	30				
4-Nitrophenol	86	90	37-129	5	30				
N-Nitroso-di-n-propylamine	84	87	60-116	3	30				
N-Nitrosodiphenylamine	95	98	71-122	4	30				
Pentachlorophenol	96	87	28-127	9	30				
Phenol	96	100	58-126	4	30				
1,2,4-Trichlorobenzene	88	93	72-115	5	30				
2,4,5-Trichlorophenol	94	98	58-129	4	30				
2,4,6-Trichlorophenol	94	96	56-134	2	30				
Batch number: 11295SLC026	Sample number(s): 6443490-6443494 UNSPK: 6443491								
Acenaphthene	92	89	63-105	3	30				
Acenaphthylene	88	85	67-114	3	30				
Anthracene	95	92	73-115	3	30				
Benzo(a)anthracene	99	97	59-128	2	30				
Benzo(a)pyrene	92	90	58-142	2	30				
Benzo(b)fluoranthene	91	88	54-163	3	30				
Benzo(g,h,i)perylene	102	98	33-141	4	30				
Benzo(k)fluoranthene	93	92	57-153	1	30				
Butylbenzylphthalate	100	96	57-173	5	30				
Di-n-butylphthalate	94	94	65-148	0	30				
Chrysene	98	97	67-123	1	30				
Dibenz(a,h)anthracene	104	101	22-133	2	30				
Diethylphthalate	91	88	70-136	4	30				
Dimethylphthalate	94	91	74-118	3	30				
Bis(2-Ethylhexyl)phthalate	124	119	39-167	4	30				
Fluoranthene	95	94	51-149	1	30				
Fluorene	91	88	66-122	3	30				
Indeno(1,2,3-cd)pyrene	104	100	21-143	3	30				
1-Methylnaphthalene	86	82	72-123	5	30				
2-Methylnaphthalene	85	82	64-103	4	30				
Naphthalene	87	83	61-102	5	30				
N-Nitrosodimethylamine	96	89	48-113	8	30				
Di-n-octylphthalate	89	89	40-192	0	30				
Phenanthrene	91	88	62-122	3	30				
Pyrene	95	88	51-131	7	30				
Batch number: 11298SLB026	Sample number(s): 6443491-6443492,6443497 UNSPK: 6443491								
N-Nitrosodimethylamine	97	91	70-130	6	30				
Batch number: 113020012A	Sample number(s): 6443491-6443492 UNSPK: 6443491								
4-Amino-2,6-Dinitrotoluene	103	106	80-127	2	50				

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Quality Control Summary

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
2-Amino-4,6-Dinitrotoluene	101	102	80-137	2	50				
1,3-Dinitrobenzene	104	105	38-166	1	50				
2,4-Dinitrotoluene	97	97	80-131	1	50				
2,6-Dinitrotoluene	99	100	80-127	1	50				
HMX	87	88	63-128	1	50				
Nitrobenzene	93	93	80-125	0	50				
Nitroglycerin	96	97	80-120	1	50				
2-Nitrotoluene	97	96	80-122	1	50				
3-Nitrotoluene	102	101	72-119	1	50				
4-Nitrotoluene	95	95	80-125	0	50				
PETN	103	104	80-121	1	50				
RDX	95	96	75-129	1	50				
Tetryl	105	109	55-174	3	50				
1,3,5-Trinitrobenzene	101	102	82-126	1	50				
2,4,6-Trinitrotoluene	104	105	82-130	1	50				
Batch number: 112980025A	Sample number(s): 6443491-6443492 UNSPK: 6443491								
20a Formaldehyde 8315A	106	113	80-120	6	50				
Batch number: 112970027A	Sample number(s): 6443490-6443494 UNSPK: 6443490								
PCB-1016	87	75	29-146	15	50				
PCB-1260	96	94	39-149	2	50				
Batch number: 112930031A	Sample number(s): 6443499 UNSPK: P442022								
Ethanol	92	88	62-145	4	20				
Isopropanol	103	99	73-131	4	20				
Methanol	82	70	52-159	11	20				
Batch number: 112930033A	Sample number(s): 6443491-6443494 UNSPK: 6443491								
Ethanol	91	95	48-130	4	20				
Isopropanol	95	90	12-149	5	20				
Methanol	83	90	43-138	8	20				
Batch number: 112970039A	Sample number(s): 6443499 UNSPK: 6443499								
Diethylene glycol	105	114	83-130	9	20				
Ethylene glycol	70*	90	89-125	25*	20				
Propylene glycol	75*	90*	91-128	18	20				
Batch number: 112980042A	Sample number(s): 6443491-6443494 UNSPK: P437195								
Diethylene glycol	47*	48*	59-109	3	20				
Ethylene glycol	75	75	63-107	1	20				
Propylene glycol	77	78	63-107	0	20				
Batch number: 112940009A	Sample number(s): 6443491-6443494 UNSPK: 6443492								
m-Terphenyl	96	98	75-125	2	20				
o-Terphenyl	105	105	75-125	0	20				
p-Terphenyl	88	90	75-125	3	20				
Batch number: 113000011A	Sample number(s): 6443491-6443494 UNSPK: P445463								
EFH (C12-C14)	119	283*	49-123	59*	20				
EFH (C15-C20)	494*	190*	49-123	55*	20				
EFH (C21-C30)	1022 (2)	728 (2)	49-123	20	20				

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
EFH (C30 - C40)	292 (2)	353 (2)	49-123	5	20				
EFH (C8-C11)	90	90	49-123	0	20				
Batch number: 112971026002A	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
Antimony	49*	57*	75-125	12	20	0.223	0.246	10 (1)	20
Arsenic	148*	161*	75-125	3	20	5.12	6.32	21*	20
Beryllium	122	120	75-125	0	20	0.654	0.770	16	20
Cadmium	119	124	75-125	4	20	0.109	0.133	20 (1)	20
Chromium	124	149*	75-125	5	20	33.9	38.3	12	20
Cobalt	120	122	75-125	3	20	6.38	7.69	19	20
Copper	127*	133*	75-125	3	20	6.25	7.47	18	20
Lead	146*	153*	75-125	3	20	5.13	6.33	21*	20
Nickel	135*	142*	75-125	3	20	11.6	13.9	18	20
Silver	117	120	75-125	3	20	0.0246 J	0.0251 J	2 (1)	20
Thallium	111	125	75-125	9	20	0.204	0.196	4 (1)	20
Vanadium	159 (2)	199 (2)	75-125	5	20	60.8	69.4	13	20
Zinc	162 (2)	186 (2)	75-125	4	20	46.6	54.5	16	20
Batch number: 112971026002B	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
Selenium	105	102	75-125	2	20	0.141 J	0.135 J	5 (1)	20
Batch number: 112971026002C	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
Molybdenum	112	117	75-125	6	20	0.495	0.518	5 (1)	20
Batch number: 112971026002D	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
Barium	206 (2)	245 (2)	75-125	5	20	59.8	70.0	16	20
Batch number: 112975708004	Sample number(s): 6443490-6443494 UNSPK: P435690 BKG: P435690								
Aluminum	1436 (2)	1627 (2)	75-125	3	20	9,700	10,400	7	20
Boron	97	96	84-115	3	20	1.83 J	0.350 U	200* (1)	20
Calcium	173 (2)	213 (2)	75-125	3	20	4,060	3,830	6	20
Iron	2364 (2)	2747 (2)	75-125	2	20	16,600	17,900	8	20
Lithium	106	105	82-114	1	20	23.2	24.7	6	20
Magnesium	326 (2)	298 (2)	75-125	2	20	3,270	3,450	5	20
Manganese	115 (2)	122 (2)	75-125	1	20	260	258	1	20
Phosphorus	89	87	75-125	1	20	276	254	8	20
Potassium	141*	144*	75-125	1	20	1,890	2,000	6	20
Sodium	102	101	75-125	2	20	69.3 J	74.3 J	7 (1)	20
Strontium	101	101	75-115	1	20	17.9	15.5	15	20
Tin	87	87	80-110	1	20	2.85 J	2.77 J	3 (1)	20
Titanium	258 (2)	255 (2)	75-125	0	20	1,060	1,030	3	20
Zirconium	101	102	81-110	0	20	3.58 J	4.03 J	12 (1)	20
Batch number: 112975711002	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
Mercury	100	96	65-135	4	20	0.0067 U	0.0067 U	0 (1)	20
Batch number: 11298243201A	Sample number(s): 6443490-6443494 UNSPK: P441963 BKG: P441963								
3a Cr VI by EPA 7199	96		75-125			0.46 J	0.65 J	36* (1)	20
Batch number: 11298621201A	Sample number(s): 6443490-6443494 UNSPK: 6443490 BKG: 6443490								
7a Perchlorate EPA 314.0	98		80-120			9.0 U	9.0 U	0 (1)	15

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11300102201A	Sample number(s): 6443491-6443494 UNSPK: 6443491 BKG: 6443491								
16a Cyanide by 9012B	102		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11300621201A	Sample number(s): 6443490-6443494 UNSPK: P441963 BKG: P441963								
11a Anions by 300.0 - Fluoride	53*		80-120			1.9	2.4	22* (1)	20
11a Anions by 300.0 - Nitrate	99		80-120			3.1	2.5	22* (1)	20
Batch number: 11300039402B	Sample number(s): 6443490-6443494 BKG: 6443494								
17a pH by 9045C						6.51	6.54	0	3
Batch number: 11301162401A	Sample number(s): 6443490,6443493-6443494,6443497 BKG: 6443493								
Moisture Content by 160.3						3.9	3.8	1	20
Batch number: 11315162401A	Sample number(s): 6443491-6443492 BKG: P457197								
Moisture Content by 160.3						0.50 U	0.50 U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 1a Volatile Organics EPA 8260B
Batch number: B112981AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6443491	103	107	98	96
6443492	101	100	97	95
Blank	102	101	98	93
LCS	100	99	102	101
LCSD	101	100	102	101
Limits:	80-120	80-120	81-117	74-121

Analysis Name: 14b 1,4-Dioxane by 8260B SIM
Batch number: E112972AA

	Toluene-d8
6443498	100
6443499	100
Blank	100
LCS	100
MS	100
MSD	100
Limits:	80-120

Analysis Name: 14a 1,4-Dioxane by 8260B SIM
Batch number: E112981AA

	Toluene-d8

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

6443491	93
6443492	94
Blank	94
LCS	94
LCSD	94
Limits:	70-130

Analysis Name: 1b Volatile Organics EPA8260B
Batch number: Y112992AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6443498	101	99	97	99
6443499	104	99	97	101
Blank	100	99	98	100
LCS	104	100	100	105
LCSD	100	98	99	102
Limits:	86-118	80-120	88-110	86-115

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11295SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6443490	86	90	84	80	85	97
6443491	94	97	80	88	89	100
6443492	73	77	65	70	72	78
6443493	94	97	84	85	89	98
6443494	90	91	90	83	86	102
Blank	86	90	84	86	88	99
LCS	89	90	91	85	88	101
MS	92	94	86	86	87	96
MSD	95	98	89	91	92	101
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11295SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6443490	79	69	88
6443491	78	65	72
6443492	101	83	84
6443493	98	83	79
6443494	96	73	65
Blank	93	82	81
LCS	98	81	86
MS	100	83	84
MSD	97	80	80
Limits:	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11297WAC026

	N-Nitrosodimethylamine-d6

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

6443495	104
6443496	103
6443499	110
Blank	102
LCS	101
LCSD	106
Limits:	50-150

Analysis Name: 4b Select SVOC EPA 8270SIM
Batch number: 11297WAE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6443499	101	87	94
Blank	102	88	93
LCS	104	89	93
LCSD	105	89	92
Limits:	40-130	45-130	45-135

Analysis Name: 5b Semivolatiles by EPA 8270C
Batch number: 11297WAI026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6443499	61	39	90	89	89	102
Blank	61	41	90	85	88	102
LCS	69	48	89	86	87	97
LCSD	71	51	91	91	89	99
Limits:	20-130	20-120	30-130	40-130	45-130	45-135

Analysis Name: 21a NDMA by 1625C
Batch number: 11298SLB026

	N-Nitrosodimethylamine-d6
6443491	99
6443492	71
6443497	93
Blank	115
LCS	106
MS	92
MSD	56
Limits:	50-150

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11294B20A

	Trifluorotoluene-F
6443499	88
Blank	86
LCS	117
LCSD	113
Limits:	63-135

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11297B20A

	Trifluorotoluene-F
6443498	87
Blank	87
LCS	117
LCSD	113
Limits:	63-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11299A16A

	Trifluorotoluene-F
6443491	92
6443492	88
6443493	122
6443494	93
Blank	96
LCS	89
LCSD	93
Limits:	61-122

Analysis Name: 20b Formaldehyde 8315A
Batch number: 112930018A

	Butyraldehyde
6443499	91
Blank	86
LCS	94
LCSD	95
Limits:	45-145

Analysis Name: 15b Energetics by 8330A
Batch number: 112930023A

	2-Nitro-m-xylene
6443499	85
Blank	91
LCS	91
LCSD	92
Limits:	50-134

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112970027A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6443490	71	79
6443491	81	88
6443492	81	93
6443493	90	97
6443494	85	90

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

Blank	83	99
LCS	81	98
LCSD	82	97
MS	80	97
MSD	79	95
Limits:	53-139	53-142

Analysis Name: 8b PCBs/PCTs by 8082
Batch number: 112980001A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6443499	97	102
Blank	101	104
LCS	101	84
LCSD	99	79
Limits:	30-150	30-150

Analysis Name: 20a Formaldehyde 8315A
Batch number: 112980025A

	Butyraldehyde
6443491	98
6443492	93
Blank	85
LCS	80
MS	82
MSD	89
Limits:	64-126

Analysis Name: 15a Energetics by 8330A
Batch number: 113020012A

	2-Nitro-m-xylene
6443491	105
6443492	101
Blank	112
LCS	94
LCSD	93
MS	95
MSD	101
Limits:	80-146

Analysis Name: 18b Alcohols by 8015B
Batch number: 112930031A

	Acetone
6443499	94
Blank	101
LCS	104
MS	108
MSD	103
Limits:	54-147

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

Analysis Name: 18a Alcohols by 8015B
Batch number: 112930033A

	Acetone
6443491	82
6443492	82
6443493	85
6443494	82
Blank	96
LCS	92
MS	82
MSD	82
Limits:	42-138

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112940009A

	n-Triacontane-d62
6443491	53
6443492	51
6443493	57
6443494	74
Blank	115
LCS	64
MS	57
MSD	54
Limits:	19-152

Analysis Name: 9b TPH by EPA 8015B Oil/Diesel
Batch number: 112940018A

	Chlorobenzene	Orthoterphenyl
6443499	85	84
Blank	106	
LCS	130	101
LCSD	94	98
Limits:	28-152	52-131

Analysis Name: 22b Terphenyls by 8015B
Batch number: 112970009A

	n-Triacontane-d62
6443499	72
Blank	73
LCS	81
LCSD	76
Limits:	17-138

Analysis Name: 19b Glycols by 8015B
Batch number: 112970039A

	Tetramethylene glycol

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272257
Reported: 11/18/11 at 09:41 AM

Surrogate Quality Control

6443499	106
Blank	104
LCS	110
MS	110
MSD	114
Limits:	29-157

Analysis Name: 19a Glycols by 8015B
Batch number: 112980042A

	Tetramethylene glycol
6443491	87
6443492	87
6443493	85
6443494	88
Blank	100
LCS	99
MS	88
MSD	87
Limits:	29-137

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113000011A

	Chlorobenzene	Orthoterphenyl
6443491	84	88
6443492	90	91
6443493	85	87
6443494	88	89
Blank	83	87
LCS	80	90
MS	85	75
MSD	88	81
Limits:	37-125	47-145

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Cap# 1272257 Sample# 6443490-99

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	VOCs/EPA 8260B $	1,4-Dioxane EPA 8260SIM $	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-016-SA5DS-SB-4.0-5.0	10.19.11	0942	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X															
SL-143-SA7-SB-5.5	10.19.11	1005	SOIL	NONE	5-Encores										X	X	X											
SL-143-SA7-SB-5.0-6.0	10.19.11	0945	SOIL	NONE	1-SS Sleeve			X	X																			
SL-143-SA7-SB-5.0-6.0	10.19.11	0945	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X		
SL-143-SA7-SB-9.5	10.19.11	1045	SOIL	NONE	5-Encores										X	X	X											
SL-143-SA7-SB-9.0-10.0	10.19.11	1050	SOIL	NONE	1-SS Sleeve			X	X																			
SL-143-SA7-SB-9.0-10.0	10.19.11	1050	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X	X	X	X	X	X	X	X	X		
SL-142-SA7-SB-2.5	10.19.11	1511	SOIL	NONE	2-Encores												X											
SL-142-SA7-SB-2.0-3.0	10.19.11	1515	SOIL	NONE	1-SS Sleeve			X	X																			
SL-142-SA7-SB-2.0-3.0	10.19.11	1515	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X					X	X	X	X		
SL-142-SA7-SB-5.5	10.19.11	1520	SOIL	NONE	2-Encores												X											
SL-142-SA7-SB-7.0-8.0	10.19.11	1545	SOIL	NONE	1-SS Sleeve			X	X																			
SL-142-SA7-SB-7.0-8.0	10.19.11	1545	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X					X	X	X	X		
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-1 L Amber																X							HG^L ASTM II WATER-HA crew
TB-101911	10.19.11	0800	WATER	NONE	1-1 L Amber																X							
TB-101911	10.19.11	0800	SOIL	NONE	1-4 oz Jar																X							
TB-101911	10.19.11	0800	WATER	NONE	4-40 mL Vials										X	X	X											

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/19/2011 / 1630	LLL 10/20/11 0745	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s)	
		8767 9857 5176,5187,3531	

acct# 13013 Qp# 1372257 Sample# 6443490-99

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-500 mL poly		X				X	X	X												
EB-SA7-SB-101911	10.19.11	1430	WATER	HNO3	1-500 mL poly	X																			
EB-SA7-SB-101911	10.19.11	1430	WATER	NaOH	1-500 mL poly																X				
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-250 mL glass													X							
EB-SA7-SB-101911	10.19.11	1430	WATER	HCL	11-40 mL vials										X									X	
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	4-40 mL vials												X						X		

Other Instructions and Notes

Laboratory:
Lancaster Laboratories, Inc.

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)
	10/19/2011 / 1630	10/20/11 0915
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**
		8767 9857 5176,5187,3531

Nicole Maljovec

From: Hartman, Pamela [HartmanPM@cdm.com]
Sent: Thursday, October 20, 2011 4:55 PM
To: Nicole Maljovec
Subject: RE: SSFL COC 10/19/11: SL-142@2.5 Question

Yes, please run all VOCs.

I'm sorry for the inconsistencies!!!!

From: Nicole Maljovec [nmaljovec@lancasterlabs.com]
Sent: Thursday, October 20, 2011 1:52 PM
To: Hartman, Pamela
Subject: SSFL COC 10/19/11: SL-142@2.5 Question

Hi Pam,
We have another question for you. The attached COC has 5 encores listed for SL-142 @2.5 and all of the VOC tests are marked off. The COC in the cooler has 2 encores listed and only GRO checked off. There are 5 encores in the silver pouch, so I'm assuming the e-COC was right and we should test for all VOC analyses. Do you concur?

Thanks!
Nicole

-----Original Message-----
From: Hartman, Pamela [mailto:HartmanPM@cdm.com]
Sent: Wednesday, October 19, 2011 7:47 PM
To: Bloisa, Peggy; Burgesser, Todd; 'Laura Rainey'; SA Env Entry; TWallbom@dtsc.ca.gov; Zakowski, Cherie; Nicole Maljovec
Subject: SSFL COC 10/19/11

Subsurface sampling with two crews continued in SA7 and SA5DS today.
Please see attached COC.

Thanks,

Pam

Pamela Hartman
CDM
523 W 6th St #400
Los Angeles, CA 90014
Cell 714-900-0916
Direct 818-466-8007

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 14, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/20/2011
Group Number: 1272258
SDG: DX150
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-016-SA5DS-SB-4.0-5.0 Soil	6443500
SL-143-SA7-SB-5.0-6.0 Soil	6443501
SL-143-SA7-SB-9.0-10.0 Soil	6443502
SL-142-SA7-SB-2.0-3.0 Soil	6443503
SL-142-SA7-SB-7.0-8.0 Soil	6443504
EB-SA7-SB-101911 Water	6443505

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443500
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5006 SDG#: DX150-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443500
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5006 SDG#: DX150-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0321 U	0.0321	1.08	1
11031	12378-PeCDD	40321-76-4	0.0435 JB	0.0276	5.42	1
11031	123478-HxCDD	39227-28-6	0.0397 JBQ	0.0237	5.42	1
11031	123678-HxCDD	57653-85-7	0.0801 JB	0.0252	5.42	1
11031	123789-HxCDD	19408-74-3	0.161 JBQ	0.0234	5.42	1
11031	1234678-HpCDD	35822-46-9	0.264 JB	0.0239	5.42	1
11031	OCDD	3268-87-9	0.552 JBQ	0.0415	10.8	1
11031	2378-TCDF	51207-31-9	0.0249 JQ	0.0244	1.08	1
11031	12378-PeCDF	57117-41-6	0.0355 JB	0.0131	5.42	1
11031	23478-PeCDF	57117-31-4	0.0479 JB	0.0143	5.42	1
11031	123478-HxCDF	70648-26-9	0.0316 J	0.0176	5.42	1
11031	123678-HxCDF	57117-44-9	0.0409 JBQ	0.0146	5.42	1
11031	123789-HxCDF	72918-21-9	0.183 JB	0.0203	5.42	1
11031	234678-HxCDF	60851-34-5	0.0493 JBQ	0.0152	5.42	1
11031	1234678-HpCDF	67562-39-4	0.145 JB	0.0122	5.42	1
11031	1234789-HpCDF	55673-89-7	0.0224 U	0.0224	5.42	1
11031	OCDF	39001-02-0	0.164 JBQ	0.0467	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	67	25 - 181
13C12-123478-HxCDD	72	32 - 141
13C12-123678-HxCDD	73	28 - 130
13C12-123789-HxCDD	72	28 - 130
13C12-1234678-HpCDD	71	23 - 140
13C12-OCDD	68	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	71	24 - 185
13C12-23478-PeCDF	62	21 - 178
13C12-123478-HxCDF	55	26 - 152
13C12-123678-HxCDF	66	26 - 123
13C12-234678-HxCDF	63	28 - 136
13C12-123789-HxCDF	57	29 - 147
13C12-1234678-HpCDF	76	28 - 143
13C12-1234789-HpCDF	50	26 - 138
13C12-OCDF	46	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443500
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5006 SDG#: DX150-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6443500
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:42

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5006 SDG#: DX150-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 19:06	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443501
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5007 SDG#: DX150-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443501
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5007 SDG#: DX150-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0319 U	0.0319	1.06	1
11031	12378-PeCDD	40321-76-4	0.0776 JBQ	0.0274	5.30	1
11031	123478-HxCDD	39227-28-6	0.0481 JB	0.0209	5.30	1
11031	123678-HxCDD	57653-85-7	0.0925 JBQ	0.0216	5.30	1
11031	123789-HxCDD	19408-74-3	0.0778 JBQ	0.0210	5.30	1
11031	1234678-HpCDD	35822-46-9	0.709 JB	0.0251	5.30	1
11031	OCDD	3268-87-9	4.51 JB	0.0447	10.6	1
11031	2378-TCDF	51207-31-9	0.0429 JQ	0.0256	1.06	1
11031	12378-PeCDF	57117-41-6	0.103 JBQ	0.0152	5.30	1
11031	23478-PeCDF	57117-31-4	0.120 JB	0.0163	5.30	1
11031	123478-HxCDF	70648-26-9	0.129 JQ	0.0170	5.30	1
11031	123678-HxCDF	57117-44-9	0.0594 JBQ	0.0135	5.30	1
11031	123789-HxCDF	72918-21-9	0.0576 JBQ	0.0188	5.30	1
11031	234678-HxCDF	60851-34-5	0.0785 JBQ	0.0137	5.30	1
11031	1234678-HpCDF	67562-39-4	0.191 JB	0.0130	5.30	1
11031	1234789-HpCDF	55673-89-7	0.0688 JBQ	0.0245	5.30	1
11031	OCDF	39001-02-0	0.298 JBQ	0.0449	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	68	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	73	28 - 136
13C12-123789-HxCDF	64	29 - 147
13C12-1234678-HpCDF	88	28 - 143
13C12-1234789-HpCDF	59	26 - 138
13C12-OCDF	57	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443501
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5007 SDG#: DX150-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-143-SA7-SB-5.0-6.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-5.0-6.0

LLI Sample # SW 6443501
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 09:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5007 SDG#: DX150-07

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/29/2011 20:02	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443502
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5008 SDG#: DX150-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443502
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5008 SDG#: DX150-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0635 JQ	0.0309	1.01	1
11031	12378-PeCDD	40321-76-4	0.150 JBQ	0.0236	5.05	1
11031	123478-HxCDD	39227-28-6	0.0456 JBQ	0.0211	5.05	1
11031	123678-HxCDD	57653-85-7	0.107 JBQ	0.0215	5.05	1
11031	123789-HxCDD	19408-74-3	0.104 JB	0.0196	5.05	1
11031	1234678-HpCDD	35822-46-9	0.354 JB	0.0222	5.05	1
11031	OCDD	3268-87-9	1.37 JBQ	0.0294	10.1	1
11031	2378-TCDF	51207-31-9	0.100 JQ	0.0217	1.01	1
11031	12378-PeCDF	57117-41-6	0.159 JB	0.0123	5.05	1
11031	23478-PeCDF	57117-31-4	0.158 JBQ	0.0131	5.05	1
11031	123478-HxCDF	70648-26-9	0.0821 J	0.0171	5.05	1
11031	123678-HxCDF	57117-44-9	0.0777 JB	0.0137	5.05	1
11031	123789-HxCDF	72918-21-9	0.0508 JBQ	0.0174	5.05	1
11031	234678-HxCDF	60851-34-5	0.0847 JB	0.0143	5.05	1
11031	1234678-HpCDF	67562-39-4	0.217 JB	0.0110	5.05	1
11031	1234789-HpCDF	55673-89-7	0.0633 JBQ	0.0203	5.05	1
11031	OCDF	39001-02-0	0.304 JB	0.0433	10.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	82	28 - 130
13C12-123789-HxCDD	81	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	69	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	88	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	54	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443502
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5008 SDG#: DX150-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-143-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-143-SA7-SB-9.0-10.0

LLI Sample # SW 6443502
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 10:50

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5008 SDG#: DX150-08

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 00:02	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443503
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5009 SDG#: DX150-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443503
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5009 SDG#: DX150-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0615 J	0.0271	1.02	1
11031	12378-PeCDD	40321-76-4	0.135 JB	0.0271	5.10	1
11031	123478-HxCDD	39227-28-6	0.0851 JB	0.0249	5.10	1
11031	123678-HxCDD	57653-85-7	0.182 JB	0.0241	5.10	1
11031	123789-HxCDD	19408-74-3	0.221 JB	0.0250	5.10	1
11031	1234678-HpCDD	35822-46-9	3.16 JB	0.0300	5.10	1
11031	OCDD	3268-87-9	25.3 B	0.0407	10.2	1
11031	2378-TCDF	51207-31-9	0.155 J	0.0362	1.02	1
11031	12378-PeCDF	57117-41-6	0.137 JB	0.0200	5.10	1
11031	23478-PeCDF	57117-31-4	0.205 JB	0.0207	5.10	1
11031	123478-HxCDF	70648-26-9	0.411 J	0.0241	5.10	1
11031	123678-HxCDF	57117-44-9	0.0818 JB	0.0190	5.10	1
11031	123789-HxCDF	72918-21-9	0.167 JB	0.0246	5.10	1
11031	234678-HxCDF	60851-34-5	0.0887 JB	0.0201	5.10	1
11031	1234678-HpCDF	67562-39-4	0.633 JB	0.0126	5.10	1
11031	1234789-HpCDF	55673-89-7	0.0417 JB	0.0237	5.10	1
11031	OCDF	39001-02-0	1.31 JB	0.0395	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	87	25 - 164
13C12-12378-PeCDD	91	25 - 181
13C12-123478-HxCDD	87	32 - 141
13C12-123678-HxCDD	92	28 - 130
13C12-123789-HxCDD	91	28 - 130
13C12-1234678-HpCDD	91	23 - 140
13C12-OCDD	86	17 - 157
13C12-2378-TCDF	83	24 - 169
13C12-12378-PeCDF	94	24 - 185
13C12-23478-PeCDF	83	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	77	28 - 136
13C12-123789-HxCDF	74	29 - 147
13C12-1234678-HpCDF	97	28 - 143
13C12-1234789-HpCDF	63	26 - 138
13C12-OCDF	57	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443503
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5009 SDG#: DX150-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **SL-142-SA7-SB-2.0-3.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-2.0-3.0

LLI Sample # SW 6443503
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:15

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5009 SDG#: DX150-09

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 17:17	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443504
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5010 SDG#: DX150-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443504
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
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Suite 210
Chantilly VA 20151

X5010 SDG#: DX150-10

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0275	U	0.0275	1.04	1
11031	12378-PeCDD	40321-76-4	0.0919	JB	0.0301	5.20	1
11031	123478-HxCDD	39227-28-6	0.188	JB	0.0297	5.20	1
11031	123678-HxCDD	57653-85-7	0.539	JB	0.0304	5.20	1
11031	123789-HxCDD	19408-74-3	0.415	JB	0.0298	5.20	1
11031	1234678-HpCDD	35822-46-9	11.2	B	0.0405	5.20	1
11031	OCDD	3268-87-9	86.8	B	0.0592	10.4	1
11031	2378-TCDF	51207-31-9	0.336	JQ	0.0571	1.04	1
11031	12378-PeCDF	57117-41-6	0.225	JB	0.0278	5.20	1
11031	23478-PeCDF	57117-31-4	0.0300	U	0.0300	5.20	1
11031	123478-HxCDF	70648-26-9	0.437	J	0.0303	5.20	1
11031	123678-HxCDF	57117-44-9	0.177	JB	0.0248	5.20	1
11031	123789-HxCDF	72918-21-9	0.126	JB	0.0302	5.20	1
11031	234678-HxCDF	60851-34-5	0.194	JB	0.0229	5.20	1
11031	1234678-HpCDF	67562-39-4	1.45	JB	0.0172	5.20	1
11031	1234789-HpCDF	55673-89-7	0.147	JBQ	0.0305	5.20	1
11031	OCDF	39001-02-0	3.44	JB	0.0396	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	85	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	80	23 - 140
13C12-OCDD	82	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	80	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	60	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	74	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	87	28 - 143
13C12-1234789-HpCDF	59	26 - 138
13C12-OCDF	58	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443504
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5010 SDG#: DX150-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-142-SA7-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-142-SA7-SB-7.0-8.0

LLI Sample # SW 6443504
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 15:45

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5010 SDG#: DX150-10

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 01:55	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401A	10/28/2011 22:37	Lisa J Cooke	1

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-101911 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443505
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5011 SDG#: DX150-11EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.449	U	0.449	2.12	1
10915	12378-PeCDD	40321-76-4	0.392	U	0.392	10.6	1
10915	123478-HxCDD	39227-28-6	0.328	U	0.328	10.6	1
10915	123678-HxCDD	57653-85-7	0.623	JBQ	0.327	10.6	1
10915	123789-HxCDD	19408-74-3	0.805	JBQ	0.319	10.6	1
10915	1234678-HpCDD	35822-46-9	3.05	JB	0.351	10.6	1
10915	OCDD	3268-87-9	6.70	JB	0.371	21.2	1
10915	2378-TCDF	51207-31-9	0.315	JBQ	0.266	2.12	1
10915	12378-PeCDF	57117-41-6	0.543	JBQ	0.217	10.6	1
10915	23478-PeCDF	57117-31-4	0.801	JBQ	0.196	10.6	1
10915	123478-HxCDF	70648-26-9	0.302	JBQ	0.192	10.6	1
10915	123678-HxCDF	57117-44-9	0.460	JBQ	0.179	10.6	1
10915	123789-HxCDF	72918-21-9	0.426	JBQ	0.186	10.6	1
10915	234678-HxCDF	60851-34-5	0.536	JBQ	0.171	10.6	1
10915	1234678-HpCDF	67562-39-4	2.50	JB	0.182	10.6	1
10915	1234789-HpCDF	55673-89-7	0.479	JBQ	0.214	10.6	1
10915	OCDF	39001-02-0	2.49	JBQ	0.505	21.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	59	25 - 164
13C12-12378-PeCDD	55	25 - 181
13C12-123478-HxCDD	55	32 - 141
13C12-123678-HxCDD	57	28 - 130
13C12-123789-HxCDD	56	28 - 130
13C12-1234678-HpCDD	56	23 - 140
13C12-OCDD	54	17 - 157
13C12-2378-TCDF	63	24 - 169
13C12-12378-PeCDF	57	24 - 185
13C12-23478-PeCDF	58	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	53	26 - 123
13C12-234678-HxCDF	54	28 - 136
13C12-123789-HxCDF	60	29 - 147
13C12-1234678-HpCDF	53	28 - 143
13C12-1234789-HpCDF	54	26 - 138
13C12-OCDF	52	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **EB-SA7-SB-101911 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB-101911

LLI Sample # WW 6443505
LLI Group # 1272258
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/19/2011 14:30

Submitted: 10/20/2011 09:15
Reported: 11/14/2011 09:30

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5011 SDG#: DX150-11EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11297002	10/26/2011 09:09	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11297002	10/24/2011 09:45	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272258
Reported: 11/14/11 at 09:30 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11301162401A	Sample number(s): 6443500,6443503-6443504									
Moisture Content by 160.3						99		80-120		
Batch number: 11315162401A	Sample number(s): 6443501-6443502									
Moisture Content by 160.3						100		80-120		

Analysis Name	Blank Result		Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11297002	Sample number(s): 6443505									
2378-TCDD	0.534	U	0.534	2.00	pg/l	108		67-158		
12378-PeCDD	0.463	U	0.463	10.0	pg/l	109		70-142		
123478-HxCDD	0.338	U	0.338	10.0	pg/l	102		70-164		
123678-HxCDD	0.372	J	0.333	10.0	pg/l	99		76-134		
123789-HxCDD	0.989	J	0.344	10.0	pg/l	107		64-162		
1234678-HpCDD	3.78	J	0.374	10.0	pg/l	105		70-140		
OCDD	6.96	J	0.424	20.0	pg/l	104		78-144		
2378-TCDF	0.339	J	0.324	2.00	pg/l	97		75-158		
12378-PeCDF	0.262	J	0.229	10.0	pg/l	102		80-134		
23478-PeCDF	0.327	J	0.200	10.0	pg/l	99		68-160		
123478-HxCDF	0.588	J	0.209	10.0	pg/l	103		72-134		
123678-HxCDF	0.410	J	0.208	10.0	pg/l	105		84-130		
123789-HxCDF	0.976	J	0.229	10.0	pg/l	102		78-130		
234678-HxCDF	0.342	J	0.198	10.0	pg/l	99		70-156		
1234678-HpCDF	1.54	J	0.203	10.0	pg/l	98		82-122		
1234789-HpCDF	0.445	J	0.233	10.0	pg/l	104		78-138		
OCDF	2.32	J	0.508	20.0	pg/l	103		63-170		
Batch number: 11300001	Sample number(s): 6443500-6443504									
2378-TCDD	0.0422	U	0.0422	1.00	ng/kg	107		67-158		
12378-PeCDD	0.0804	J	0.0346	5.00	ng/kg	105		70-142		
123478-HxCDD	0.0345	J	0.0262	5.00	ng/kg	97		70-164		
123678-HxCDD	0.0438	J	0.0267	5.00	ng/kg	94		76-134		
123789-HxCDD	0.0427	J	0.0259	5.00	ng/kg	101		64-162		
1234678-HpCDD	0.295	J	0.0295	5.00	ng/kg	97		70-140		
OCDD	0.493	J	0.0380	10.0	ng/kg	96		78-144		
2378-TCDF	0.0353	U	0.0353	1.00	ng/kg	103		75-158		
12378-PeCDF	0.0458	J	0.0185	5.00	ng/kg	101		80-134		
23478-PeCDF	0.0744	J	0.0187	5.00	ng/kg	96		68-160		
123478-HxCDF	0.0234	U	0.0234	5.00	ng/kg	96		72-134		
123678-HxCDF	0.0512	J	0.0189	5.00	ng/kg	97		84-130		
123789-HxCDF	0.0857	J	0.0250	5.00	ng/kg	99		78-130		
234678-HxCDF	0.0555	J	0.0210	5.00	ng/kg	94		70-156		
1234678-HpCDF	0.128	J	0.0153	5.00	ng/kg	90		82-122		
1234789-HpCDF	0.0489	J	0.0291	5.00	ng/kg	96		78-138		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272258
Reported: 11/14/11 at 09:30 AM

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
OCDF	0.188 J	0.0680	10.0	ng/kg	96		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11301162401A	Sample number(s): 6443500,6443503-6443504 BKG: P443493								
Moisture Content by 160.3						3.9	3.8	1	20
Batch number: 11315162401A	Sample number(s): 6443501-6443502 BKG: P457197								
Moisture Content by 160.3						0.50 U	0.50 U	0 (1)	20
Batch number: 11300001	Sample number(s): 6443500-6443504 UNSPK: P437220								
2378-TCDD	103	109	67-158	2	25				
12378-PeCDD	101	102	70-142	3	25				
123478-HxCDD	99	96	70-164	6	25				
123678-HxCDD	92	93	76-134	3	25				
123789-HxCDD	101	101	64-162	3	25				
1234678-HpCDD	96	98	70-140	2	25				
OCDD	94	95	78-144	2	25				
2378-TCDF	98	94	75-158	8	25				
12378-PeCDF	99	100	80-134	2	25				
23478-PeCDF	95	94	68-160	5	25				
123478-HxCDF	97	96	72-134	4	25				
123678-HxCDF	96	97	84-130	3	25				
123789-HxCDF	99	99	78-130	4	25				
234678-HxCDF	95	96	70-156	3	25				
1234678-HpCDF	89	89	82-122	3	25				
1234789-HpCDF	95	94	78-138	5	25				
OCDF	96	95	63-170	5	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10b Dioxin/Furan by EPA 1613B
Batch number: 11297002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6443505	59	58	52	53	54	60
Blank	54	55	50	50	53	54
OPR	65	64	62	62	65	73
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6443505	53	54	52	55	55	57

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272258
Reported: 11/14/11 at 09:30 AM

Surrogate Quality Control

Blank	51	52	49	52	52	57
OPR	65	63	62	62	66	68
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6443505	56	56	54	63	57	
Blank	53	54	51	57	54	
OPR	67	68	66	67	66	
Limits:	28-130	23-140	17-157	24-169	24-185	

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11300001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6443500	67	62	55	66	63	57
6443501	78	68	59	73	73	64
6443502	76	70	59	73	69	67
6443503	87	83	64	79	77	74
6443504	78	69	60	72	74	67
Blank	58	52	46	57	53	52
MS	78	72	72	81	81	73
MSD	71	67	64	72	72	67
OPR	63	57	56	65	59	59
Limits:	25-164	21-178	26-152	26-123	28-136	29-147
	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6443500	76	50	46	67	72	73
6443501	88	59	57	78	86	85
6443502	88	60	54	77	80	82
6443503	97	63	57	91	87	92
6443504	87	59	58	77	85	85
Blank	69	45	42	59	62	65
MS	95	68	68	79	90	92
MSD	84	58	52	73	82	81
OPR	80	53	51	65	72	72
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6443500	72	71	68	65	71	
6443501	84	82	80	70	81	
6443502	81	82	80	73	83	
6443503	91	91	86	83	94	
6443504	82	80	82	74	80	
Blank	63	65	62	52	59	
MS	89	88	88	74	82	
MSD	80	79	76	69	75	
OPR	71	74	70	56	65	
Limits:	28-130	23-140	17-157	24-169	24-185	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272258
Reported: 11/14/11 at 09:30 AM

Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Gp# 1372258 Sample# 6443500-05

CHAIN OF CUSTODY RECORD

CDM — **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	VOCs/EPA 8260B $	1,4-Dioxane EPA 8260SIM $	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Perphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dioxonal EPA 8270	Other Instructions and Notes
SL-016-SA5DS-SB-4.0-5.0	10.19.11	0942	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X															
SL-143-SA7-SB-5.5	10.19.11	1005	SOIL	NONE	5-Encores										X	X	X											
SL-143-SA7-SB-5.0-6.0	10.19.11	0945	SOIL	NONE	1-SS Sleeve			X	X																			
SL-143-SA7-SB-5.0-6.0	10.19.11	0945	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X		
SL-143-SA7-SB-9.5	10.19.11	1045	SOIL	NONE	5-Encores										X	X	X											
SL-143-SA7-SB-9.0-10.0	10.19.11	1050	SOIL	NONE	1-SS Sleeve			X	X																			
SL-143-SA7-SB-9.0-10.0	10.19.11	1050	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X	X	X	X	X	X	X	X	X		
SL-142-SA7-SB-2.5	10.19.11	1511	SOIL	NONE	2-Encores												X											
SL-142-SA7-SB-2.0-3.0	10.19.11	1515	SOIL	NONE	1-SS Sleeve			X	X																			
SL-142-SA7-SB-2.0-3.0	10.19.11	1515	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X					X	X	X	X		
SL-142-SA7-SB-5.5	10.19.11	1520	SOIL	NONE	2-Encores												X											
SL-142-SA7-SB-7.0-8.0	10.19.11	1545	SOIL	NONE	1-SS Sleeve			X	X																			
SL-142-SA7-SB-7.0-8.0	10.19.11	1545	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X					X					X	X	X	X		
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-1 L Amber																X							HGL ASTM II WATER-HA crew
TB-101911	10.19.11	0800	WATER	NONE	1-1 L Amber																X							
TB-101911	10.19.11	0800	SOIL	NONE	1-4 oz Jar																X							
TB-101911	10.19.11	0800	WATER	NONE	4-40 mL Vials										X	X	X											

Relinquished by: (Signature) — Date/Time: 10/19/2011 / 1630

Received for Laboratory by: (Signature) LLI 10/20/11 0915

Received by: (Signature) — Date/Time

Airbill No.(s): 8767 9857 5176,5187,3531

Laboratory: Lancaster Laboratories, Inc.

acct#13013 Gp# 1372258 Sample# 6443500 05

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	10-1 liter ambers			X	X	X						X			X	X		X			X	
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-500 mL poly		X				X	X	X													
EB-SA7-SB-101911	10.19.11	1430	WATER	HNO3	1-500 mL poly	X																				
EB-SA7-SB-101911	10.19.11	1430	WATER	NaOH	1-500 mL poly																X					
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	1-250 mL glass													X								
EB-SA7-SB-101911	10.19.11	1430	WATER	HCL	11-40 mL vials										X									X		
EB-SA7-SB-101911	10.19.11	1430	WATER	NONE	4-40 mL vials												X						X			

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/19/2011 / 1630	LLS 10/20/11 0915	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s)	
		8767 9857 5176,5187,3531	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 18, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/21/2011
Group Number: 1272534
SDG: DE273
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-023-SA7-SB-2.0-3.0 Soil	6445463
SL-060-SA7-SB-2.5-3.5 Soil	6445464
SL-069-SA7-SB-2.5-3.5 Soil	6445465
SL-148-SA7-SB-0.0-1.0 Soil	6445466
SL-026-SA5DS-SB-4.0-5.0 Soil	6445467
SL-026-SA5DS-SB-9.0-10.0 Soil	6445468
SL-040-SA5DS-SB-4.0-5.0 Soil	6445469
SL-040-SA5DS-SB-9.0-10.0 Soil	6445470
SL-016-SA8S-SB-4.0-5.0 Soil	6445471
TB-102011 Water	6445473

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	510	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400	1
04688	Benzoic acid	65-85-0	170	U	170	510	1
04688	Benzyl alcohol	100-51-6	170	U	170	510	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170	1
04688	4-Chloroaniline	106-47-8	69	U	69	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170	1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	510	1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	510	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	34	U	34	170	1
04688	4-Methylphenol	106-44-5	34	U	34	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	34	U	34	170	1
04688	4-Nitroaniline	100-01-6	69	U	69	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	510	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	510	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170	1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.68	U	0.68	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.68	U	0.68	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.68	U	0.68	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.75	J	0.68	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.68	U	0.68	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	1.9		0.68	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.1	U	6.1	18	1
10138	Di-n-butylphthalate	84-74-2	6.1	U	6.1	18	1
10138	Chrysene	218-01-9	0.62	J	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.68	U	0.68	1.7	1
10138	Diethylphthalate	84-66-2	6.1	U	6.1	18	1
10138	Dimethylphthalate	131-11-3	6.1	U	6.1	18	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.1	U	6.1	18	1
10138	Fluoranthene	206-44-0	0.68	U	0.68	1.7	1
10138	Fluorene	86-73-7	0.68	U	0.68	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.68	U	0.68	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7	1
10138	Naphthalene	91-20-3	0.68	U	0.68	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.1	U	6.1	18	1
10138	Phenanthrene	85-01-8	0.68	U	0.68	1.7	1
10138	Pyrene	129-00-0	0.68	U	0.68	1.7	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.3	J	0.2	1.1	25.46
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.34	U	0.34	1.8	1
10225	PCB-1260	11096-82-5	0.40	U	0.40	1.8	1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8	1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520	1
10501	Isopropanol	67-63-0	100	U	100	520	1
10501	Methanol	67-56-1	100	U	100	520	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10	1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10	1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.6	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.6	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.6	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.66	J	0.41	1.2	1
10199	EFH (C15-C20)	n.a.	2.8		0.41	1.2	1
10199	EFH (C21-C30)	n.a.	13		0.41	1.2	1
10199	EFH (C30 - C40)	n.a.	22		0.41	1.2	1
10199	EFH (C8-C11)	n.a.	0.41	U	0.41	1.2	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,100		5.97	19.7	1
07914	Boron	7440-42-8	6.14		0.355	4.93	1
01650	Calcium	7440-70-2	2,530		2.47	19.7	1
01654	Iron	7439-89-6	19,000		2.58	19.7	1
01656	Lithium	7439-93-2	27.2		0.61	2.0	1
01657	Magnesium	7439-95-4	4,510		0.434	9.87	1
06958	Manganese	7439-96-5	303		0.0355	0.493	1
10145	Phosphorus	7723-14-0	400		0.345	9.87	1
01662	Potassium	7440-09-7	3,000		11.2	49.3	1
01667	Sodium	7440-23-5	73.6	J	5.87	98.7	1
07968	Strontium	7440-24-6	14.0		0.0247	0.493	1
06969	Tin	7440-31-5	2.51	J	0.316	9.87	1
06970	Titanium	7440-32-6	1,060		0.0701	0.987	1
10146	Zirconium	7440-67-7	3.26	J	0.454	4.93	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0767	U	0.0767	0.207	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	3.51		0.0829	0.415	2
06126	Barium	7440-39-3	81.9		0.110	0.415	2
06127	Beryllium	7440-41-7	0.467		0.0166	0.104	2
06128	Cadmium	7440-43-9	0.149		0.0456	0.104	2
06131	Chromium	7440-47-3	14.7		0.124	0.415	2
06132	Cobalt	7440-48-4	5.10		0.0207	0.104	2
06133	Copper	7440-50-8	6.73		0.0829	0.415	2
06135	Lead	7439-92-1	4.68		0.0106	0.207	2
06138	Molybdenum	7439-98-7	0.457		0.0518	0.104	2
06139	Nickel	7440-02-0	9.30		0.104	0.415	2
06141	Selenium	7782-49-2	0.137	J	0.0601	0.415	2
06142	Silver	7440-22-4	0.0253	J	0.0147	0.104	2
06145	Thallium	7440-28-0	0.243		0.0311	0.104	2
06148	Vanadium	7440-62-2	29.5		0.0228	0.104	2
06149	Zinc	7440-66-6	55.9		0.580	3.11	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0072	U	0.0072	0.102	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.1		0.82	1.0	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	2.4		0.82	1.5	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.3	U	9.3	31.1	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.21	U	0.21	1.0	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19	U	0.19	0.52	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.58		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	3.5		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

*=This limit was used in the evaluation of the final result

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-023-SA7-SB-2.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 22:57	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 15:01	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/27/2011 16:24	Laura M Krieger	25.46
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129425935	10/21/2011 15:05	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129425935	10/21/2011 15:06	Christopher D Meeks	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 05:31	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/25/2011 22:12	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 00:33	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112990013A	11/02/2011 16:34	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/29/2011 01:13	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112990013A	10/26/2011 17:30	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112970037A	10/25/2011 21:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:25	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445463
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL023 SDG#: DE273-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:38	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:38	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:38	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:38	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:13	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 18:45	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11306621203A	11/03/2011 18:45	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 18:24	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 16:07	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:45	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170	1
04688	4-Chloroaniline	106-47-8	69	U	69	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170	1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	34	U	34	170	1
04688	4-Methylphenol	106-44-5	34	U	34	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	34	U	34	170	1
04688	4-Nitroaniline	100-01-6	69	U	69	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170	1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.69	U	0.69	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.69	U	0.69	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.69	U	0.69	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.69	U	0.69	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.69	U	0.69	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	19	1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19	1
10138	Chrysene	218-01-9	0.34	U	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.69	U	0.69	1.7	1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19	1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.2	U	6.2	19	1
10138	Fluoranthene	206-44-0	0.69	U	0.69	1.7	1
10138	Fluorene	86-73-7	0.69	U	0.69	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	U	0.69	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7	1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19	1
10138	Phenanthrene	85-01-8	0.69	U	0.69	1.7	1
10138	Pyrene	129-00-0	0.69	U	0.69	1.7	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	24.51
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.34	U	0.34	1.8	1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8	1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520	1
10501	Isopropanol	67-63-0	100	U	100	520	1
10501	Methanol	67-56-1	100	U	100	520	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10	1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10	1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.83	J	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	4.3		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	8.2		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	12,400		6.21	20.5	1
07914	Boron	7440-42-8	5.18		0.370	5.13	1
01650	Calcium	7440-70-2	2,240		2.57	20.5	1
01654	Iron	7439-89-6	17,200		2.68	20.5	1
01656	Lithium	7439-93-2	17.2		0.64	2.1	1
01657	Magnesium	7439-95-4	3,820		0.452	10.3	1
06958	Manganese	7439-96-5	168		0.0370	0.513	1
10145	Phosphorus	7723-14-0	98.7		0.359	10.3	1
01662	Potassium	7440-09-7	945		11.6	51.3	1
01667	Sodium	7440-23-5	156		6.11	103	1
07968	Strontium	7440-24-6	15.5		0.0257	0.513	1
06969	Tin	7440-31-5	2.62	J	0.329	10.3	1
06970	Titanium	7440-32-6	968		0.0729	1.03	1
10146	Zirconium	7440-67-7	2.54	J	0.472	5.13	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0752	U	0.0752	0.203	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	2.76		0.0813	0.407	2
06126	Barium	7440-39-3	36.1		0.108	0.407	2
06127	Beryllium	7440-41-7	0.398		0.0163	0.102	2
06128	Cadmium	7440-43-9	0.0447	U	0.0447	0.102	2
06131	Chromium	7440-47-3	13.9		0.122	0.407	2
06132	Cobalt	7440-48-4	3.37		0.0203	0.102	2
06133	Copper	7440-50-8	4.05		0.0813	0.407	2
06135	Lead	7439-92-1	2.85		0.0104	0.203	2
06138	Molybdenum	7439-98-7	0.226		0.0508	0.102	2
06139	Nickel	7440-02-0	10.8		0.102	0.407	2
06141	Selenium	7782-49-2	0.0657	J	0.0590	0.407	2
06142	Silver	7440-22-4	0.0206	J	0.0144	0.102	2
06145	Thallium	7440-28-0	0.144		0.0305	0.102	2
06148	Vanadium	7440-62-2	25.5		0.0224	0.102	2
06149	Zinc	7440-66-6	27.1		0.569	3.05	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0071	U	0.0071	0.102	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.2		0.83	1.0	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.4	J	0.83	1.6	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.4	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.21	U	0.21	1.0	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18	U	0.18	0.51	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.68		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.5		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

*=This limit was used in the evaluation of the final result

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-060-SA7-SB-3.0.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 23:22	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 15:33	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/26/2011 22:29	Laura M Krieger	24.51
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129425935	10/21/2011 15:07	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129425935	10/21/2011 15:07	Christopher D Meeks	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 05:49	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/25/2011 22:29	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 00:46	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112990013A	11/02/2011 15:48	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/29/2011 00:02	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112990013A	10/26/2011 17:30	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112970037A	10/25/2011 21:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:37	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445464
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL060 SDG#: DE273-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:41	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:41	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:41	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:41	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:15	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 19:44	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11306621203A	11/03/2011 19:44	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 19:28	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 10:35	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:46	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170	1
04688	4-Chloroaniline	106-47-8	69	U	69	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	35	U	35	170	1
04688	4-Methylphenol	106-44-5	35	U	35	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	35	U	35	170	1
04688	4-Nitroaniline	100-01-6	69	U	69	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.68	U	0.68	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.68	U	0.68	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.68	U	0.68	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.68	U	0.68	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.68	U	0.68	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.79	J	0.68	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.1	U	6.1	18	1
10138	Di-n-butylphthalate	84-74-2	6.1	U	6.1	18	1
10138	Chrysene	218-01-9	0.34	U	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.68	U	0.68	1.7	1
10138	Diethylphthalate	84-66-2	6.1	U	6.1	18	1
10138	Dimethylphthalate	131-11-3	6.1	U	6.1	18	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	7.2	J	6.1	18	1
10138	Fluoranthene	206-44-0	0.68	U	0.68	1.7	1
10138	Fluorene	86-73-7	0.68	U	0.68	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.68	U	0.68	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7	1
10138	Naphthalene	91-20-3	0.68	U	0.68	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.1	U	6.1	18	1
10138	Phenanthrene	85-01-8	0.68	U	0.68	1.7	1
10138	Pyrene	129-00-0	0.68	U	0.68	1.7	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1	26.65
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.34	U	0.34	1.8	1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8	1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520	1
10501	Isopropanol	67-63-0	100	U	100	520	1
10501	Methanol	67-56-1	100	U	100	520	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10	1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10	1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.6	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.6	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.6	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.53	J	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	6.5		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	12		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,700		6.18	20.4	1
07914	Boron	7440-42-8	5.96		0.368	5.11	1
01650	Calcium	7440-70-2	2,750		2.55	20.4	1
01654	Iron	7439-89-6	23,500		2.67	20.4	1
01656	Lithium	7439-93-2	25.2		0.63	2.0	1
01657	Magnesium	7439-95-4	6,180		0.449	10.2	1
06958	Manganese	7439-96-5	322		0.0368	0.511	1
10145	Phosphorus	7723-14-0	359		0.357	10.2	1
01662	Potassium	7440-09-7	3,780		11.5	51.1	1
01667	Sodium	7440-23-5	78.9	J	6.08	102	1
07968	Strontium	7440-24-6	14.3		0.0255	0.511	1
06969	Tin	7440-31-5	2.68	J	0.327	10.2	1
06970	Titanium	7440-32-6	1,240		0.0725	1.02	1
10146	Zirconium	7440-67-7	3.10	J	0.470	5.11	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0771	U	0.0771	0.208	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.63		0.0833	0.417	2
06126	Barium	7440-39-3	82.7		0.110	0.417	2
06127	Beryllium	7440-41-7	0.585		0.0167	0.104	2
06128	Cadmium	7440-43-9	0.0879	J	0.0458	0.104	2
06131	Chromium	7440-47-3	22.9		0.125	0.417	2
06132	Cobalt	7440-48-4	6.74		0.0208	0.104	2
06133	Copper	7440-50-8	10.0		0.0833	0.417	2
06135	Lead	7439-92-1	4.83		0.0106	0.208	2
06138	Molybdenum	7439-98-7	0.347		0.0521	0.104	2
06139	Nickel	7440-02-0	15.8		0.104	0.417	2
06141	Selenium	7782-49-2	0.132	J	0.0604	0.417	2
06142	Silver	7440-22-4	0.0376	J	0.0148	0.104	2
06145	Thallium	7440-28-0	0.263		0.0313	0.104	2
06148	Vanadium	7440-62-2	43.1		0.0229	0.104	2
06149	Zinc	7440-66-6	56.4		0.583	3.13	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0070	U	0.0070	0.0992	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	0.84	U	0.84	1.1	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.8		0.84	1.6	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.3	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.21	U	0.21	1.0	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19	U	0.19	0.52	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.87		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.0		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-069-SA7-SB-3.0.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/26/2011 23:47	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/25/2011 16:05	Joseph M Gambler	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16A	10/26/2011 23:07	Laura M Krieger	26.65
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201129425935	10/21/2011 15:08	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201129425935	10/21/2011 15:09	Christopher D Meeks	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 06:08	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/25/2011 22:45	Elizabeth J Marin	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/26/2011 17:41	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 00:59	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112990013A	11/02/2011 15:26	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/29/2011 00:25	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112990013A	10/26/2011 17:30	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112970037A	10/25/2011 21:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:41	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445465
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL069 SDG#: DE273-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:50	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:50	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:50	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:50	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:16	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 19:55	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11306621203A	11/03/2011 19:55	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 19:49	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 10:41	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:47	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170	1
04688	4-Chloroaniline	106-47-8	70	U	70	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	70	U	70	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	35	U	35	170	1
04688	4-Methylphenol	106-44-5	35	U	35	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	35	U	35	170	1
04688	4-Nitroaniline	100-01-6	70	U	70	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.69	U	0.69	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.69	U	0.69	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.69	U	0.69	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.69	U	0.69	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	1.1	J	0.69	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.8	J	6.2	19	1
10138	Di-n-butylphthalate	84-74-2	8.1	J	6.2	19	1
10138	Chrysene	218-01-9	0.38	J	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.69	U	0.69	1.7	1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19	1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	13	J	6.2	19	1
10138	Fluoranthene	206-44-0	0.69	U	0.69	1.7	1
10138	Fluorene	86-73-7	0.69	U	0.69	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	U	0.69	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7	1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19	1
10138	Phenanthrene	85-01-8	0.69	U	0.69	1.7	1
10138	Pyrene	129-00-0	0.69	U	0.69	1.7	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.5	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.5	1
10225	Aroclor 5460	11126-42-4	1.4	J	1.0	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.71	J	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	5.4		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	13		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	14,100		6.24	20.6	1
07914	Boron	7440-42-8	4.61	J	0.371	5.15	1
01650	Calcium	7440-70-2	2,570		2.58	20.6	1
01654	Iron	7439-89-6	19,700		2.69	20.6	1
01656	Lithium	7439-93-2	21.6		0.64	2.1	1
01657	Magnesium	7439-95-4	4,600		0.454	10.3	1
06958	Manganese	7439-96-5	253		0.0371	0.515	1
10145	Phosphorus	7723-14-0	258		0.361	10.3	1
01662	Potassium	7440-09-7	2,220		11.6	51.5	1
01667	Sodium	7440-23-5	74.8	J	6.13	103	1
07968	Strontium	7440-24-6	14.7		0.0258	0.515	1
06969	Tin	7440-31-5	2.69	J	0.330	10.3	1
06970	Titanium	7440-32-6	982		0.0732	1.03	1
10146	Zirconium	7440-67-7	2.66	J	0.474	5.15	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0741	U	0.0741	0.200	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.44		0.0801	0.401	2
06126	Barium	7440-39-3	82.5		0.106	0.401	2

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

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Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06127	Beryllium	7440-41-7	0.607	0.0160	0.100	2
06128	Cadmium	7440-43-9	0.0780 J	0.0441	0.100	2
06131	Chromium	7440-47-3	18.2	0.120	0.401	2
06132	Cobalt	7440-48-4	6.03	0.0200	0.100	2
06133	Copper	7440-50-8	7.01	0.0801	0.401	2
06135	Lead	7439-92-1	5.48	0.0102	0.200	2
06138	Molybdenum	7439-98-7	0.466	0.0501	0.100	2
06139	Nickel	7440-02-0	11.7	0.100	0.401	2
06141	Selenium	7782-49-2	0.147 J	0.0581	0.401	2
06142	Silver	7440-22-4	0.0344 J	0.0142	0.100	2
06145	Thallium	7440-28-0	0.227	0.0300	0.100	2
06148	Vanadium	7440-62-2	35.8	0.0220	0.100	2
06149	Zinc	7440-66-6	52.2	0.561	3.00	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073 U	0.0073	0.104	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.1	0.84	1.1	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.9	0.84	1.6	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.5 U	9.5	31.5	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.27 J	0.21	1.0	1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19 U	0.19	0.53	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.69	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

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14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 00:12	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 01:14	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 06:27	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/25/2011 23:02	Elizabeth J Marin	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	112970037A	10/26/2011 17:57	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	112980042A	10/26/2011 01:12	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	112990013A	11/02/2011 15:04	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113000011A	10/29/2011 00:49	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113000011A	10/27/2011 18:00	David S Schrum	1
10303	Terphenyls soil prep	SW-846 3550B	1	112990013A	10/26/2011 17:30	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	112970037A	10/25/2011 21:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	112980042A	10/25/2011 18:25	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:45	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:53	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:53	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:53	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445466
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL148 SDG#: DE273-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:53	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:17	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 20:07	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11306621203A	11/03/2011 20:07	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 20:10	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 11:02	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11300102201A	10/28/2011 08:48	K Robert Caulfeild-James	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11300102201A	10/27/2011 10:15	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445467
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL264 SDG#: DE273-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	72	U	72	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	72	U	72	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445467
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL264 SDG#: DE273-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.71	U	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	8.2	J	6.4	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	9.1	J	6.4	19	1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8	1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8	1
Perchlorate	**SW-846 6850 1/2007**		**ug/kg**		**ug/kg**	**ug/kg**	
06557	6a Perchlorate EPA 6850	14797-73-0	2.3	U	2.3	5.4	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8	1
10225	PCB-1254	11097-69-1	0.65	J	0.36	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results

*=This limit was used in the evaluation of the final result

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445467
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL264 SDG#: DE273-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.						
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	20,700		6.51	21.5	1
07914	Boron	7440-42-8	13.4		0.387	5.38	1
01650	Calcium	7440-70-2	5,730		2.69	21.5	1
01654	Iron	7439-89-6	28,500		14.0	108	5
01656	Lithium	7439-93-2	40.0		0.67	2.2	1
01657	Magnesium	7439-95-4	8,240		0.474	10.8	1
06958	Manganese	7439-96-5	323		0.0387	0.538	1
10145	Phosphorus	7723-14-0	588		0.377	10.8	1
01662	Potassium	7440-09-7	4,200		12.2	53.8	1
01667	Sodium	7440-23-5	164		6.40	108	1
07968	Strontium	7440-24-6	23.1		0.0269	0.538	1
06969	Tin	7440-31-5	2.74	J	0.344	10.8	1
06970	Titanium	7440-32-6	1,380		0.0764	1.08	1
10146	Zirconium	7440-67-7	7.39		0.495	5.38	1
		SW-846 6020	**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0804	U	0.0804	0.217	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.73		0.0870	0.435	2
06126	Barium	7440-39-3	70.5		0.115	0.435	2
06127	Beryllium	7440-41-7	0.578		0.0174	0.109	2
06128	Cadmium	7440-43-9	0.0890	J	0.0478	0.109	2
06131	Chromium	7440-47-3	27.9		0.130	0.435	2
06132	Cobalt	7440-48-4	8.63		0.0217	0.109	2
06133	Copper	7440-50-8	10.8		0.0870	0.435	2
06135	Lead	7439-92-1	6.65		0.0111	0.217	2
06138	Molybdenum	7439-98-7	0.303		0.0543	0.109	2
06139	Nickel	7440-02-0	14.4		0.109	0.435	2
06141	Selenium	7782-49-2	0.206	J	0.0630	0.435	2
06142	Silver	7440-22-4	0.0154	U	0.0154	0.109	2
06145	Thallium	7440-28-0	0.269		0.0326	0.109	2
06148	Vanadium	7440-62-2	56.7		0.0239	0.109	2
06149	Zinc	7440-66-6	67.9		0.609	3.26	2
		SW-846 7471A	**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076	U	0.0076	0.108	1
Wet Chemistry		**EPA 300.0**	**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	6.7		0.87	1.1	1
		EPA 314.0	**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8	U	9.8	32.6	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445467
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL264 SDG#: DE273-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.20		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	8.0		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 00:37	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 01:47	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
06557	6a Perchlorate EPA 6850	SW-846 6850 1/2007	1	112980018A	10/26/2011 19:33	Richard A Shober	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 06:46	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
06568	Perchlorate Soil Prep	SW-846 6850 1/2007	1	112980018A	10/26/2011 09:00	Maria Davenport	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:20	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445467
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL264 SDG#: DE273-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:49	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:56	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:56	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:56	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:56	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:18	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 20:19	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 20:31	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 11:08	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445468
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL269 SDG#: DE273-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	550	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	550	1
04688	Benzyl alcohol	100-51-6	180	U	180	550	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	73	U	73	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	73	U	73	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	550	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	550	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445468
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL269 SDG#: DE273-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19	1
10138	Di-n-butylphthalate	84-74-2	8.0	J	6.5	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	11	J	6.5	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9	1
10225	PCB-1254	11097-69-1	1.8	J	0.36	1.9	1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445468
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL269 SDG#: DE273-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	30,100		6.64	22.0	1
07914	Boron	7440-42-8	17.5		0.395	5.49	1
01650	Calcium	7440-70-2	6,120		2.74	22.0	1
01654	Iron	7439-89-6	37,300		14.3	110	5
01656	Lithium	7439-93-2	52.9		0.68	2.2	1
01657	Magnesium	7439-95-4	10,500		0.483	11.0	1
06958	Manganese	7439-96-5	250		0.0395	0.549	1
10145	Phosphorus	7723-14-0	613		0.384	11.0	1
01662	Potassium	7440-09-7	6,250		12.4	54.9	1
01667	Sodium	7440-23-5	209		6.53	110	1
07968	Strontium	7440-24-6	31.9		0.0274	0.549	1
06969	Tin	7440-31-5	2.98	J	0.351	11.0	1
06970	Titanium	7440-32-6	1,590		0.0779	1.10	1
10146	Zirconium	7440-67-7	7.92		0.505	5.49	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0880	J	0.0812	0.220	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.86		0.0878	0.439	2
06126	Barium	7440-39-3	103		0.116	0.439	2
06127	Beryllium	7440-41-7	0.762		0.0176	0.110	2
06128	Cadmium	7440-43-9	0.108	J	0.0483	0.110	2
06131	Chromium	7440-47-3	35.9		0.132	0.439	2
06132	Cobalt	7440-48-4	8.11		0.0220	0.110	2
06133	Copper	7440-50-8	20.6		0.0878	0.439	2
06135	Lead	7439-92-1	9.82		0.0112	0.220	2
06138	Molybdenum	7439-98-7	0.165		0.0549	0.110	2
06139	Nickel	7440-02-0	22.5		0.110	0.439	2
06141	Selenium	7782-49-2	0.344	J	0.0637	0.439	2
06142	Silver	7440-22-4	0.0195	J	0.0156	0.110	2
06145	Thallium	7440-28-0	0.395		0.0329	0.110	2
06148	Vanadium	7440-62-2	67.2		0.0241	0.110	2
06149	Zinc	7440-66-6	98.9		0.615	3.29	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0142	J	0.0077	0.109	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	9.1		0.88	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	32.9	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445468
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL269 SDG#: DE273-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	7.13	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	8.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 01:02	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 02:19	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 07:04	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:23	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:53	Damary Valentin	1
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06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:59	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445468
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL269 SDG#: DE273-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/31/2011 06:46	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:59	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:59	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:19	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 20:31	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11298621201B	11/04/2011 13:58	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 11:22	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445469
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL404 SDG#: DE273-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	72	U	72	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	72	U	72	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445469
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL404 SDG#: DE273-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	7.7	J	6.4	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	8.3	J	6.4	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8	1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	31,000		6.53	21.6	1
07914	Boron	7440-42-8	12.2		0.389	5.40	1
01650	Calcium	7440-70-2	3,610		2.70	21.6	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445469
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

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Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL404 SDG#: DE273-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	33,900	14.1	108	5
01656	Lithium	7439-93-2	31.3	0.67	2.2	1
01657	Magnesium	7439-95-4	7,700	0.475	10.8	1
06958	Manganese	7439-96-5	295	0.0389	0.540	1
10145	Phosphorus	7723-14-0	372	0.378	10.8	1
01662	Potassium	7440-09-7	3,930	12.2	54.0	1
01667	Sodium	7440-23-5	903	6.42	108	1
07968	Strontium	7440-24-6	34.3	0.0270	0.540	1
06969	Tin	7440-31-5	2.92 J	0.346	10.8	1
06970	Titanium	7440-32-6	1,330	0.0767	1.08	1
10146	Zirconium	7440-67-7	8.67	0.497	5.40	1
	SW-846 6020		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0827 J	0.0799	0.216	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.					
06125	Arsenic	7440-38-2	6.45	0.0864	0.432	2
06126	Barium	7440-39-3	107	0.114	0.432	2
06127	Beryllium	7440-41-7	0.852	0.0173	0.108	2
06128	Cadmium	7440-43-9	0.0595 J	0.0475	0.108	2
06131	Chromium	7440-47-3	36.9	0.130	0.432	2
06132	Cobalt	7440-48-4	10.5	0.0216	0.108	2
06133	Copper	7440-50-8	12.8	0.0864	0.432	2
06135	Lead	7439-92-1	8.46	0.0110	0.216	2
06138	Molybdenum	7439-98-7	0.606	0.0540	0.108	2
06139	Nickel	7440-02-0	19.5	0.108	0.432	2
06141	Selenium	7782-49-2	0.112 J	0.0626	0.432	2
06142	Silver	7440-22-4	0.0407 J	0.0153	0.108	2
06145	Thallium	7440-28-0	0.353	0.0324	0.108	2
06148	Vanadium	7440-62-2	70.5	0.0238	0.108	2
06149	Zinc	7440-66-6	69.5	0.605	3.24	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076 U	0.0076	0.108	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	25.0	0.88	1.1	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8 U	9.8	32.7	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	3.2	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445469
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL404 SDG#: DE273-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.05	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	8.3	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 01:28	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 02:52	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 07:23	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:27	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:57	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:02	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:02	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:02	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:02	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445469
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL404 SDG#: DE273-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:02	Choon Y Tian	2
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06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:02	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:21	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 20:42	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621201B	11/03/2011 21:34	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 11:35	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445470
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL409 SDG#: DE273-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445470
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL409 SDG#: DE273-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.8	1
10138	Anthracene	120-12-7	0.35	U	0.35	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.71	U	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.3	U	6.3	19	1
10138	Di-n-butylphthalate	84-74-2	7.7	J	6.3	19	1
10138	Chrysene	218-01-9	0.35	U	0.35	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.3	U	6.3	19	1
10138	Dimethylphthalate	131-11-3	6.3	U	6.3	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	8.4	J	6.3	19	1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.3	U	6.3	19	1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8	1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	23,800		6.38	21.1	1
07914	Boron	7440-42-8	9.92		0.380	5.27	1
01650	Calcium	7440-70-2	3,970		2.64	21.1	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445470
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL409 SDG#: DE273-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	31,200		13.8	105	5
01656	Lithium	7439-93-2	30.1		0.65	2.1	1
01657	Magnesium	7439-95-4	7,470		0.464	10.5	1
06958	Manganese	7439-96-5	339		0.0380	0.527	1
10145	Phosphorus	7723-14-0	467		0.369	10.5	1
01662	Potassium	7440-09-7	2,760		11.9	52.7	1
01667	Sodium	7440-23-5	848		6.27	105	1
07968	Strontium	7440-24-6	28.2		0.0264	0.527	1
06969	Tin	7440-31-5	2.92	J	0.337	10.5	1
06970	Titanium	7440-32-6	1,240		0.0748	1.05	1
10146	Zirconium	7440-67-7	8.22		0.485	5.27	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0796	U	0.0796	0.215	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.47		0.0860	0.430	2
06126	Barium	7440-39-3	90.8		0.114	0.430	2
06127	Beryllium	7440-41-7	0.729		0.0172	0.108	2
06128	Cadmium	7440-43-9	0.0473	U	0.0473	0.108	2
06131	Chromium	7440-47-3	39.9		0.129	0.430	2
06132	Cobalt	7440-48-4	10.7		0.0215	0.108	2
06133	Copper	7440-50-8	10.4		0.0860	0.430	2
06135	Lead	7439-92-1	7.86		0.0110	0.215	2
06138	Molybdenum	7439-98-7	0.471		0.0538	0.108	2
06139	Nickel	7440-02-0	19.3		0.108	0.430	2
06141	Selenium	7782-49-2	0.164	J	0.0624	0.430	2
06142	Silver	7440-22-4	0.0203	J	0.0153	0.108	2
06145	Thallium	7440-28-0	0.280		0.0323	0.108	2
06148	Vanadium	7440-62-2	67.5		0.0237	0.108	2
06149	Zinc	7440-66-6	62.7		0.602	3.23	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0141	J	0.0074	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	17.1		0.87	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.3	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445470
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL409 SDG#: DE273-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	7.35	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	7.0	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 01:53	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 03:24	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 07:42	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:31	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:01	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:05	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445470
LLI Group # 1272534
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Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL409 SDG#: DE273-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:05	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:05	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:05	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:22	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 20:54	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11298621201B	11/04/2011 14:40	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 11:49	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-016-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA8S-SB-4.0-5.0

LLI Sample # SW 6445471
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL016 SDG#: DE273-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	73	U	73	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	73	U	73	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-016-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA8S-SB-4.0-5.0

LLI Sample # SW 6445471
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL016 SDG#: DE273-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	13	J	6.5	19	1
10138	Di-n-butylphthalate	84-74-2	8.2	J	6.5	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	9.5	J	6.5	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9	1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9	1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	21,400		6.63	21.9	1
07914	Boron	7440-42-8	9.65		0.395	5.48	1
01650	Calcium	7440-70-2	11,200		2.74	21.9	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-016-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA8S-SB-4.0-5.0

LLI Sample # SW 6445471
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL016 SDG#: DE273-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	23,900		2.86	21.9	1
01656	Lithium	7439-93-2	24.6		0.68	2.2	1
01657	Magnesium	7439-95-4	4,600		0.482	11.0	1
06958	Manganese	7439-96-5	403		0.0395	0.548	1
10145	Phosphorus	7723-14-0	300		0.384	11.0	1
01662	Potassium	7440-09-7	3,940		12.4	54.8	1
01667	Sodium	7440-23-5	83.0	J	6.52	110	1
07968	Strontium	7440-24-6	21.1		0.0274	0.548	1
06969	Tin	7440-31-5	2.71	J	0.351	11.0	1
06970	Titanium	7440-32-6	1,150		0.0779	1.10	1
10146	Zirconium	7440-67-7	4.78	J	0.504	5.48	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0780	U	0.0780	0.211	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.12		0.0843	0.422	2
06126	Barium	7440-39-3	116		0.112	0.422	2
06127	Beryllium	7440-41-7	0.735		0.0169	0.105	2
06128	Cadmium	7440-43-9	0.176		0.0464	0.105	2
06131	Chromium	7440-47-3	22.5		0.127	0.422	2
06132	Cobalt	7440-48-4	8.16		0.0211	0.105	2
06133	Copper	7440-50-8	12.1		0.0843	0.422	2
06135	Lead	7439-92-1	6.92		0.0108	0.211	2
06138	Molybdenum	7439-98-7	0.490		0.0527	0.105	2
06139	Nickel	7440-02-0	16.1		0.105	0.422	2
06141	Selenium	7782-49-2	0.0647	J	0.0612	0.422	2
06142	Silver	7440-22-4	0.0377	J	0.0150	0.105	2
06145	Thallium	7440-28-0	0.313		0.0316	0.105	2
06148	Vanadium	7440-62-2	43.7		0.0232	0.105	2
06149	Zinc	7440-66-6	62.0		0.590	3.16	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0072	U	0.0072	0.103	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.2		0.87	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	32.9	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	3.1		0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA8S-SB-4.0-5.0

LLI Sample # SW 6445471
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL016 SDG#: DE273-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.17	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	8.8	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11295SLA026	10/27/2011 02:19	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11295SLC026	10/26/2011 03:57	Gregory J Drahovsky	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11295SLC026	10/24/2011 11:30	Olivia Arosemena	1
00381	BNA Soil Sonication	SW-846 3550B	1	11295SLA026	10/24/2011 10:05	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 08:01	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:05	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:08	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA8S-SB-4.0-5.0

LLI Sample # SW 6445471
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SL016 SDG#: DE273-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:08	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:08	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:08	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:26	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203A	11/03/2011 21:06	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	2	11298621201B	11/04/2011 15:01	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 12:15	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203A	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621201B	10/25/2011 06:05	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403A	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-102011 Water
SSFL Area IV Collocated Soil Sampling
TB-102011

LLI Sample # WW 6445473
LLI Group # 1272534
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 08:00

Submitted: 10/21/2011 09:15
Reported: 11/18/2011 12:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

TB120 SDG#: DE273-11TB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11300A20A	10/27/2011 17:05	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11300A20A	10/27/2011 17:05	Catherine J Schwarz	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11295SLA026	Sample number(s): 6445463-6445471									
Aniline	170 U		170.	500	ug/kg	63		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	43		15-121		
Benzoic acid	170 U		170.	500	ug/kg	85		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	93		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	95		73-114		
Carbazole	17	U	17.	170	ug/kg	101		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	100		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	42		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	92		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	87		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	85		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	71		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	92		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	96		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	93		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	85		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	82		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	83		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	33		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	97		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	95		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	100		83-120		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	77		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	76		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	105		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	103		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	96		71-125		
Hexachlorobenzene	17	U	17.	170	ug/kg	96		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	87		65-117		
Hexachlorocyclopentadiene	170 U		170.	500	ug/kg	84		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	82		61-109		
Isophorone	17	U	17.	170	ug/kg	92		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	93		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	93		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	102		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	96		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	81		49-98		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrobenzene	17	U	17.	170	ug/kg	91		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	89		76-111		
4-Nitrophenol	170 U		170.	500	ug/kg	100		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	85		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	100		67-141		
Pentachlorophenol	170 U		170.	500	ug/kg	100		51-117		
Phenol	17	U	17.	170	ug/kg	96		58-112		
Tetralin	170 U		170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	90		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	97		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	101		78-111		
Batch number: 11295SLC026	Sample number(s): 6445463-6445471									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	89		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	81		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	88		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	93		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	86		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	91		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	106		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	94		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	86		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	86		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	94		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	104		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	87		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	89		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	96		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	91		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	90		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	103		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	84		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	86		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	94		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	99		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	88		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	95		72-119		
Batch number: 11299A16A	Sample number(s): 6445463-6445465									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	74	75	67-119	2	30
Batch number: 11300A20A	Sample number(s): 6445473									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 112980018A	Sample number(s): 6445467									
6a Perchlorate EPA 6850	2.1	U	2.1	5.0	ug/kg	100		85-115		
Batch number: 112990025A	Sample number(s): 6445463-6445471									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	85	61	36-106	32*	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	117		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	153*		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112970037A	Sample number(s): 6445463-6445466									
Ethanol	100	U	100.	500	ug/kg	93		71-129		
Isopropanol	100	U	100.	500	ug/kg	95		75-125		
Methanol	100	U	100.	500	ug/kg	100		68-129		
Batch number: 112980042A	Sample number(s): 6445463-6445466									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	106		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	99		67-131		
Batch number: 112990013A	Sample number(s): 6445463-6445466									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	102		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	104		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	104		69-109		
Batch number: 113000011A	Sample number(s): 6445463-6445466									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	96		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	99		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	99		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	84		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	88		49-107		
Batch number: 112971026003A	Sample number(s): 6445463-6445471									
Antimony	0.0705	U	0.0705	0.190	mg/kg	79		40-227		
Arsenic	0.0762	U	0.0762	0.381	mg/kg	105		83-111		
Beryllium	0.0152	U	0.0152	0.0952	mg/kg	104		84-112		
Cadmium	0.0419	U	0.0419	0.0952	mg/kg	102		83-111		
Chromium	0.114	U	0.114	0.381	mg/kg	112		77-123		
Cobalt	0.0190	U	0.0190	0.0952	mg/kg	107		85-114		
Copper	0.0762	U	0.0762	0.381	mg/kg	107		81-110		
Lead	0.0121	J	0.0097	0.190	mg/kg	101		84-112		
Nickel	0.0952	U	0.0952	0.381	mg/kg	101		81-110		
Silver	0.0135	U	0.0135	0.0952	mg/kg	103		83-112		
Thallium	0.0286	U	0.0286	0.0952	mg/kg	100		82-112		
Vanadium	0.0210	U	0.0210	0.0952	mg/kg	102		76-110		
Zinc	0.533	U	0.533	2.86	mg/kg	99		82-110		
Batch number: 112971026003B	Sample number(s): 6445463-6445471									
Selenium	0.0552	U	0.0552	0.381	mg/kg	101		79-110		
Batch number: 112971026003C	Sample number(s): 6445463-6445471									
Molybdenum	0.0476	U	0.0476	0.0952	mg/kg	101		80-110		
Batch number: 112971026003D	Sample number(s): 6445463-6445471									
Barium	0.101	U	0.101	0.381	mg/kg	102		83-110		
Batch number: 112975708006	Sample number(s): 6445463-6445471									
Aluminum	6.05	U	6.05	20.0	mg/kg	88		40-127		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Boron	0.447	J	0.360	5.00	mg/kg	102		83-110		
Calcium	17.2	J	2.50	20.0	mg/kg	95		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	88		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	101		80-120		
Magnesium	2.05	J	0.440	10.0	mg/kg	91		63-116		
Manganese	0.0480	J	0.0360	0.500	mg/kg	101		85-116		
Phosphorus	1.14	J	0.350	10.0	mg/kg	103		80-120		
Potassium	11.3	U	11.3	50.0	mg/kg	103		71-110		
Sodium	5.95	U	5.95	100	mg/kg	103		76-110		
Strontium	0.0770	J	0.0250	0.500	mg/kg	101		84-110		
Tin	1.18	J	0.320	10.0	mg/kg	94		86-120		
Titanium	0.0710	U	0.0710	1.00	mg/kg	91		80-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	101		80-120		
Batch number: 112975711003	Sample number(s): 6445463-6445471									
Mercury	0.0070	U	0.0070	0.0989	mg/kg	111		83-119		
Batch number: 11298621201B	Sample number(s): 6445463-6445471									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	99		85-115		
Batch number: 11300102201A	Sample number(s): 6445463-6445466									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	96		80-120		
Batch number: 11305243201A	Sample number(s): 6445463-6445471									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	95		80-120		
Batch number: 11306621203A	Sample number(s): 6445463-6445471									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	101		90-110		
11a Anions by 300.0 - Nitrate	0.80	U	0.80	1.5	mg/kg	102		90-110		
Batch number: 11300039403A	Sample number(s): 6445463-6445471									
17a pH by 9045C						100		95-105		
Batch number: 11301162401B	Sample number(s): 6445463-6445471									
Moisture Content by 160.3						99		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11295SLA026	Sample number(s): 6445463-6445471 UNSPK: P443490								
Aniline	65	74	18-116	13	30				
Benzidine	0*	0*	35-141	0	30				
Benzoic acid	74	58	10-173	25	30				
Benzyl alcohol	90	94	67-115	5	30				
4-Bromophenyl-phenylether	92	96	67-129	4	30				
Carbazole	92	98	64-120	6	30				
4-Chloro-3-methylphenol	94	99	62-122	6	30				
4-Chloroaniline	55	70	13-107	24	30				
bis(2-Chloroethoxy)methane	93	98	75-104	6	30				
bis(2-Chloroethyl)ether	88	90	60-116	2	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
bis(2-Chloroisopropyl)ether	84	86	55-142	2	30				
2-Chloronaphthalene	71	74	50-141	4	30				
2-Chlorophenol	94	97	73-121	3	30				
4-Chlorophenyl-phenylether	94	97	80-109	3	30				
Dibenzofuran	91	96	71-112	5	30				
1,2-Dichlorobenzene	85	87	66-108	2	30				
1,3-Dichlorobenzene	85	86	63-109	1	30				
1,4-Dichlorobenzene	85	86	58-108	2	30				
3,3'-Dichlorobenzidine	39	55	28-109	33*	30				
2,4-Dichlorophenol	97	100	66-123	3	30				
2,4-Dimethylphenol	93	98	68-118	5	30				
3,5-Dimethylphenol	98	104	71-127	5	30				
4,6-Dinitro-2-methylphenol	80	46	11-126	53*	30				
2,4-Dinitrophenol	65	20	20-143	104*	30				
2,4-Dinitrotoluene	98	100	56-129	2	30				
2,6-Dinitrotoluene	97	101	69-123	4	30				
1,2-Diphenylhydrazine	94	97	71-129	3	30				
Hexachlorobenzene	91	96	77-114	5	30				
Hexachlorobutadiene	86	91	62-120	6	30				
Hexachlorocyclopentadiene	87	86	10-153	1	30				
Hexachloroethane	84	84	57-109	0	30				
Isophorone	89	94	73-102	5	30				
2-Methylphenol	95	97	75-111	2	30				
4-Methylphenol	93	95	59-123	1	30				
2-Nitroaniline	98	101	67-125	3	30				
3-Nitroaniline	93	100	59-122	7	30				
4-Nitroaniline	81	89	41-109	10	30				
Nitrobenzene	89	95	57-125	7	30				
2-Nitrophenol	90	91	56-127	2	30				
4-Nitrophenol	86	90	37-129	5	30				
N-Nitroso-di-n-propylamine	84	87	60-116	3	30				
N-Nitrosodiphenylamine	95	98	71-122	4	30				
Pentachlorophenol	96	87	28-127	9	30				
Phenol	96	100	58-126	4	30				
1,2,4-Trichlorobenzene	88	93	72-115	5	30				
2,4,5-Trichlorophenol	94	98	58-129	4	30				
2,4,6-Trichlorophenol	94	96	56-134	2	30				
Batch number: 11295SLC026	Sample number(s): 6445463-6445471 UNSPK: P443491								
Acenaphthene	92	89	63-105	3	30				
Acenaphthylene	88	85	67-114	3	30				
Anthracene	95	92	73-115	3	30				
Benzo(a)anthracene	99	97	59-128	2	30				
Benzo(a)pyrene	92	90	58-142	2	30				
Benzo(b)fluoranthene	91	88	54-163	3	30				
Benzo(g,h,i)perylene	102	98	33-141	4	30				
Benzo(k)fluoranthene	93	92	57-153	1	30				
Butylbenzylphthalate	100	96	57-173	5	30				
Di-n-butylphthalate	94	94	65-148	0	30				
Chrysene	98	97	67-123	1	30				
Dibenz(a,h)anthracene	104	101	22-133	2	30				
Diethylphthalate	91	88	70-136	4	30				
Dimethylphthalate	94	91	74-118	3	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Bis(2-Ethylhexyl)phthalate	124	119	39-167	4	30				
Fluoranthene	95	94	51-149	1	30				
Fluorene	91	88	66-122	3	30				
Indeno(1,2,3-cd)pyrene	104	100	21-143	3	30				
1-Methylnaphthalene	86	82	72-123	5	30				
2-Methylnaphthalene	85	82	64-103	4	30				
Naphthalene	87	83	61-102	5	30				
N-Nitrosodimethylamine	96	89	48-113	8	30				
Di-n-octylphthalate	89	89	40-192	0	30				
Phenanthrene	91	88	62-122	3	30				
Pyrene	95	88	51-131	7	30				
Batch number: 112980018A	Sample number(s): 6445467 UNSPK: P439929								
6a Perchlorate EPA 6850	100	104	80-120	4	20				
Batch number: 112990025A	Sample number(s): 6445463-6445471 UNSPK: P446810								
PCB-1016	109	123	29-146	12	50				
PCB-1260	110	118	39-149	7	50				
Batch number: 112970037A	Sample number(s): 6445463-6445466 UNSPK: 6445463								
Ethanol	84	91	48-130	8	20				
Isopropanol	90	94	12-149	5	20				
Methanol	89	100	43-138	11	20				
Batch number: 112980042A	Sample number(s): 6445463-6445466 UNSPK: P437195								
Diethylene glycol	47*	48*	59-109	3	20				
Ethylene glycol	75	75	63-107	1	20				
Propylene glycol	77	78	63-107	0	20				
Batch number: 112990013A	Sample number(s): 6445463-6445466 UNSPK: 6445463								
m-Terphenyl	107	105	75-125	2	20				
o-Terphenyl	106	105	75-125	2	20				
p-Terphenyl	106	104	75-125	2	20				
Batch number: 113000011A	Sample number(s): 6445463-6445466 UNSPK: 6445463								
EFH (C12-C14)	119	283*	49-123	59*	20				
EFH (C15-C20)	494*	190*	49-123	55*	20				
EFH (C21-C30)	1022 (2)	728 (2)	49-123	20	20				
EFH (C30 - C40)	292 (2)	353 (2)	49-123	5	20				
EFH (C8-C11)	90	90	49-123	0	20				
Batch number: 112971026003A	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Antimony	28*	28*	75-125	1	20	0.103 J	0.0806 J	25* (1)	20
Arsenic	82	57*	75-125	6	20	6.62	6.98	5	20
Beryllium	90	72*	75-125	10	20	0.824	0.814	1	20
Cadmium	105	96	75-125	9	20	0.0882 J	0.0745 J	17 (1)	20
Chromium	88	60*	75-125	9	20	25.6	25.3	1	20
Cobalt	101	97	75-125	4	20	7.66	7.86	3	20
Copper	95	89	75-125	3	20	11.4	11.8	4	20
Lead	101	50*	75-125	15	20	7.46	7.35	1	20
Nickel	92	85	75-125	3	20	15.3	15.6	2	20
Silver	104	102	75-125	2	20	0.0299 J	0.0293 J	2 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Thallium	92	79	75-125	8	20	0.319	0.280	13 (1)	20
Vanadium	80 (2)	51 (2)	75-125	5	20	49.7	50.1	1	20
Zinc	67 (2)	45 (2)	75-125	4	20	53.4	53.2	0	20
Batch number: 112971026003B	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Selenium	91	97	75-125	5	20	0.0790 J	0.0998 J	23* (1)	20
Batch number: 112971026003C	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Molybdenum	94	92	75-125	3	20	0.533	0.502	6	20
Batch number: 112971026003D	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Barium	43 (2)	-80 (2)	75-125	11	20	109	113	3	20
Batch number: 112975708006	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Aluminum	1918 (2)	-1788 (2)	75-125	27*	20	27,400	28,100	2	20
Boron	96	92	84-115	2	20	9.74	9.76	0 (1)	20
Calcium	-52 (2)	77 (2)	75-125	4	20	12,800	11,100	14	20
Iron	2334 (2)	-2778 (2)	75-125	20	20	25,600	27,400	7	20
Lithium	103	91	82-114	8	20	26.0	27.0	4	20
Magnesium	254 (2)	-105 (2)	75-125	14	20	5,070	5,250	4	20
Manganese	42 (2)	52 (2)	75-125	2	20	282	320	13	20
Phosphorus	87	98	75-125	5	20	168	165	2	20
Potassium	151*	80	75-125	18	20	2,640	2,740	3	20
Sodium	100	93	75-125	6	20	75.4 J	75.9 J	1 (1)	20
Strontium	99	96	75-115	1	20	19.6	19.5	0	20
Tin	81	80	80-110	1	20	2.73 J	2.88 J	5 (1)	20
Titanium	218 (2)	155 (2)	75-125	5	20	1,070	1,110	4	20
Zirconium	96	88	81-110	6	20	5.00	6.41	25* (1)	20
Batch number: 112975711003	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
Mercury	95	102	65-135	9	20	0.0150 J	0.0204 J	30* (1)	20
Batch number: 11298621201B	Sample number(s): 6445463-6445471 UNSPK: 6445463 BKG: 6445463								
7a Perchlorate EPA 314.0	108		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11300102201A	Sample number(s): 6445463-6445466 UNSPK: P443491 BKG: P443491								
16a Cyanide by 9012B	102		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11305243201A	Sample number(s): 6445463-6445471 UNSPK: P446810 BKG: P446810								
3a Cr VI by EPA 7199	94		75-125			0.21 J	0.56 J	90* (1)	20
Batch number: 11306621203A	Sample number(s): 6445463-6445471 UNSPK: 6445463 BKG: 6445463								
11a Anions by 300.0 - Fluoride	73*		80-120			1.1	0.80 U	200* (1)	20
11a Anions by 300.0 - Nitrate	104		80-120			2.3	2.1	9 (1)	20
Batch number: 11300039403A	Sample number(s): 6445463-6445471 BKG: 6445463								
17a pH by 9045C						6.58	6.60	0	3
Batch number: 11301162401B	Sample number(s): 6445463-6445471 BKG: 6445471								
Moisture Content by 160.3						8.8	8.8	0	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11295SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6445463	96	97	84	89	92	102
6445464	88	91	81	82	85	93
6445465	95	97	82	84	86	96
6445466	88	90	81	83	86	96
6445467	88	91	75	85	86	96
6445468	91	93	70	83	83	98
6445469	89	92	69	84	86	95
6445470	87	89	71	79	82	96
6445471	91	94	70	83	84	99
Blank	86	90	84	86	88	99
LCS	89	90	91	85	88	101
MS	92	94	86	86	87	96
MSD	95	98	89	91	92	101
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11295SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6445463	90	55	69
6445464	96	79	68
6445465	92	78	72
6445466	86	77	71
6445467	88	79	88
6445468	82	72	82
6445469	85	77	86
6445470	79	72	82
6445471	87	60	85
Blank	93	82	81
LCS	98	81	86
MS	100	83	84
MSD	97	80	80
Limits:	40-130	45-130	45-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11299A16A

	Trifluorotoluene-F

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Surrogate Quality Control

6445463	119
6445464	90
6445465	91
Blank	96
LCS	89
LCSD	93
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11300A20A

	Trifluorotoluene-F
6445473	86
Blank	88
LCS	117
LCSD	115
Limits:	63-135

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112990025A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6445463	110	121*
6445464	115	129*
6445465	117	131*
6445466	97	109
6445467	101	106
6445468	104	96
6445469	101	113
6445470	107	113
6445471	95	100
Blank	103	124*
LCS	136	163*
LCSD	101	113
MS	108	109
MSD	104	118
Limits:	53-139	45-120

Analysis Name: 18a Alcohols by 8015B
Batch number: 112970037A

	Acetone
6445463	89
6445464	92
6445465	94
6445466	89
Blank	97
LCS	103
MS	94
MSD	95
Limits:	42-138

Analysis Name: 19a Glycols by 8015B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272534
Reported: 11/18/11 at 12:00 PM

Surrogate Quality Control

Batch number: 112980042A

	Tetramethylene glycol
6445463	88
6445464	88
6445465	86
6445466	87
Blank	100
LCS	99
MS	88
MSD	87
Limits:	29-137

Analysis Name: 22a Terphenyls by 8015B
Batch number: 112990013A

	n-Triacontane-d62
6445463	86
6445464	78
6445465	75
6445466	93
Blank	76
LCS	76
MS	95
MSD	85
Limits:	19-152

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113000011A

	Chlorobenzene	Orthoterphenyl
6445463	84	87
6445464	89	91
6445465	85	89
6445466	90	92
Blank	83	87
LCS	80	90
MS	85	75
MSD	88	81
Limits:	37-125	47-145

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13013 1272534 6445463-73

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-023-SA7-SB-2.5	10.20.11	0915	SOIL	NONE	2-Encores										X											
SL-023-SA7-SB-2.0-3.0	10.20.11	0918	SOIL	NONE	1-SS Sleeve			X	X																	
SL-023-SA7-SB-2.0-3.0	10.20.11	0918	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X		
SL-060-SA7-SB-3.0	10.20.11	1100	SOIL	NONE	2-Encores										X											
SL-060-SA7-SB-2.5-3.5	10.20.11	1105	SOIL	NONE	1-SS Sleeve			X	X																	
SL-060-SA7-SB-2.5-3.5	10.20.11	1105	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X		
SL-069-SA7-SB-3.0	10.20.11	1520	SOIL	NONE	2-Encores										X											
SL-069-SA7-SB-2.5-3.5	10.20.11	1523	SOIL	NONE	1-SS Sleeve			X	X																	
SL-069-SA7-SB-2.5-3.5	10.20.11	1523	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X		
SL-148-SA7-SB-0.0-1.0	10.20.11	1423	SOIL	NONE	1-SS Sleeve			X	X																	
SL-148-SA7-SB-0.0-1.0	10.20.11	1423	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X		
SL-026-SA5DS-SB-4.0-5.0	10.20.11	1237	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X												
SL-026-SA5DS-SB-9.0-10.0	10.20.11	1155	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-040-SA5DS-SB-4.0-5.0	10.20.11	1001	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-040-SA5DS-SB-9.0-10.0	10.20.11	0920	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-016-SA8S-SB-4.0-5.0	10.20.11	1508	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
EB-SA5DS-SB-102011	10.20.11	1400	WATER	NONE	1-1 L Amber														X							HGL ASTM II WATER-DTP crew
TB-~~4012011~~ 102011 NLA 10/21/11	10.20.11	0800	WATER	NONE	2-40 mL Vials										X											

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/20/2011 / 1630	10/21/11 0915	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No(s)	
		8767 9858 7618,7629	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 01, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/21/2011
Group Number: 1272535
SDG: DX150
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-023-SA7-SB-2.0-3.0 Soil	6445474
SL-060-SA7-SB-2.5-3.5 Soil	6445475
SL-069-SA7-SB-2.5-3.5 Soil	6445476
SL-148-SA7-SB-0.0-1.0 Soil	6445477
SL-026-SA5DS-SB-4.0-5.0 Soil	6445478
SL-026-SA5DS-SB-9.0-10.0 Soil	6445479
SL-040-SA5DS-SB-4.0-5.0 Soil	6445480
SL-040-SA5DS-SB-9.0-10.0 Soil	6445481
SL-016-SA5DS-SB-4.0-5.0 Soil	6445482

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445474
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD023 SDG#: DX150-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445474
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD023 SDG#: DX150-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0332 U	0.0332	1.03	1
11031	12378-PeCDD	40321-76-4	0.0570 JBQ	0.0274	5.15	1
11031	123478-HxCDD	39227-28-6	0.0513 JBQ	0.0261	5.15	1
11031	123678-HxCDD	57653-85-7	0.199 JB	0.0265	5.15	1
11031	123789-HxCDD	19408-74-3	0.310 JBQ	0.0252	5.15	1
11031	1234678-HpCDD	35822-46-9	2.55 JB	0.0314	5.15	1
11031	OCDD	3268-87-9	22.0 B	0.0411	10.3	1
11031	2378-TCDF	51207-31-9	0.0490 JQ	0.0359	1.03	1
11031	12378-PeCDF	57117-41-6	0.0624 JBQ	0.0233	5.15	1
11031	23478-PeCDF	57117-31-4	0.176 JB	0.0237	5.15	1
11031	123478-HxCDF	70648-26-9	0.462 J	0.0289	5.15	1
11031	123678-HxCDF	57117-44-9	0.0703 JB	0.0245	5.15	1
11031	123789-HxCDF	72918-21-9	0.137 JB	0.0298	5.15	1
11031	234678-HxCDF	60851-34-5	0.0988 JB	0.0218	5.15	1
11031	1234678-HpCDF	67562-39-4	0.653 JB	0.0166	5.15	1
11031	1234789-HpCDF	55673-89-7	0.0434 JB	0.0277	5.15	1
11031	OCDF	39001-02-0	1.53 JB	0.0413	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	69	25 - 181
13C12-123478-HxCDD	79	32 - 141
13C12-123678-HxCDD	80	28 - 130
13C12-123789-HxCDD	76	28 - 130
13C12-1234678-HpCDD	74	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	68	24 - 169
13C12-12378-PeCDF	73	24 - 185
13C12-23478-PeCDF	63	21 - 178
13C12-123478-HxCDF	57	26 - 152
13C12-123678-HxCDF	68	26 - 123
13C12-234678-HxCDF	70	28 - 136
13C12-123789-HxCDF	62	29 - 147
13C12-1234678-HpCDF	78	28 - 143
13C12-1234789-HpCDF	55	26 - 138
13C12-OCDF	55	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445474
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD023 SDG#: DX150-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-023-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-023-SA7-SB-2.0-3.0

LLI Sample # SW 6445474
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:18

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD023 SDG#: DX150-12

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 02:51	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445475
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD060 SDG#: DX150-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445475
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD060 SDG#: DX150-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0242 U	0.0242	1.04	1
11031	12378-PeCDD	40321-76-4	0.0208 U	0.0208	5.21	1
11031	123478-HxCDD	39227-28-6	0.0162 U	0.0162	5.21	1
11031	123678-HxCDD	57653-85-7	0.0201 JBQ	0.0165	5.21	1
11031	123789-HxCDD	19408-74-3	0.0198 JB	0.0169	5.21	1
11031	1234678-HpCDD	35822-46-9	0.283 JB	0.0176	5.21	1
11031	OCDD	3268-87-9	1.58 JB	0.0248	10.4	1
11031	2378-TCDF	51207-31-9	0.0164 U	0.0164	1.04	1
11031	12378-PeCDF	57117-41-6	0.00932 U	0.00932	5.21	1
11031	23478-PeCDF	57117-31-4	0.0512 JBQ	0.00942	5.21	1
11031	123478-HxCDF	70648-26-9	0.0458 J	0.0119	5.21	1
11031	123678-HxCDF	57117-44-9	0.00901 U	0.00901	5.21	1
11031	123789-HxCDF	72918-21-9	0.0231 JBQ	0.0114	5.21	1
11031	234678-HxCDF	60851-34-5	0.0300 JBQ	0.00848	5.21	1
11031	1234678-HpCDF	67562-39-4	0.138 JB	0.00942	5.21	1
11031	1234789-HpCDF	55673-89-7	0.0237 JBQ	0.0171	5.21	1
11031	OCDF	39001-02-0	0.200 JBQ	0.0326	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	78	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	92	28 - 130
13C12-123789-HxCDD	88	28 - 130
13C12-1234678-HpCDD	85	23 - 140
13C12-OCDD	85	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	56	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	91	28 - 143
13C12-1234789-HpCDF	61	26 - 138
13C12-OCDF	60	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445475
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD060 SDG#: DX150-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-060-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-060-SA7-SB-2.5-3.5

LLI Sample # SW 6445475
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:05

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD060 SDG#: DX150-13

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 03:48	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445476
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD069 SDG#: DX150-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.0	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445476
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD069 SDG#: DX150-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0271 JQ	0.0243	1.01	1
11031	12378-PeCDD	40321-76-4	0.0228 U	0.0228	5.04	1
11031	123478-HxCDD	39227-28-6	0.0170 U	0.0170	5.04	1
11031	123678-HxCDD	57653-85-7	0.0460 JBQ	0.0179	5.04	1
11031	123789-HxCDD	19408-74-3	0.0442 JBQ	0.0174	5.04	1
11031	1234678-HpCDD	35822-46-9	0.429 JB	0.0198	5.04	1
11031	OCDD	3268-87-9	2.28 JB	0.0297	10.1	1
11031	2378-TCDF	51207-31-9	0.0260 JQ	0.0204	1.01	1
11031	12378-PeCDF	57117-41-6	0.0351 JB	0.0121	5.04	1
11031	23478-PeCDF	57117-31-4	0.0799 JBQ	0.0125	5.04	1
11031	123478-HxCDF	70648-26-9	0.0475 J	0.0145	5.04	1
11031	123678-HxCDF	57117-44-9	0.0469 JBQ	0.0122	5.04	1
11031	123789-HxCDF	72918-21-9	0.0420 JBQ	0.0166	5.04	1
11031	234678-HxCDF	60851-34-5	0.0564 JBQ	0.0123	5.04	1
11031	1234678-HpCDF	67562-39-4	0.157 JB	0.0118	5.04	1
11031	1234789-HpCDF	55673-89-7	0.0242 JB	0.0228	5.04	1
11031	OCDF	39001-02-0	0.210 JBQ	0.0347	10.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	81	32 - 141
13C12-123678-HxCDD	81	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	78	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	58	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	69	28 - 136
13C12-123789-HxCDF	60	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	54	26 - 138
13C12-OCDF	52	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445476
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD069 SDG#: DX150-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-069-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-069-SA7-SB-2.5-3.5

LLI Sample # SW 6445476
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD069 SDG#: DX150-14

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 04:45	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445477
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD148 SDG#: DX150-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445477
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD148 SDG#: DX150-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0293 U	0.0293	1.04	1
11031	12378-PeCDD	40321-76-4	0.0351 JBQ	0.0268	5.22	1
11031	123478-HxCDD	39227-28-6	0.0500 JBQ	0.0238	5.22	1
11031	123678-HxCDD	57653-85-7	0.111 JB	0.0242	5.22	1
11031	123789-HxCDD	19408-74-3	0.128 JB	0.0244	5.22	1
11031	1234678-HpCDD	35822-46-9	1.84 JB	0.0293	5.22	1
11031	OCDD	3268-87-9	16.8 B	0.0396	10.4	1
11031	2378-TCDF	51207-31-9	0.0365 JQ	0.0286	1.04	1
11031	12378-PeCDF	57117-41-6	0.0730 JB	0.0154	5.22	1
11031	23478-PeCDF	57117-31-4	0.108 JB	0.0167	5.22	1
11031	123478-HxCDF	70648-26-9	0.110 J	0.0229	5.22	1
11031	123678-HxCDF	57117-44-9	0.0770 JBQ	0.0180	5.22	1
11031	123789-HxCDF	72918-21-9	0.0441 JB	0.0209	5.22	1
11031	234678-HxCDF	60851-34-5	0.0610 JB	0.0152	5.22	1
11031	1234678-HpCDF	67562-39-4	0.437 JB	0.0158	5.22	1
11031	1234789-HpCDF	55673-89-7	0.0671 JB	0.0253	5.22	1
11031	OCDF	39001-02-0	0.833 JB	0.0442	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	81	32 - 141
13C12-123678-HxCDD	82	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	81	17 - 157
13C12-2378-TCDF	68	24 - 169
13C12-12378-PeCDF	77	24 - 185
13C12-23478-PeCDF	64	21 - 178
13C12-123478-HxCDF	46	26 - 152
13C12-123678-HxCDF	60	26 - 123
13C12-234678-HxCDF	69	28 - 136
13C12-123789-HxCDF	60	29 - 147
13C12-1234678-HpCDF	75	28 - 143
13C12-1234789-HpCDF	55	26 - 138
13C12-OCDF	56	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-148-SA7-SB-0.0-1.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445477
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD148 SDG#: DX150-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-148-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-148-SA7-SB-0.0-1.0

LLI Sample # SW 6445477
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 14:23

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD148 SDG#: DX150-15

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 05:41	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445478
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD264 SDG#: DX150-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.0	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445478
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD264 SDG#: DX150-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0276 U	0.0276	1.05	1
11031	12378-PeCDD	40321-76-4	0.0233 U	0.0233	5.27	1
11031	123478-HxCDD	39227-28-6	0.0419 JBQ	0.0190	5.27	1
11031	123678-HxCDD	57653-85-7	0.0749 JBQ	0.0193	5.27	1
11031	123789-HxCDD	19408-74-3	0.0559 JBQ	0.0188	5.27	1
11031	1234678-HpCDD	35822-46-9	0.555 JBQ	0.0239	5.27	1
11031	OCDD	3268-87-9	3.60 JB	0.0293	10.5	1
11031	2378-TCDF	51207-31-9	0.0251 JQ	0.0202	1.05	1
11031	12378-PeCDF	57117-41-6	0.0656 JB	0.0118	5.27	1
11031	23478-PeCDF	57117-31-4	0.123 JB	0.0132	5.27	1
11031	123478-HxCDF	70648-26-9	0.0647 JQ	0.0172	5.27	1
11031	123678-HxCDF	57117-44-9	0.0349 JBQ	0.0127	5.27	1
11031	123789-HxCDF	72918-21-9	0.0230 JB	0.0161	5.27	1
11031	234678-HxCDF	60851-34-5	0.0370 JBQ	0.0116	5.27	1
11031	1234678-HpCDF	67562-39-4	0.191 JB	0.0104	5.27	1
11031	1234789-HpCDF	55673-89-7	0.0221 JBQ	0.0203	5.27	1
11031	OCDF	39001-02-0	0.395 JB	0.0424	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	71	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	78	28 - 130
13C12-123789-HxCDD	78	28 - 130
13C12-1234678-HpCDD	76	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	63	24 - 169
13C12-12378-PeCDF	72	24 - 185
13C12-23478-PeCDF	62	21 - 178
13C12-123478-HxCDF	45	26 - 152
13C12-123678-HxCDF	61	26 - 123
13C12-234678-HxCDF	65	28 - 136
13C12-123789-HxCDF	56	29 - 147
13C12-1234678-HpCDF	79	28 - 143
13C12-1234789-HpCDF	50	26 - 138
13C12-OCDF	48	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-026-SA5DS-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445478
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD264 SDG#: DX150-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445478
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 12:37

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD264 SDG#: DX150-16

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 06:38	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445479
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD269 SDG#: DX150-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445479
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD269 SDG#: DX150-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0537 JQ	0.0319	1.08	1
11031	12378-PeCDD	40321-76-4	0.110 JB	0.0273	5.40	1
11031	123478-HxCDD	39227-28-6	0.0210 U	0.0210	5.40	1
11031	123678-HxCDD	57653-85-7	0.0734 JB	0.0199	5.40	1
11031	123789-HxCDD	19408-74-3	0.0487 JBQ	0.0199	5.40	1
11031	1234678-HpCDD	35822-46-9	0.263 JB	0.0257	5.40	1
11031	OCDD	3268-87-9	0.667 JB	0.0381	10.8	1
11031	2378-TCDF	51207-31-9	0.0563 J	0.0241	1.08	1
11031	12378-PeCDF	57117-41-6	0.159 JB	0.0144	5.40	1
11031	23478-PeCDF	57117-31-4	0.0157 U	0.0157	5.40	1
11031	123478-HxCDF	70648-26-9	0.0689 JQ	0.0193	5.40	1
11031	123678-HxCDF	57117-44-9	0.0426 JBQ	0.0150	5.40	1
11031	123789-HxCDF	72918-21-9	0.0855 JB	0.0201	5.40	1
11031	234678-HxCDF	60851-34-5	0.0297 JBQ	0.0145	5.40	1
11031	1234678-HpCDF	67562-39-4	0.0992 JB	0.00999	5.40	1
11031	1234789-HpCDF	55673-89-7	0.0417 JBQ	0.0218	5.40	1
11031	OCDF	39001-02-0	0.210 JB	0.0469	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	69	25 - 181
13C12-123478-HxCDD	73	32 - 141
13C12-123678-HxCDD	76	28 - 130
13C12-123789-HxCDD	73	28 - 130
13C12-1234678-HpCDD	74	23 - 140
13C12-OCDD	73	17 - 157
13C12-2378-TCDF	59	24 - 169
13C12-12378-PeCDF	71	24 - 185
13C12-23478-PeCDF	58	21 - 178
13C12-123478-HxCDF	47	26 - 152
13C12-123678-HxCDF	62	26 - 123
13C12-234678-HxCDF	61	28 - 136
13C12-123789-HxCDF	52	29 - 147
13C12-1234678-HpCDF	82	28 - 143
13C12-1234789-HpCDF	47	26 - 138
13C12-OCDF	45	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-026-SA5DS-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445479
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD269 SDG#: DX150-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-026-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-026-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445479
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 11:55

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD269 SDG#: DX150-17

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 07:35	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445480
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD404 SDG#: DX150-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445480
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD404 SDG#: DX150-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0378 U	0.0378	1.08	1
11031	12378-PeCDD	40321-76-4	0.0860 JBQ	0.0312	5.40	1
11031	123478-HxCDD	39227-28-6	0.0279 JB	0.0184	5.40	1
11031	123678-HxCDD	57653-85-7	0.0420 JB	0.0181	5.40	1
11031	123789-HxCDD	19408-74-3	0.0702 JBQ	0.0179	5.40	1
11031	1234678-HpCDD	35822-46-9	0.186 JB	0.0256	5.40	1
11031	OCDD	3268-87-9	0.582 JB	0.0418	10.8	1
11031	2378-TCDF	51207-31-9	0.0275 U	0.0275	1.08	1
11031	12378-PeCDF	57117-41-6	0.0733 JB	0.0158	5.40	1
11031	23478-PeCDF	57117-31-4	0.0902 JBQ	0.0173	5.40	1
11031	123478-HxCDF	70648-26-9	0.0409 JQ	0.0217	5.40	1
11031	123678-HxCDF	57117-44-9	0.0414 JBQ	0.0162	5.40	1
11031	123789-HxCDF	72918-21-9	0.0552 JB	0.0185	5.40	1
11031	234678-HxCDF	60851-34-5	0.0383 JB	0.0138	5.40	1
11031	1234678-HpCDF	67562-39-4	0.135 JBQ	0.0122	5.40	1
11031	1234789-HpCDF	55673-89-7	0.0399 JB	0.0205	5.40	1
11031	OCDF	39001-02-0	0.171 JB	0.0579	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	64	25 - 164
13C12-12378-PeCDD	67	25 - 181
13C12-123478-HxCDD	72	32 - 141
13C12-123678-HxCDD	74	28 - 130
13C12-123789-HxCDD	73	28 - 130
13C12-1234678-HpCDD	72	23 - 140
13C12-OCDD	70	17 - 157
13C12-2378-TCDF	59	24 - 169
13C12-12378-PeCDF	69	24 - 185
13C12-23478-PeCDF	59	21 - 178
13C12-123478-HxCDF	41	26 - 152
13C12-123678-HxCDF	52	26 - 123
13C12-234678-HxCDF	61	28 - 136
13C12-123789-HxCDF	54	29 - 147
13C12-1234678-HpCDF	68	28 - 143
13C12-1234789-HpCDF	48	26 - 138
13C12-OCDF	45	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-040-SA5DS-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445480
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD404 SDG#: DX150-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445480
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 10:01

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD404 SDG#: DX150-18

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 08:31	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445481
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD409 SDG#: DX150-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.0	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445481
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD409 SDG#: DX150-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0311 U	0.0311	1.07	1
11031	12378-PeCDD	40321-76-4	0.0347 JBQ	0.0261	5.34	1
11031	123478-HxCDD	39227-28-6	0.0171 U	0.0171	5.34	1
11031	123678-HxCDD	57653-85-7	0.0363 JB	0.0176	5.34	1
11031	123789-HxCDD	19408-74-3	0.0672 JB	0.0171	5.34	1
11031	1234678-HpCDD	35822-46-9	0.245 JB	0.0226	5.34	1
11031	OCDD	3268-87-9	0.613 JB	0.0396	10.7	1
11031	2378-TCDF	51207-31-9	0.0230 U	0.0230	1.07	1
11031	12378-PeCDF	57117-41-6	0.0126 U	0.0126	5.34	1
11031	23478-PeCDF	57117-31-4	0.0293 JB	0.0138	5.34	1
11031	123478-HxCDF	70648-26-9	0.0471 JQ	0.0153	5.34	1
11031	123678-HxCDF	57117-44-9	0.0142 JBQ	0.0123	5.34	1
11031	123789-HxCDF	72918-21-9	0.118 JBQ	0.0147	5.34	1
11031	234678-HxCDF	60851-34-5	0.0345 JBQ	0.0108	5.34	1
11031	1234678-HpCDF	67562-39-4	0.0813 JB	0.0102	5.34	1
11031	1234789-HpCDF	55673-89-7	0.0318 JBQ	0.0194	5.34	1
11031	OCDF	39001-02-0	0.190 JB	0.0460	10.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	84	25 - 164
13C12-12378-PeCDD	90	25 - 181
13C12-123478-HxCDD	94	32 - 141
13C12-123678-HxCDD	94	28 - 130
13C12-123789-HxCDD	92	28 - 130
13C12-1234678-HpCDD	90	23 - 140
13C12-OCDD	86	17 - 157
13C12-2378-TCDF	77	24 - 169
13C12-12378-PeCDF	94	24 - 185
13C12-23478-PeCDF	81	21 - 178
13C12-123478-HxCDF	58	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	93	28 - 143
13C12-1234789-HpCDF	61	26 - 138
13C12-OCDF	54	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-040-SA5DS-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445481
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD409 SDG#: DX150-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-040-SA5DS-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-040-SA5DS-SB-9.0-10.0

LLI Sample # SW 6445481
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 09:20

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD409 SDG#: DX150-19

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 18:14	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445482
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD016 SDG#: DX150-20*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445482
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD016 SDG#: DX150-20*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0435 U	0.0435	1.09	1
11031	12378-PeCDD	40321-76-4	0.0361 U	0.0361	5.44	1
11031	123478-HxCDD	39227-28-6	0.0230 JBQ	0.0221	5.44	1
11031	123678-HxCDD	57653-85-7	0.0219 U	0.0219	5.44	1
11031	123789-HxCDD	19408-74-3	0.0393 JBQ	0.0214	5.44	1
11031	1234678-HpCDD	35822-46-9	0.314 JBQ	0.0243	5.44	1
11031	OCDD	3268-87-9	0.618 JB	0.0498	10.9	1
11031	2378-TCDF	51207-31-9	0.0331 U	0.0331	1.09	1
11031	12378-PeCDF	57117-41-6	0.0529 JBQ	0.0164	5.44	1
11031	23478-PeCDF	57117-31-4	0.134 JBQ	0.0173	5.44	1
11031	123478-HxCDF	70648-26-9	0.0636 J	0.0231	5.44	1
11031	123678-HxCDF	57117-44-9	0.0383 JBQ	0.0184	5.44	1
11031	123789-HxCDF	72918-21-9	0.0410 JB	0.0195	5.44	1
11031	234678-HxCDF	60851-34-5	0.0377 JBQ	0.0146	5.44	1
11031	1234678-HpCDF	67562-39-4	0.0831 JB	0.0163	5.44	1
11031	1234789-HpCDF	55673-89-7	0.0335 JB	0.0266	5.44	1
11031	OCDF	39001-02-0	0.140 JB	0.0594	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	68	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	76	32 - 141
13C12-123678-HxCDD	78	28 - 130
13C12-123789-HxCDD	77	28 - 130
13C12-1234678-HpCDD	78	23 - 140
13C12-OCDD	72	17 - 157
13C12-2378-TCDF	63	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	42	26 - 152
13C12-123678-HxCDF	53	26 - 123
13C12-234678-HxCDF	65	28 - 136
13C12-123789-HxCDF	58	29 - 147
13C12-1234678-HpCDF	72	28 - 143
13C12-1234789-HpCDF	54	26 - 138
13C12-OCDF	47	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445482
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD016 SDG#: DX150-20*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-016-SA5DS-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-016-SA5DS-SB-4.0-5.0

LLI Sample # SW 6445482
LLI Group # 1272535
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/20/2011 15:08

Submitted: 10/21/2011 09:15
Reported: 11/01/2011 12:50

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

SD016 SDG#: DX150-20*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11300001	10/30/2011 19:10	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11300001	10/27/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11301162401B	10/28/2011 22:37	Lisa J Cooke	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272535
Reported: 11/01/11 at 12:50 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11301162401B	Sample number(s): 6445474-6445482								
Moisture Content by 160.3					99		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11300001	Sample number(s): 6445474-6445482								
2378-TCDD	0.0422 U	0.0422	1.00	ng/kg	107		67-158		
12378-PeCDD	0.0804 J	0.0346	5.00	ng/kg	105		70-142		
123478-HxCDD	0.0345 J	0.0262	5.00	ng/kg	97		70-164		
123678-HxCDD	0.0438 J	0.0267	5.00	ng/kg	94		76-134		
123789-HxCDD	0.0427 J	0.0259	5.00	ng/kg	101		64-162		
1234678-HpCDD	0.295 J	0.0295	5.00	ng/kg	97		70-140		
OCDD	0.493 J	0.0380	10.0	ng/kg	96		78-144		
2378-TCDF	0.0353 U	0.0353	1.00	ng/kg	103		75-158		
12378-PeCDF	0.0458 J	0.0185	5.00	ng/kg	101		80-134		
23478-PeCDF	0.0744 J	0.0187	5.00	ng/kg	96		68-160		
123478-HxCDF	0.0234 U	0.0234	5.00	ng/kg	96		72-134		
123678-HxCDF	0.0512 J	0.0189	5.00	ng/kg	97		84-130		
123789-HxCDF	0.0857 J	0.0250	5.00	ng/kg	99		78-130		
234678-HxCDF	0.0555 J	0.0210	5.00	ng/kg	94		70-156		
1234678-HpCDF	0.128 J	0.0153	5.00	ng/kg	90		82-122		
1234789-HpCDF	0.0489 J	0.0291	5.00	ng/kg	96		78-138		
OCDF	0.188 J	0.0680	10.0	ng/kg	96		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11301162401B	Sample number(s): 6445474-6445482					BKG: P445471			
Moisture Content by 160.3						8.8	8.8	0	20
Batch number: 11300001	Sample number(s): 6445474-6445482					UNSPK: P437220			
2378-TCDD	103	109	67-158	2	25				
12378-PeCDD	101	102	70-142	3	25				
123478-HxCDD	99	96	70-164	6	25				
123678-HxCDD	92	93	76-134	3	25				
123789-HxCDD	101	101	64-162	3	25				
1234678-HpCDD	96	98	70-140	2	25				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272535
Reported: 11/01/11 at 12:50 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
OCDD	94	95	78-144	2	25				
2378-TCDF	98	94	75-158	8	25				
12378-PeCDF	99	100	80-134	2	25				
23478-PeCDF	95	94	68-160	5	25				
123478-HxCDF	97	96	72-134	4	25				
123678-HxCDF	96	97	84-130	3	25				
123789-HxCDF	99	99	78-130	4	25				
234678-HxCDF	95	96	70-156	3	25				
1234678-HpCDF	89	89	82-122	3	25				
1234789-HpCDF	95	94	78-138	5	25				
OCDF	96	95	63-170	5	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11300001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6445474	72	63	57	68	70	62
6445475	78	70	56	72	79	68
6445476	74	67	58	72	69	60
6445477	72	64	46	60	69	60
6445478	69	62	45	61	65	56
6445479	67	58	47	62	61	52
6445480	64	59	41	52	61	54
6445481	84	81	58	72	79	67
6445482	68	67	42	53	65	58
Blank	58	52	46	57	53	52
MS	78	72	72	81	81	73
MSD	71	67	64	72	72	67
OPR	63	57	56	65	59	59
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6445474	78	55	55	69	79	80
6445475	91	61	60	78	89	92
6445476	84	54	52	73	81	81
6445477	75	55	56	73	81	82
6445478	79	50	48	71	80	78
6445479	82	47	45	69	73	76
6445480	68	48	45	67	72	74
6445481	93	61	54	90	94	94
6445482	72	54	47	75	76	78
Blank	69	45	42	59	62	65
MS	95	68	68	79	90	92

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272535
Reported: 11/01/11 at 12:50 PM

Surrogate Quality Control

MSD	84	58	52	73	82	81
OPR	80	53	51	65	72	72
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6445474	76	74	77	68	73	
6445475	88	85	85	73	81	
6445476	79	78	77	70	78	
6445477	80	79	81	68	77	
6445478	78	76	76	63	72	
6445479	73	74	73	59	71	
6445480	73	72	70	59	69	
6445481	92	90	86	77	94	
6445482	77	78	72	63	75	
Blank	63	65	62	52	59	
MS	89	88	88	74	82	
MSD	80	79	76	69	75	
OPR	71	74	70	56	65	
Limits:	28-130	23-140	17-157	24-169	24-185	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1272535 6445474-82

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS									SECONDARY FOR ALL LOCATIONS										Other Instructions and Notes
						*Metals EPA 6010/6020/9A7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
SL-023-SA7-SB-2.5	10.20.11	0915	SOIL	NONE	2-Encores										X										
SL-023-SA7-SB-2.0-3.0	10.20.11	0918	SOIL	NONE	1-SS Sleeve			X	X																
SL-023-SA7-SB-2.0-3.0	10.20.11	0918	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X	
SL-060-SA7-SB-3.0	10.20.11	1100	SOIL	NONE	2-Encores										X										
SL-060-SA7-SB-2.5-3.5	10.20.11	1105	SOIL	NONE	1-SS Sleeve			X	X																
SL-060-SA7-SB-2.5-3.5	10.20.11	1105	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X	
SL-069-SA7-SB-3.0	10.20.11	1520	SOIL	NONE	2-Encores										X										
SL-069-SA7-SB-2.5-3.5	10.20.11	1523	SOIL	NONE	1-SS Sleeve			X	X																
SL-069-SA7-SB-2.5-3.5	10.20.11	1523	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X	
SL-148-SA7-SB-0.0-1.0	10.20.11	1423	SOIL	NONE	1-SS Sleeve			X	X																
SL-148-SA7-SB-0.0-1.0	10.20.11	1423	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X				X	X	X	X	
SL-026-SA5DS-SB-4.0-5.0	10.20.11	1237	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X	X											
SL-026-SA5DS-SB-9.0-10.0	10.20.11	1155	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-040-SA5DS-SB-4.0-5.0	10.20.11	1001	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-040-SA5DS-SB-9.0-10.0	10.20.11	0920	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
SL-016-SA8S-SB-4.0-5.0	10.20.11	1508	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X												
EB-SA5DS-SB-102D11	10.20.11	1400	WATER	NONE	1-1 L Amber													X							HGL ASTM II WATER-DTP crew
TB-1012011	10.20.11	0800	WATER	NONE	2-40 mL Vials										X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/20/2011 / 1630	10/21/11 0915	Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8767 9858 7618,7629	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 18, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/22/2011
Group Number: 1272728
SDG: DE277
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-017-SA8S-SB-4.0-5.0 Soil	6446809
SL-018-SA8S-SB-4.0-5.0 Soil	6446810
SL-018-SA8S-SB-4.0-5.0MS Soil	6446811
SL-018-SA8S-SB-4.0-5.0MSD Soil	6446812
SL-018-SA8S-SB-4.0-5.0DUP Soil	6446813
SL-018-SA8S-SB-4.0-5.0RL MS Soil	6446814
SL-018-SA8S-SB-4.0-5.0RL LCS Soil	6446815
SL-018-SA8S-SB-7.5-8.5 Soil	6446816
DUP02-SA8S-QC-102111 Soil	6446817
SL-065-SA7-SB-2.0-3.0 Soil	6446818
SL-014-SA8S-SB-4.0-5.0 Soil	6446819
SL-014-SA8S-SB-7.0-8.0 Soil	6446820
SL-015-SA8S-SB-4.0-5.0 Soil	6446821
SL-015-SA8S-SB-9.0-10.0 Soil	6446822

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446809
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7301 SDG#: DE277-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	72	U	72	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	72	U	72	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446809
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7301 SDG#: DE277-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.73	U	0.73	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.73	U	0.73	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.73	U	0.73	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	1.0	J	0.73	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.82	J	0.73	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.73	U	0.73	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.6	U	6.6	20	1
10138	Di-n-butylphthalate	84-74-2	6.6	U	6.6	20	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.73	U	0.73	1.8	1
10138	Diethylphthalate	84-66-2	6.6	U	6.6	20	1
10138	Dimethylphthalate	131-11-3	6.6	U	6.6	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	34		6.6	20	1
10138	Fluoranthene	206-44-0	0.73	U	0.73	1.8	1
10138	Fluorene	86-73-7	0.73	U	0.73	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.87	J	0.73	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.73	U	0.73	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.73	U	0.73	1.8	1
10138	Naphthalene	91-20-3	0.73	U	0.73	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.73	U	0.73	1.8	1
10138	Di-n-octylphthalate	117-84-0	50		6.6	20	1
10138	Phenanthrene	85-01-8	0.73	U	0.73	1.8	1
10138	Pyrene	129-00-0	0.73	U	0.73	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9	1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9	1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	28,400		6.51	21.5	1
07914	Boron	7440-42-8	11.5		0.387	5.38	1
01650	Calcium	7440-70-2	5,480		2.69	21.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446809
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7301 SDG#: DE277-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01654	Iron	7439-89-6	29,700		14.0	108	5
01656	Lithium	7439-93-2	27.9		0.67	2.2	1
01657	Magnesium	7439-95-4	6,630		0.474	10.8	1
06958	Manganese	7439-96-5	299		0.0387	0.538	1
10145	Phosphorus	7723-14-0	399		0.377	10.8	1
01662	Potassium	7440-09-7	3,490		12.2	53.8	1
01667	Sodium	7440-23-5	94.3	J	6.40	108	1
07968	Strontium	7440-24-6	22.0		0.0269	0.538	1
06969	Tin	7440-31-5	2.80	J	0.344	10.8	1
06970	Titanium	7440-32-6	1,200		0.0764	1.08	1
10146	Zirconium	7440-67-7	6.32		0.495	5.38	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.138	J	0.0789	0.213	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.70		0.0853	0.426	2
06126	Barium	7440-39-3	74.8		0.113	0.426	2
06127	Beryllium	7440-41-7	0.757		0.0171	0.107	2
06128	Cadmium	7440-43-9	0.159		0.0469	0.107	2
06131	Chromium	7440-47-3	28.5		0.128	0.426	2
06132	Cobalt	7440-48-4	9.96		0.0213	0.107	2
06133	Copper	7440-50-8	15.0		0.0853	0.426	2
06135	Lead	7439-92-1	8.87		0.0109	0.213	2
06138	Molybdenum	7439-98-7	0.555		0.0533	0.107	2
06139	Nickel	7440-02-0	17.7		0.107	0.426	2
06141	Selenium	7782-49-2	0.233	J	0.0618	0.426	2
06142	Silver	7440-22-4	0.0315	J	0.0151	0.107	2
06145	Thallium	7440-28-0	0.291		0.0320	0.107	2
06148	Vanadium	7440-62-2	48.3		0.0234	0.107	2
06149	Zinc	7440-66-6	68.2		0.597	3.20	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0172	J	0.0074	0.105	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.2		0.89	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	32.9	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.44	J	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446809
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7301 SDG#: DE277-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	6.89	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	8.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 02:44	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 07:45	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 08:20	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:35	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:09	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:11	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446809
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7301 SDG#: DE277-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:11	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:11	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:11	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:27	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 22:16	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 02:08	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 12:29	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446810
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	550	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700	1
04688	Benzoic acid	65-85-0	180	U	180	550	1
04688	Benzyl alcohol	100-51-6	180	U	180	550	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180	1
04688	4-Chloroaniline	106-47-8	73	U	73	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180	1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550	1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	37	U	37	180	1
04688	4-Methylphenol	106-44-5	37	U	37	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	37	U	37	180	1
04688	4-Nitroaniline	100-01-6	73	U	73	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	550	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	550	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446810
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180	1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.74	U	0.74	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.74	U	0.74	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.74	U	0.74	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.74	U	0.74	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.74	U	0.74	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.74	U	0.74	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.74	U	0.74	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.74	U	0.74	1.9	1
10138	Fluorene	86-73-7	0.74	U	0.74	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.74	U	0.74	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.74	U	0.74	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.74	U	0.74	1.9	1
10138	Naphthalene	91-20-3	0.74	U	0.74	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.74	U	0.74	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.74	U	0.74	1.9	1
10138	Pyrene	129-00-0	0.74	U	0.74	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.51	J	0.37	1.9	1
10225	PCB-1254	11097-69-1	1.9	J	0.37	1.9	1
10225	PCB-1260	11096-82-5	0.80	J	0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS and this sample is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446810
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	30,600		6.63	21.9	1
07914	Boron	7440-42-8	10.9		0.394	5.48	1
01650	Calcium	7440-70-2	14,300		2.74	21.9	1
01654	Iron	7439-89-6	28,600		14.3	110	5
01656	Lithium	7439-93-2	29.1		0.68	2.2	1
01657	Magnesium	7439-95-4	5,660		0.482	11.0	1
06958	Manganese	7439-96-5	315		0.0394	0.548	1
10145	Phosphorus	7723-14-0	187		0.383	11.0	1
01662	Potassium	7440-09-7	2,950		12.4	54.8	1
01667	Sodium	7440-23-5	84.3	J	6.52	110	1
07968	Strontium	7440-24-6	21.8		0.0274	0.548	1
06969	Tin	7440-31-5	3.05	J	0.351	11.0	1
06970	Titanium	7440-32-6	1,190		0.0778	1.10	1
10146	Zirconium	7440-67-7	5.59		0.504	5.48	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.115	J	0.0827	0.223	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	7.40		0.0894	0.447	2
06126	Barium	7440-39-3	122		0.118	0.447	2
06127	Beryllium	7440-41-7	0.920		0.0179	0.112	2
06128	Cadmium	7440-43-9	0.0985	J	0.0492	0.112	2
06131	Chromium	7440-47-3	28.6		0.134	0.447	2
06132	Cobalt	7440-48-4	8.56		0.0223	0.112	2
06133	Copper	7440-50-8	12.7		0.0894	0.447	2
06135	Lead	7439-92-1	8.34		0.0114	0.223	2
06138	Molybdenum	7439-98-7	0.596		0.0559	0.112	2
06139	Nickel	7440-02-0	17.1		0.112	0.447	2
06141	Selenium	7782-49-2	0.0883	J	0.0648	0.447	2
06142	Silver	7440-22-4	0.0334	J	0.0159	0.112	2
06145	Thallium	7440-28-0	0.357		0.0335	0.112	2
06148	Vanadium	7440-62-2	55.5		0.0246	0.112	2
06149	Zinc	7440-66-6	59.7		0.626	3.35	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0168	J	0.0078	0.111	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.5		0.91	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1	U	10.1	33.5	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.24	J	0.22	1.1	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446810
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	7.87	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 20:23	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 06:05	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 08:38	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:00	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:01	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:19	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446810
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:19	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:19	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:19	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:28	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 21:17	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 01:04	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 12:49	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Acenaphthene	83-32-9	1,800		19	190	1
04688	Acenaphthylene	208-96-8	1,900		19	190	1
04688	Aniline	62-53-3	1,400		190	560	1
04688	Anthracene	120-12-7	1,900		19	190	1
04688	Benzidine	92-87-5	2,500	J	1,300	3,700	1
04688	Benzo(a)anthracene	56-55-3	1,700		19	190	1
04688	Benzo(a)pyrene	50-32-8	1,900		19	190	1
04688	Benzo(b)fluoranthene	205-99-2	1,900		19	190	1
04688	Benzo(g,h,i)perylene	191-24-2	1,800		19	190	1
04688	Benzo(k)fluoranthene	207-08-9	1,900		19	190	1
04688	Benzoic acid	65-85-0	530	J	190	560	1
04688	Benzyl alcohol	100-51-6	1,800		190	560	1
04688	4-Bromophenyl-phenylether	101-55-3	1,800		19	190	1
04688	Butylbenzylphthalate	85-68-7	1,800		19	190	1
04688	Di-n-butylphthalate	84-74-2	1,800		19	190	1
04688	Carbazole	86-74-8	1,800		19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	1,800		37	190	1
04688	4-Chloroaniline	106-47-8	1,200		74	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	1,800		19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	1,700		19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	1,700		19	190	1
04688	2-Chloronaphthalene	91-58-7	1,600		19	190	1
04688	2-Chlorophenol	95-57-8	1,800		19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	1,800		37	190	1
04688	Chrysene	218-01-9	1,700		19	190	1
04688	Dibenz(a,h)anthracene	53-70-3	1,800		19	190	1
04688	Dibenzofuran	132-64-9	1,800		19	190	1
04688	1,2-Dichlorobenzene	95-50-1	1,600		19	190	1
04688	1,3-Dichlorobenzene	541-73-1	1,500		19	190	1
04688	1,4-Dichlorobenzene	106-46-7	1,500		19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	900		110	370	1
04688	2,4-Dichlorophenol	120-83-2	1,900		19	190	1
04688	Diethylphthalate	84-66-2	1,800		19	190	1
04688	2,4-Dimethylphenol	105-67-9	1,800		37	190	1
04688	3,5-Dimethylphenol	108-68-9	1,900		37	190	1
04688	Dimethylphthalate	131-11-3	1,800		19	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	1,200		190	560	1
04688	2,4-Dinitrophenol	51-28-5	1,500		370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	1,800		37	190	1
04688	2,6-Dinitrotoluene	606-20-2	1,900		19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	1,900		19	190	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	1,700		19	370	1
04688	Fluoranthene	206-44-0	1,900		19	190	1
04688	Fluorene	86-73-7	1,800		19	190	1
04688	Hexachlorobenzene	118-74-1	1,800		19	190	1
04688	Hexachlorobutadiene	87-68-3	1,700		74	190	1
04688	Hexachlorocyclopentadiene	77-47-4	3,300		190	560	1
04688	Hexachloroethane	67-72-1	1,500		19	190	1
04688	Indeno(1,2,3-cd)pyrene	193-39-5	1,800		19	190	1
04688	Isophorone	78-59-1	1,800		19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg	ug/kg	ug/kg	
04688	1-Methylnaphthalene	90-12-0	1,700	19	190	1
04688	2-Methylnaphthalene	91-57-6	1,800	19	190	1
04688	2-Methylphenol	95-48-7	1,800	37	190	1
04688	4-Methylphenol	106-44-5	1,800	37	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04688	Naphthalene	91-20-3	1,700	19	190	1
04688	2-Nitroaniline	88-74-4	1,900	19	190	1
04688	3-Nitroaniline	99-09-2	1,800	37	190	1
04688	4-Nitroaniline	100-01-6	1,500	74	190	1
04688	Nitrobenzene	98-95-3	1,800	19	190	1
04688	2-Nitrophenol	88-75-5	1,700	19	190	1
04688	4-Nitrophenol	100-02-7	1,600	190	560	1
04688	N-Nitrosodimethylamine	62-75-9	1,600	37	190	1
04688	N-Nitroso-di-n-propylamine	621-64-7	1,700	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	1,800	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04688	Di-n-octylphthalate	117-84-0	2,000	19	190	1
04688	Pentachlorophenol	87-86-5	1,600	190	560	1
04688	Phenanthrene	85-01-8	1,800	19	190	1
04688	Phenol	108-95-2	1,900	19	190	1
04688	Pyrene	129-00-0	1,800	19	190	1
04688	1,2,4-Trichlorobenzene	120-82-1	1,700	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	1,800	37	190	1
04688	2,4,6-Trichlorophenol	88-06-2	1,800	37	190	1
GC/MS Semivolatiles SW-846 8270C SIM			ug/kg	ug/kg	ug/kg	
10138	Acenaphthene	83-32-9	32	0.74	1.9	1
10138	Acenaphthylene	208-96-8	32	0.37	1.9	1
10138	Anthracene	120-12-7	34	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	34	0.74	1.9	1
10138	Benzo(a)pyrene	50-32-8	34	0.74	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	35	0.74	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	34	0.74	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	36	0.74	1.9	1
10138	Butylbenzylphthalate	85-68-7	36	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	39	6.7	20	1
10138	Chrysene	218-01-9	34	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	36	0.74	1.9	1
10138	Diethylphthalate	84-66-2	36	6.7	20	1
10138	Dimethylphthalate	131-11-3	36	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	49	6.7	20	1
10138	Fluoranthene	206-44-0	35	0.74	1.9	1
10138	Fluorene	86-73-7	35	0.74	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	35	0.74	1.9	1
10138	1-Methylnaphthalene	90-12-0	31	0.74	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	2-Methylnaphthalene	91-57-6	30		0.74	1.9	1
10138	Naphthalene	91-20-3	31		0.74	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	32		0.74	1.9	1
10138	Di-n-octylphthalate	117-84-0	54		6.7	20	1
10138	Phenanthrene	85-01-8	33		0.74	1.9	1
10138	Pyrene	129-00-0	34		0.74	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	20		0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	22		0.37	1.9	1
10225	PCB-1254	11097-69-1	4.6		0.37	1.9	1
10225	PCB-1260	11096-82-5	21		0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1
	The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	34,800		6.63	21.9	1
07914	Boron	7440-42-8	220		0.394	5.48	1
01650	Calcium	7440-70-2	14,100		2.74	21.9	1
01654	Iron	7439-89-6	31,200		14.3	110	5
01656	Lithium	7439-93-2	142		0.68	2.2	1
01657	Magnesium	7439-95-4	6,220		0.482	11.0	1
06958	Manganese	7439-96-5	338		0.0394	0.548	1
10145	Phosphorus	7723-14-0	282		0.383	11.0	1
01662	Potassium	7440-09-7	4,610		12.4	54.8	1
01667	Sodium	7440-23-5	1,180		6.52	110	1
07968	Strontium	7440-24-6	131		0.0274	0.548	1
06969	Tin	7440-31-5	357		0.351	11.0	1
06970	Titanium	7440-32-6	1,430		0.0778	1.10	1
10146	Zirconium	7440-67-7	111		0.504	5.48	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.476		0.0803	0.217	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	9.19		0.0868	0.434	2
06126	Barium	7440-39-3	126		0.115	0.434	2

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06127	Beryllium	7440-41-7	1.70	0.0174	0.108	2
06128	Cadmium	7440-43-9	1.23	0.0477	0.108	2
06131	Chromium	7440-47-3	38.1	0.130	0.434	2
06132	Cobalt	7440-48-4	63.1	0.0217	0.108	2
06133	Copper	7440-50-8	23.1	0.0868	0.434	2
06135	Lead	7439-92-1	11.6	0.0111	0.217	2
06138	Molybdenum	7439-98-7	10.8	0.0542	0.108	2
06139	Nickel	7440-02-0	27.1	0.108	0.434	2
06141	Selenium	7782-49-2	2.07	0.0629	0.434	2
06142	Silver	7440-22-4	11.3	0.0154	0.108	2
06145	Thallium	7440-28-0	0.755	0.0325	0.108	2
06148	Vanadium	7440-62-2	64.2	0.0239	0.108	2
06149	Zinc	7440-66-6	66.9	0.607	3.25	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.185	0.0074	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	10.0	0.91	1.1	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	587	10.1	33.5	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	42.5	1.1	5.6	5
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 20:49	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 06:38	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 08:57	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:12	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:13	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:29	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:29	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:29	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:29	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:31	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	2	11313621201A	11/09/2011 15:34	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 01:47	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 13:02	Elyse P Brunstetter	5
01352	11a Anions by 300.0 - Extract.	EPA 300.0	2	11306621203B	11/09/2011 06:05	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446811
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446812
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Acenaphthene	83-32-9	1,800		18	180	1
04688	Acenaphthylene	208-96-8	1,900		18	180	1
04688	Aniline	62-53-3	1,300		180	550	1
04688	Anthracene	120-12-7	1,800		18	180	1
04688	Benzidine	92-87-5	2,500	J	1,300	3,700	1
04688	Benzo(a)anthracene	56-55-3	1,800		18	180	1
04688	Benzo(a)pyrene	50-32-8	1,800		18	180	1
04688	Benzo(b)fluoranthene	205-99-2	1,800		18	180	1
04688	Benzo(g,h,i)perylene	191-24-2	1,800		18	180	1
04688	Benzo(k)fluoranthene	207-08-9	1,900		18	180	1
04688	Benzoic acid	65-85-0	530	J	180	550	1
04688	Benzyl alcohol	100-51-6	1,800		180	550	1
04688	4-Bromophenyl-phenylether	101-55-3	1,700		18	180	1
04688	Butylbenzylphthalate	85-68-7	1,800		18	180	1
04688	Di-n-butylphthalate	84-74-2	1,800		18	180	1
04688	Carbazole	86-74-8	1,800		18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	1,800		37	180	1
04688	4-Chloroaniline	106-47-8	1,200		74	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	1,800		18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	1,700		18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	1,600		18	180	1
04688	2-Chloronaphthalene	91-58-7	1,700		18	180	1
04688	2-Chlorophenol	95-57-8	1,800		18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	1,800		37	180	1
04688	Chrysene	218-01-9	1,700		18	180	1
04688	Dibenz(a,h)anthracene	53-70-3	1,700		18	180	1
04688	Dibenzofuran	132-64-9	1,700		18	180	1
04688	1,2-Dichlorobenzene	95-50-1	1,600		18	180	1
04688	1,3-Dichlorobenzene	541-73-1	1,500		18	180	1
04688	1,4-Dichlorobenzene	106-46-7	1,500		18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	900		110	370	1
04688	2,4-Dichlorophenol	120-83-2	1,800		18	180	1
04688	Diethylphthalate	84-66-2	1,800		18	180	1
04688	2,4-Dimethylphenol	105-67-9	1,800		37	180	1
04688	3,5-Dimethylphenol	108-68-9	1,900		37	180	1
04688	Dimethylphthalate	131-11-3	1,800		18	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	1,300		180	550	1
04688	2,4-Dinitrophenol	51-28-5	1,500		370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	1,900		37	180	1
04688	2,6-Dinitrotoluene	606-20-2	1,900		18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	1,800		18	180	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	1,800		18	370	1
04688	Fluoranthene	206-44-0	1,900		18	180	1
04688	Fluorene	86-73-7	1,800		18	180	1
04688	Hexachlorobenzene	118-74-1	1,700		18	180	1
04688	Hexachlorobutadiene	87-68-3	1,600		74	180	1
04688	Hexachlorocyclopentadiene	77-47-4	3,100		180	550	1
04688	Hexachloroethane	67-72-1	1,500		18	180	1
04688	Indeno(1,2,3-cd)pyrene	193-39-5	1,800		18	180	1
04688	Isophorone	78-59-1	1,800		18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446812
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg	ug/kg	ug/kg	
04688	1-Methylnaphthalene	90-12-0	1,700	18	180	1
04688	2-Methylnaphthalene	91-57-6	1,800	18	180	1
04688	2-Methylphenol	95-48-7	1,800	37	180	1
04688	4-Methylphenol	106-44-5	1,700	37	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04688	Naphthalene	91-20-3	1,700	18	180	1
04688	2-Nitroaniline	88-74-4	1,800	18	180	1
04688	3-Nitroaniline	99-09-2	1,800	37	180	1
04688	4-Nitroaniline	100-01-6	1,600	74	180	1
04688	Nitrobenzene	98-95-3	1,800	18	180	1
04688	2-Nitrophenol	88-75-5	1,700	18	180	1
04688	4-Nitrophenol	100-02-7	1,700	180	550	1
04688	N-Nitrosodimethylamine	62-75-9	1,600	37	180	1
04688	N-Nitroso-di-n-propylamine	621-64-7	1,600	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	1,700	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04688	Di-n-octylphthalate	117-84-0	2,000	18	180	1
04688	Pentachlorophenol	87-86-5	1,500	180	550	1
04688	Phenanthrene	85-01-8	1,800	18	180	1
04688	Phenol	108-95-2	1,800	18	180	1
04688	Pyrene	129-00-0	1,700	18	180	1
04688	1,2,4-Trichlorobenzene	120-82-1	1,700	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	1,700	37	180	1
04688	2,4,6-Trichlorophenol	88-06-2	1,800	37	180	1
GC/MS Semivolatiles SW-846 8270C SIM			ug/kg	ug/kg	ug/kg	
10138	Acenaphthene	83-32-9	34	0.73	1.8	1
10138	Acenaphthylene	208-96-8	34	0.37	1.8	1
10138	Anthracene	120-12-7	34	0.37	1.8	1
10138	Benzo(a)anthracene	56-55-3	36	0.73	1.8	1
10138	Benzo(a)pyrene	50-32-8	35	0.73	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	36	0.73	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	34	0.73	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	38	0.73	1.8	1
10138	Butylbenzylphthalate	85-68-7	38	6.6	20	1
10138	Di-n-butylphthalate	84-74-2	40	6.6	20	1
10138	Chrysene	218-01-9	35	0.37	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	36	0.73	1.8	1
10138	Diethylphthalate	84-66-2	37	6.6	20	1
10138	Dimethylphthalate	131-11-3	37	6.6	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	54	6.6	20	1
10138	Fluoranthene	206-44-0	36	0.73	1.8	1
10138	Fluorene	86-73-7	36	0.73	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	35	0.73	1.8	1
10138	1-Methylnaphthalene	90-12-0	32	0.73	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446812
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	2-Methylnaphthalene	91-57-6	32		0.73	1.8	1
10138	Naphthalene	91-20-3	33		0.73	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	34		0.73	1.8	1
10138	Di-n-octylphthalate	117-84-0	67		6.6	20	1
10138	Phenanthrene	85-01-8	34		0.73	1.8	1
10138	Pyrene	129-00-0	35		0.73	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	23		0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	22		0.37	1.9	1
10225	PCB-1254	11097-69-1	6.2		0.37	1.9	1
10225	PCB-1260	11096-82-5	23		0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1
	The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	26,600		6.76	22.3	1
07914	Boron	7440-42-8	215		0.402	5.59	1
01650	Calcium	7440-70-2	14,600		2.79	22.3	1
01654	Iron	7439-89-6	25,500		2.92	22.3	1
01656	Lithium	7439-93-2	131		0.69	2.2	1
01657	Magnesium	7439-95-4	5,430		0.492	11.2	1
06958	Manganese	7439-96-5	344		0.0402	0.559	1
10145	Phosphorus	7723-14-0	296		0.391	11.2	1
01662	Potassium	7440-09-7	3,850		12.6	55.9	1
01667	Sodium	7440-23-5	1,120		6.65	112	1
07968	Strontium	7440-24-6	129		0.0279	0.559	1
06969	Tin	7440-31-5	359		0.358	11.2	1
06970	Titanium	7440-32-6	1,370		0.0793	1.12	1
10146	Zirconium	7440-67-7	104		0.514	5.59	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.470		0.0795	0.215	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	8.63		0.0859	0.430	2
06126	Barium	7440-39-3	113		0.114	0.430	2

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446812
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		mg/kg	mg/kg	mg/kg	
06127	Beryllium	7440-41-7	1.54	0.0172	0.107	2
06128	Cadmium	7440-43-9	1.13	0.0473	0.107	2
06131	Chromium	7440-47-3	35.0	0.129	0.430	2
06132	Cobalt	7440-48-4	60.8	0.0215	0.107	2
06133	Copper	7440-50-8	22.3	0.0859	0.430	2
06135	Lead	7439-92-1	9.95	0.0110	0.215	2
06138	Molybdenum	7439-98-7	10.5	0.0537	0.107	2
06139	Nickel	7440-02-0	26.2	0.107	0.430	2
06141	Selenium	7782-49-2	2.17	0.0623	0.430	2
06142	Silver	7440-22-4	11.0	0.0153	0.107	2
06145	Thallium	7440-28-0	0.697	0.0322	0.107	2
06148	Vanadium	7440-62-2	61.0	0.0236	0.107	2
06149	Zinc	7440-66-6	64.5	0.602	3.22	2
	SW-846 7471A		mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.203	0.0077	0.110	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 21:14	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 07:11	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 09:16	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446812
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:17	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:32	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:32	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:32	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:32	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:32	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446813
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02DUP

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	31,400		6.76	22.3	1
07914	Boron	7440-42-8	10.9		0.402	5.59	1
01650	Calcium	7440-70-2	12,400		2.79	22.3	1
01654	Iron	7439-89-6	30,600		14.6	112	5
01656	Lithium	7439-93-2	30.1		0.69	2.2	1
01657	Magnesium	7439-95-4	5,870		0.492	11.2	1
06958	Manganese	7439-96-5	357		0.0402	0.559	1
10145	Phosphorus	7723-14-0	184		0.391	11.2	1
01662	Potassium	7440-09-7	3,060		12.6	55.9	1
01667	Sodium	7440-23-5	84.8	J	6.65	112	1
07968	Strontium	7440-24-6	21.7		0.0279	0.559	1
06969	Tin	7440-31-5	3.22	J	0.358	11.2	1
06970	Titanium	7440-32-6	1,240		0.0793	1.12	1
10146	Zirconium	7440-67-7	7.16		0.514	5.59	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0900	J	0.0811	0.219	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	7.80		0.0876	0.438	2
06126	Barium	7440-39-3	126		0.116	0.438	2
06127	Beryllium	7440-41-7	0.909		0.0175	0.110	2
06128	Cadmium	7440-43-9	0.0833	J	0.0482	0.110	2
06131	Chromium	7440-47-3	28.2		0.131	0.438	2
06132	Cobalt	7440-48-4	8.78		0.0219	0.110	2
06133	Copper	7440-50-8	13.2		0.0876	0.438	2
06135	Lead	7439-92-1	8.21		0.0112	0.219	2
06138	Molybdenum	7439-98-7	0.561		0.0548	0.110	2
06139	Nickel	7440-02-0	17.5		0.110	0.438	2
06141	Selenium	7782-49-2	0.112	J	0.0635	0.438	2
06142	Silver	7440-22-4	0.0328	J	0.0156	0.110	2
06145	Thallium	7440-28-0	0.313		0.0329	0.110	2
06148	Vanadium	7440-62-2	55.9		0.0241	0.110	2
06149	Zinc	7440-66-6	59.4		0.613	3.29	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0228	J	0.0078	0.110	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.5		0.88	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1	U	10.1	33.5	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.63	J	0.22	1.1	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446813
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02DUP

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	7.91	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11626	28a Moisture Content by 160.3	n.a.	10.7	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.					
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 17:08	John P Hook	5
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 07:09	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 19:26	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 19:26	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 19:26	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0DUP Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446813
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 19:26	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:29	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 21:29	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 01:25	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 13:59	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11626	28a Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0RL MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446814
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02RLR

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	3.0		0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9	1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9	1
10225	PCB-1260	11096-82-5	2.8		0.43	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS and this sample is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

Wet Chemistry	**EPA 160.3 modified**		%		%	%	
11625	Moisture Content by 160.3	n.a.	10.5		0.50	0.50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 09:35	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0RL LCS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446815
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7302 SDG#: DE277-02RLQ

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/kg		ug/kg	ug/kg	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.3	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.3	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.3	1
10225	PCB-1016	12674-11-2	1.7	J	0.33	1.7	1
10225	PCB-1221	11104-28-2	0.33	U	0.33	1.7	1
10225	PCB-1232	11141-16-5	0.33	U	0.33	1.7	1
10225	PCB-1242	53469-21-9	0.33	U	0.33	1.7	1
10225	PCB-1248	12672-29-6	0.33	U	0.33	1.7	1
10225	PCB-1254	11097-69-1	0.33	U	0.33	1.7	1
10225	PCB-1260	11096-82-5	2.0		0.39	1.7	1
10225	PCB-1262	37324-23-5	0.33	U	0.33	1.7	1
10225	PCB-1268	11100-14-4	0.33	U	0.33	1.7	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 09:54	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446816
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7303 SDG#: DE277-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	35	U	35	180	1
04688	4-Methylphenol	106-44-5	35	U	35	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	35	U	35	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446816
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7303 SDG#: DE277-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19	1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	14	J	6.5	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8	1
10225	PCB-1254	11097-69-1	5.5		0.36	1.8	1
10225	PCB-1260	11096-82-5	1.1	J	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS and this sample is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446816
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7303 SDG#: DE277-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	12,900		6.53	21.6	1
07914	Boron	7440-42-8	3.99	J	0.389	5.40	1
01650	Calcium	7440-70-2	8,290		2.70	21.6	1
01654	Iron	7439-89-6	17,400		2.82	21.6	1
01656	Lithium	7439-93-2	23.9		0.67	2.2	1
01657	Magnesium	7439-95-4	3,170		0.475	10.8	1
06958	Manganese	7439-96-5	179		0.0389	0.540	1
10145	Phosphorus	7723-14-0	358		0.378	10.8	1
01662	Potassium	7440-09-7	1,680		12.2	54.0	1
01667	Sodium	7440-23-5	73.6	J	6.43	108	1
07968	Strontium	7440-24-6	21.2		0.0270	0.540	1
06969	Tin	7440-31-5	2.87	J	0.346	10.8	1
06970	Titanium	7440-32-6	986		0.0767	1.08	1
10146	Zirconium	7440-67-7	3.02	J	0.497	5.40	1
		SW-846 6020	**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0783	U	0.0783	0.212	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.24		0.0847	0.423	2
06126	Barium	7440-39-3	77.2		0.112	0.423	2
06127	Beryllium	7440-41-7	0.519		0.0169	0.106	2
06128	Cadmium	7440-43-9	0.0466	U	0.0466	0.106	2
06131	Chromium	7440-47-3	12.7		0.127	0.423	2
06132	Cobalt	7440-48-4	5.54		0.0212	0.106	2
06133	Copper	7440-50-8	6.42		0.0847	0.423	2
06135	Lead	7439-92-1	4.81		0.0108	0.212	2
06138	Molybdenum	7439-98-7	0.393		0.0529	0.106	2
06139	Nickel	7440-02-0	7.43		0.106	0.423	2
06141	Selenium	7782-49-2	0.0614	U	0.0614	0.423	2
06142	Silver	7440-22-4	0.0258	J	0.0150	0.106	2
06145	Thallium	7440-28-0	0.242		0.0318	0.106	2
06148	Vanadium	7440-62-2	31.5		0.0233	0.106	2
06149	Zinc	7440-66-6	48.7		0.593	3.18	2
		SW-846 7471A	**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0072	U	0.0072	0.103	1
Wet Chemistry		**EPA 300.0**	**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	0.87	U	0.87	1.1	1
		EPA 314.0	**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.4	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446816
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7303 SDG#: DE277-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22 U	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.33	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	7.4	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 21:39	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 08:19	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 11:27	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:13	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446816
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7303 SDG#: DE277-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:14	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:14	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:14	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:14	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:33	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 22:28	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 02:50	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 14:13	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446817
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7304 SDG#: DE277-04FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	190	U	190	560	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700	1
04688	Benzoic acid	65-85-0	190	U	190	560	1
04688	Benzyl alcohol	100-51-6	190	U	190	560	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	190	1
04688	4-Chloroaniline	106-47-8	74	U	74	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	190	1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	560	1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	74	U	74	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	560	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	37	U	37	190	1
04688	4-Methylphenol	106-44-5	37	U	37	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	37	U	37	190	1
04688	4-Nitroaniline	100-01-6	74	U	74	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	560	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	560	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446817
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7304 SDG#: DE277-04FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	190	1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9	1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9	1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9	1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9	1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9	1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446817
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7304 SDG#: DE277-04FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	27,400		6.51	21.5	1
07914	Boron	7440-42-8	9.11		0.387	5.38	1
01650	Calcium	7440-70-2	26,100		2.69	21.5	1
01654	Iron	7439-89-6	27,000		2.81	21.5	1
01656	Lithium	7439-93-2	27.4		0.67	2.2	1
01657	Magnesium	7439-95-4	5,210		0.473	10.8	1
06958	Manganese	7439-96-5	363		0.0387	0.538	1
10145	Phosphorus	7723-14-0	219		0.376	10.8	1
01662	Potassium	7440-09-7	3,050		12.2	53.8	1
01667	Sodium	7440-23-5	83.1	J	6.40	108	1
07968	Strontium	7440-24-6	23.4		0.0269	0.538	1
06969	Tin	7440-31-5	2.70	J	0.344	10.8	1
06970	Titanium	7440-32-6	1,090		0.0764	1.08	1
10146	Zirconium	7440-67-7	5.19	J	0.495	5.38	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.100	J	0.0820	0.221	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.72		0.0886	0.443	2
06126	Barium	7440-39-3	114		0.117	0.443	2
06127	Beryllium	7440-41-7	0.862		0.0177	0.111	2
06128	Cadmium	7440-43-9	0.0919	J	0.0487	0.111	2
06131	Chromium	7440-47-3	26.8		0.133	0.443	2
06132	Cobalt	7440-48-4	7.19		0.0221	0.111	2
06133	Copper	7440-50-8	11.7		0.0886	0.443	2
06135	Lead	7439-92-1	7.48		0.0113	0.221	2
06138	Molybdenum	7439-98-7	0.550		0.0554	0.111	2
06139	Nickel	7440-02-0	15.5		0.111	0.443	2
06141	Selenium	7782-49-2	0.162	J	0.0642	0.443	2
06142	Silver	7440-22-4	0.0444	J	0.0157	0.111	2
06145	Thallium	7440-28-0	0.285		0.0332	0.111	2
06148	Vanadium	7440-62-2	51.7		0.0244	0.111	2
06149	Zinc	7440-66-6	52.8		0.620	3.32	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0271	J	0.0078	0.110	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.2		0.88	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1	U	10.1	33.6	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446817
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7304 SDG#: DE277-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.23 U	0.23	1.1	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.25	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	10.6	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 22:04	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 08:52	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 11:46	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:24	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446817
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7304 SDG#: DE277-04FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:26	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:26	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:26	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:26	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:34	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 22:39	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 03:11	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 14:26	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446818
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7305 SDG#: DE277-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170	1
04688	4-Chloroaniline	106-47-8	69	U	69	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170	1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	34	U	34	170	1
04688	4-Methylphenol	106-44-5	34	U	34	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	34	U	34	170	1
04688	4-Nitroaniline	100-01-6	69	U	69	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446818
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7305 SDG#: DE277-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170	1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	0.34	U	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.69	U	0.69	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.69	U	0.69	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	0.69	U	0.69	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.69	U	0.69	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.69	U	0.69	1.7	1
10138	Butylbenzylphthalate	85-68-7	13	J	6.2	19	1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19	1
10138	Chrysene	218-01-9	0.34	U	0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.69	U	0.69	1.7	1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19	1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.2	U	6.2	19	1
10138	Fluoranthene	206-44-0	0.69	U	0.69	1.7	1
10138	Fluorene	86-73-7	0.69	U	0.69	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	U	0.69	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7	1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19	1
10138	Phenanthrene	85-01-8	0.69	U	0.69	1.7	1
10138	Pyrene	129-00-0	0.69	U	0.69	1.7	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8	1
10225	PCB-1254	11097-69-1	0.34	U	0.34	1.8	1
10225	PCB-1260	11096-82-5	0.40	U	0.40	1.8	1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The

*=This limit was used in the evaluation of the final result

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446818
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7305 SDG#: DE277-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.						
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,000		6.24	20.6	1
07914	Boron	7440-42-8	4.54	J	0.371	5.16	1
01650	Calcium	7440-70-2	4,150		2.58	20.6	1
01654	Iron	7439-89-6	20,800		2.69	20.6	1
01656	Lithium	7439-93-2	25.6		0.64	2.1	1
01657	Magnesium	7439-95-4	4,780		0.454	10.3	1
06958	Manganese	7439-96-5	278		0.0371	0.516	1
10145	Phosphorus	7723-14-0	334		0.361	10.3	1
01662	Potassium	7440-09-7	2,510		11.7	51.6	1
01667	Sodium	7440-23-5	82.4	J	6.14	103	1
07968	Strontium	7440-24-6	14.7		0.0258	0.516	1
06969	Tin	7440-31-5	2.70	J	0.330	10.3	1
06970	Titanium	7440-32-6	1,040		0.0732	1.03	1
10146	Zirconium	7440-67-7	2.99	J	0.474	5.16	1
		SW-846 6020	**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0734	U	0.0734	0.198	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.16		0.0794	0.397	2
06126	Barium	7440-39-3	68.1		0.105	0.397	2
06127	Beryllium	7440-41-7	0.505		0.0159	0.0992	2
06128	Cadmium	7440-43-9	0.0859	J	0.0437	0.0992	2
06131	Chromium	7440-47-3	15.6		0.119	0.397	2
06132	Cobalt	7440-48-4	5.17		0.0198	0.0992	2
06133	Copper	7440-50-8	7.95		0.0794	0.397	2
06135	Lead	7439-92-1	4.72		0.0101	0.198	2
06138	Molybdenum	7439-98-7	0.357		0.0496	0.0992	2
06139	Nickel	7440-02-0	9.90		0.0992	0.397	2
06141	Selenium	7782-49-2	0.0800	J	0.0575	0.397	2
06142	Silver	7440-22-4	0.0177	J	0.0141	0.0992	2
06145	Thallium	7440-28-0	0.258		0.0298	0.0992	2
06148	Vanadium	7440-62-2	31.9		0.0218	0.0992	2
06149	Zinc	7440-66-6	53.9		0.556	2.98	2
		SW-846 7471A	**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0073	U	0.0073	0.104	1
Wet Chemistry		**EPA 300.0**	**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.1		0.84	1.1	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446818
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7305 SDG#: DE277-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 314.0**		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.3	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.21	U	0.21	1.0	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.01		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.0		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 22:30	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 09:25	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 12:05	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446818
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7305 SDG#: DE277-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:28	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:29	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:29	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:29	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:29	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:35	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 22:51	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 03:32	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 14:40	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446819
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7306 SDG#: DE277-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	540	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	540	1
04688	Benzyl alcohol	100-51-6	180	U	180	540	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	72	U	72	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	72	U	72	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	540	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	540	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446819
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7306 SDG#: DE277-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.71	U	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.4	U	6.4	19	1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8	1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446819
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7306 SDG#: DE277-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,400		6.38	21.1	1
07914	Boron	7440-42-8	11.5		0.380	5.28	1
01650	Calcium	7440-70-2	60,400		13.2	106	5
01654	Iron	7439-89-6	25,500		2.75	21.1	1
01656	Lithium	7439-93-2	24.6		0.65	2.1	1
01657	Magnesium	7439-95-4	5,750		0.464	10.6	1
06958	Manganese	7439-96-5	366		0.0380	0.528	1
10145	Phosphorus	7723-14-0	490		0.369	10.6	1
01662	Potassium	7440-09-7	2,980		11.9	52.8	1
01667	Sodium	7440-23-5	88.7	J	6.28	106	1
07968	Strontium	7440-24-6	62.5		0.0264	0.528	1
06969	Tin	7440-31-5	2.50	J	0.338	10.6	1
06970	Titanium	7440-32-6	964		0.0749	1.06	1
10146	Zirconium	7440-67-7	3.69	J	0.485	5.28	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0773	J	0.0766	0.207	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.54		0.0828	0.414	2
06126	Barium	7440-39-3	87.1		0.110	0.414	2
06127	Beryllium	7440-41-7	0.676		0.0166	0.104	2
06128	Cadmium	7440-43-9	0.203		0.0455	0.104	2
06131	Chromium	7440-47-3	24.8		0.124	0.414	2
06132	Cobalt	7440-48-4	7.79		0.0207	0.104	2
06133	Copper	7440-50-8	13.3		0.0828	0.414	2
06135	Lead	7439-92-1	7.86		0.0106	0.207	2
06138	Molybdenum	7439-98-7	0.405		0.0518	0.104	2
06139	Nickel	7440-02-0	14.3		0.104	0.414	2
06141	Selenium	7782-49-2	0.245	J	0.0600	0.414	2
06142	Silver	7440-22-4	0.0205	J	0.0147	0.104	2
06145	Thallium	7440-28-0	0.288		0.0311	0.104	2
06148	Vanadium	7440-62-2	45.1		0.0228	0.104	2
06149	Zinc	7440-66-6	60.1		0.580	3.11	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0075	U	0.0075	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.8		0.86	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.3	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446819
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7306 SDG#: DE277-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.24	J	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.96		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	7.1		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 22:56	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 09:58	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 12:24	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 17:47	John P Hook	5
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:32	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446819
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7306 SDG#: DE277-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:32	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/31/2011 06:47	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:32	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:32	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:32	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:37	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 23:03	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 03:53	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11305243201A	11/04/2011 15:07	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446820
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7307 SDG#: DE277-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	550	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700	1
04688	Benzoic acid	65-85-0	180	U	180	550	1
04688	Benzyl alcohol	100-51-6	180	U	180	550	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180	1
04688	4-Chloroaniline	106-47-8	73	U	73	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180	1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550	1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	37	U	37	180	1
04688	4-Methylphenol	106-44-5	37	U	37	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	37	U	37	180	1
04688	4-Nitroaniline	100-01-6	73	U	73	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	550	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	550	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446820
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7307 SDG#: DE277-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180	1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	20	1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	20	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	20	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	30		6.5	20	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	44		6.5	20	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9	1
10225	PCB-1254	11097-69-1	0.36	U	0.36	1.9	1
10225	PCB-1260	11096-82-5	0.43	U	0.43	1.9	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446820
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7307 SDG#: DE277-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	19,000		6.53	21.6	1
07914	Boron	7440-42-8	11.8		0.389	5.40	1
01650	Calcium	7440-70-2	110,000		13.5	108	5
01654	Iron	7439-89-6	23,500		2.82	21.6	1
01656	Lithium	7439-93-2	23.6		0.67	2.2	1
01657	Magnesium	7439-95-4	5,890		0.475	10.8	1
06958	Manganese	7439-96-5	398		0.0389	0.540	1
10145	Phosphorus	7723-14-0	481		0.378	10.8	1
01662	Potassium	7440-09-7	3,260		12.2	54.0	1
01667	Sodium	7440-23-5	122		6.42	108	1
07968	Strontium	7440-24-6	107		0.0270	0.540	1
06969	Tin	7440-31-5	2.40	J	0.346	10.8	1
06970	Titanium	7440-32-6	963		0.0767	1.08	1
10146	Zirconium	7440-67-7	4.20	J	0.497	5.40	1
		SW-846 6020	**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.113	J	0.0807	0.218	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.73		0.0872	0.436	2
06126	Barium	7440-39-3	92.4		0.116	0.436	2
06127	Beryllium	7440-41-7	0.659		0.0174	0.109	2
06128	Cadmium	7440-43-9	0.233		0.0480	0.109	2
06131	Chromium	7440-47-3	26.1		0.131	0.436	2
06132	Cobalt	7440-48-4	7.85		0.0218	0.109	2
06133	Copper	7440-50-8	14.5		0.0872	0.436	2
06135	Lead	7439-92-1	8.44		0.0111	0.218	2
06138	Molybdenum	7439-98-7	0.364		0.0545	0.109	2
06139	Nickel	7440-02-0	15.7		0.109	0.436	2
06141	Selenium	7782-49-2	0.206	J	0.0632	0.436	2
06142	Silver	7440-22-4	0.0180	J	0.0155	0.109	2
06145	Thallium	7440-28-0	0.281		0.0327	0.109	2
06148	Vanadium	7440-62-2	45.8		0.0240	0.109	2
06149	Zinc	7440-66-6	58.6		0.611	3.27	2
		SW-846 7471A	**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0121	J	0.0076	0.108	1
Wet Chemistry		**EPA 300.0**	**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.1	J	0.88	1.1	1
		EPA 314.0	**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	33.0	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446820
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7307 SDG#: DE277-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.22		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	9.2		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 23:21	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 10:31	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 12:42	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 17:50	John P Hook	5
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:37	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446820
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7307 SDG#: DE277-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:35	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:35	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:35	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:35	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:40	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 23:14	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 04:14	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 15:27	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446821
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7308 SDG#: DE277-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	35	U	35	180	1
04688	4-Methylphenol	106-44-5	35	U	35	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	35	U	35	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446821
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7308 SDG#: DE277-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19	1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	19	1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8	1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19	1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.5	U	6.5	19	1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8	1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8	1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8	1
10138	Di-n-octylphthalate	117-84-0	9.1	J	6.5	19	1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8	1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.6	1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.8	1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.8	1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.8	1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.8	1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.8	1
10225	PCB-1254	11097-69-1	0.59	J	0.36	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.8	1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.8	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446821
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7308 SDG#: DE277-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,300		6.24	20.6	1
07914	Boron	7440-42-8	12.8		0.371	5.15	1
01650	Calcium	7440-70-2	72,800		12.9	103	5
01654	Iron	7439-89-6	23,200		2.69	20.6	1
01656	Lithium	7439-93-2	23.2		0.64	2.1	1
01657	Magnesium	7439-95-4	5,900		0.454	10.3	1
06958	Manganese	7439-96-5	433		0.0371	0.515	1
10145	Phosphorus	7723-14-0	512		0.361	10.3	1
01662	Potassium	7440-09-7	3,310		11.6	51.5	1
01667	Sodium	7440-23-5	92.9	J	6.13	103	1
07968	Strontium	7440-24-6	72.6		0.0258	0.515	1
06969	Tin	7440-31-5	2.25	J	0.330	10.3	1
06970	Titanium	7440-32-6	893		0.0732	1.03	1
10146	Zirconium	7440-67-7	3.57	J	0.474	5.15	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0770	U	0.0770	0.208	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.76		0.0833	0.416	2
06126	Barium	7440-39-3	95.7		0.110	0.416	2
06127	Beryllium	7440-41-7	0.619		0.0167	0.104	2
06128	Cadmium	7440-43-9	0.239		0.0458	0.104	2
06131	Chromium	7440-47-3	26.2		0.125	0.416	2
06132	Cobalt	7440-48-4	7.94		0.0208	0.104	2
06133	Copper	7440-50-8	13.2		0.0833	0.416	2
06135	Lead	7439-92-1	7.59		0.0106	0.208	2
06138	Molybdenum	7439-98-7	0.385		0.0520	0.104	2
06139	Nickel	7440-02-0	15.2		0.104	0.416	2
06141	Selenium	7782-49-2	0.224	J	0.0604	0.416	2
06142	Silver	7440-22-4	0.0154	J	0.0148	0.104	2
06145	Thallium	7440-28-0	0.314		0.0312	0.104	2
06148	Vanadium	7440-62-2	45.2		0.0229	0.104	2
06149	Zinc	7440-66-6	62.7		0.583	3.12	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0079	J	0.0074	0.105	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.0	J	0.87	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446821
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7308 SDG#: DE277-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.22	U	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.95		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	7.6		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/27/2011 23:46	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 11:04	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 13:01	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 17:54	John P Hook	5
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:41	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446821
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7308 SDG#: DE277-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:38	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/31/2011 06:49	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:38	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:38	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:41	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 23:26	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 04:35	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 15:40	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446822
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7309 SDG#: DE277-09*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	560	1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700	1
04688	Benzoic acid	65-85-0	190	U	190	560	1
04688	Benzyl alcohol	100-51-6	190	U	190	560	1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190	1
04688	Carbazole	86-74-8	19	U	19	190	1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	190	1
04688	4-Chloroaniline	106-47-8	74	U	74	190	1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190	1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190	1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190	1
04688	2-Chlorophenol	95-57-8	19	U	19	190	1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	190	1
04688	Dibenzofuran	132-64-9	19	U	19	190	1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190	1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190	1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370	1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190	1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	190	1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	190	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	560	1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	190	1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190	1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190	1
04688	Hexachlorobenzene	118-74-1	19	U	19	190	1
04688	Hexachlorobutadiene	87-68-3	74	U	74	190	1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	560	1
04688	Hexachloroethane	67-72-1	19	U	19	190	1
04688	Isophorone	78-59-1	19	U	19	190	1
04688	2-Methylphenol	95-48-7	37	U	37	190	1
04688	4-Methylphenol	106-44-5	37	U	37	190	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	19	U	19	190	1
04688	3-Nitroaniline	99-09-2	37	U	37	190	1
04688	4-Nitroaniline	100-01-6	74	U	74	190	1
04688	Nitrobenzene	98-95-3	19	U	19	190	1
04688	2-Nitrophenol	88-75-5	19	U	19	190	1
04688	4-Nitrophenol	100-02-7	190	U	190	560	1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190	1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	190	U	190	560	1
04688	Phenol	108-95-2	19	U	19	190	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446822
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7309 SDG#: DE277-09*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190	1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	190	1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	190	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.74	U	0.74	1.9	1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9	1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9	1
10138	Benzo(a)anthracene	56-55-3	0.74	U	0.74	1.9	1
10138	Benzo(a)pyrene	50-32-8	0.74	U	0.74	1.9	1
10138	Benzo(b)fluoranthene	205-99-2	0.74	U	0.74	1.9	1
10138	Benzo(g,h,i)perylene	191-24-2	0.74	U	0.74	1.9	1
10138	Benzo(k)fluoranthene	207-08-9	0.74	U	0.74	1.9	1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20	1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20	1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9	1
10138	Dibenz(a,h)anthracene	53-70-3	0.74	U	0.74	1.9	1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20	1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20	1
10138	Fluoranthene	206-44-0	0.74	U	0.74	1.9	1
10138	Fluorene	86-73-7	0.74	U	0.74	1.9	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.74	U	0.74	1.9	1
10138	1-Methylnaphthalene	90-12-0	0.74	U	0.74	1.9	1
10138	2-Methylnaphthalene	91-57-6	0.74	U	0.74	1.9	1
10138	Naphthalene	91-20-3	0.74	U	0.74	1.9	1
10138	N-Nitrosodimethylamine	62-75-9	0.74	U	0.74	1.9	1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20	1
10138	Phenanthrene	85-01-8	0.74	U	0.74	1.9	1
10138	Pyrene	129-00-0	0.74	U	0.74	1.9	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7	1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9	1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9	1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9	1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9	1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9	1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9	1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9	1
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9	1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9	1

The Laboratory Control Spike is outside the QC limits for Aroclor 1260. The surrogate recovery associated with the LCS is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. Similar results were obtained in both extracts.

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446822
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7309 SDG#: DE277-09*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Aroclor 5432 and 5460 were not analyzed in the ending calibration associated with the original analysis of this sample.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	21,700		6.78	22.4	1
07914	Boron	7440-42-8	12.9		0.404	5.61	1
01650	Calcium	7440-70-2	92,700		14.0	112	5
01654	Iron	7439-89-6	25,200		2.93	22.4	1
01656	Lithium	7439-93-2	24.4		0.70	2.2	1
01657	Magnesium	7439-95-4	6,540		0.493	11.2	1
06958	Manganese	7439-96-5	375		0.0404	0.561	1
10145	Phosphorus	7723-14-0	517		0.392	11.2	1
01662	Potassium	7440-09-7	3,020		12.7	56.1	1
01667	Sodium	7440-23-5	116		6.67	112	1
07968	Strontium	7440-24-6	97.7		0.0280	0.561	1
06969	Tin	7440-31-5	2.59	J	0.359	11.2	1
06970	Titanium	7440-32-6	881		0.0796	1.12	1
10146	Zirconium	7440-67-7	4.87	J	0.516	5.61	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.104	J	0.0813	0.220	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	6.29		0.0879	0.440	2
06126	Barium	7440-39-3	91.4		0.117	0.440	2
06127	Beryllium	7440-41-7	0.751		0.0176	0.110	2
06128	Cadmium	7440-43-9	0.255		0.0484	0.110	2
06131	Chromium	7440-47-3	29.6		0.132	0.440	2
06132	Cobalt	7440-48-4	8.51		0.0220	0.110	2
06133	Copper	7440-50-8	15.0		0.0879	0.440	2
06135	Lead	7439-92-1	9.03		0.0112	0.220	2
06138	Molybdenum	7439-98-7	0.381		0.0550	0.110	2
06139	Nickel	7440-02-0	16.2		0.110	0.440	2
06141	Selenium	7782-49-2	0.436	J	0.0637	0.440	2
06142	Silver	7440-22-4	0.0213	J	0.0156	0.110	2
06145	Thallium	7440-28-0	0.284		0.0330	0.110	2
06148	Vanadium	7440-62-2	51.1		0.0242	0.110	2
06149	Zinc	7440-66-6	59.8		0.615	3.30	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0076	U	0.0076	0.108	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.8		0.91	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1	U	10.1	33.6	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446822
LLI Group # 1272728
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/18/2011 11:59

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7309 SDG#: DE277-09*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.26 J	0.22	1.1	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.90	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	10.8	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11297SLF026	10/28/2011 00:11	Holly Berry	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11299SLF026	11/01/2011 11:37	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11299SLF026	10/27/2011 08:00	Joseph S Feister	1
00381	BNA Soil Sonication	SW-846 3550B	1	11297SLF026	10/25/2011 08:45	Kerrie A Freeburn	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	112990025A	11/01/2011 13:20	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	112990025A	10/27/2011 10:40	Denise L Trimby	1
01643	Aluminum	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
07914	Boron	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
01650	Calcium	SW-846 6010B	1	112975708006	10/29/2011 17:58	John P Hook	5
01654	Iron	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
01656	Lithium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
01657	Magnesium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
06958	Manganese	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
10145	Phosphorus	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
01662	Potassium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
01667	Sodium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
07968	Strontium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
06969	Tin	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
06970	Titanium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
10146	Zirconium	SW-846 6010B	1	112975708006	10/29/2011 08:45	Damary Valentin	1
06124	Antimony	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446822
LLI Group # 1272728
Account # 13013

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
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E7309 SDG#: DE277-09*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020	1	112971026003D	10/26/2011 20:41	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06133	Copper	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06135	Lead	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	112971026003C	10/26/2011 20:41	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	112971026003B	10/26/2011 20:41	Choon Y Tian	2
06142	Silver	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	112971026003A	10/26/2011 20:41	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	112975711003	10/25/2011 18:42	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	112975708006	10/25/2011 11:28	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	112971026003	10/25/2011 12:14	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	112975711003	10/25/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11306621203B	11/03/2011 23:38	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11298621202A	11/04/2011 04:56	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11305243201A	11/04/2011 15:53	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11306621203B	11/02/2011 08:30	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11298621202A	10/25/2011 06:30	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11300039403B	10/27/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11305243201A	11/01/2011 10:35	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11297SLF026	Sample number(s): 6446809-6446812,6446816-6446822									
Acenaphthene	17	U	17.	170	ug/kg	99		76-111		
Acenaphthylene	17	U	17.	170	ug/kg	106		75-122		
Aniline	170 U		170.	500	ug/kg	68		20-115		
Anthracene	17	U	17.	170	ug/kg	101		76-112		
Benzidine	1,200 U		1,200.	3,300	ug/kg	39		15-121		
Benzo(a)anthracene	17	U	17.	170	ug/kg	97		73-112		
Benzo(a)pyrene	17	U	17.	170	ug/kg	103		65-124		
Benzo(b)fluoranthene	17	U	17.	170	ug/kg	91		61-127		
Benzo(g,h,i)perylene	17	U	17.	170	ug/kg	106		60-125		
Benzo(k)fluoranthene	17	U	17.	170	ug/kg	105		67-125		
Benzoic acid	170 U		170.	500	ug/kg	86		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	97		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	98		73-114		
Butylbenzylphthalate	17	U	17.	170	ug/kg	99		75-115		
Di-n-butylphthalate	17	U	17.	170	ug/kg	100		79-112		
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	99		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	51		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	99		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	94		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	93		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	76		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	100		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	98		74-115		
Chrysene	17	U	17.	170	ug/kg	95		76-113		
Dibenz(a,h)anthracene	17	U	17.	170	ug/kg	105		61-126		
Dibenzofuran	17	U	17.	170	ug/kg	96		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	91		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	89		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	89		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	37		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	102		75-111		
Diethylphthalate	17	U	17.	170	ug/kg	99		76-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	99		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	103		83-120		
Dimethylphthalate	17	U	17.	170	ug/kg	102		77-109		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	79		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	75		18-133		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	103		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	105		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	100		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	97		75-117		
Fluoranthene	17	U	17.	170	ug/kg	102		78-116		
Fluorene	17	U	17.	170	ug/kg	102		75-116		
Hexachlorobenzene	17	U	17.	170	ug/kg	98		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	94		65-117		
Hexachlorocyclopentadiene	170	U	170.	500	ug/kg	95		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	87		61-109		
Indeno(1,2,3-cd)pyrene	17	U	17.	170	ug/kg	105		64-119		
Isophorone	17	U	17.	170	ug/kg	99		69-110		
1-Methylnaphthalene	17	U	17.	170	ug/kg	95		74-105		
2-Methylnaphthalene	17	U	17.	170	ug/kg	99		69-109		
2-Methylphenol	33	U	33.	170	ug/kg	101		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	99		66-117		
Naphthalene	17	U	17.	170	ug/kg	96		73-106		
2-Nitroaniline	17	U	17.	170	ug/kg	103		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	94		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	78		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	99		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	98		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	91		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	92		63-107		
N-Nitrosodimethylamine	33	U	33.	170	ug/kg	85		60-106		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	100		67-141		
Di-n-octylphthalate	17	U	17.	170	ug/kg	107		62-137		
Pentachlorophenol	170	U	170.	500	ug/kg	93		51-117		
Phenanthrene	17	U	17.	170	ug/kg	98		77-113		
Phenol	17	U	17.	170	ug/kg	103		58-112		
Pyrene	17	U	17.	170	ug/kg	99		75-115		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	97		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	100		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	100		78-111		

Batch number: 11299SLF026 Sample number(s): 6446809-6446812,6446816-6446822

Acenaphthene	0.67	U	0.67	1.7	ug/kg	96		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	91		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	94		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	97		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	95		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	98		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	95		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	103		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	102		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	105		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	95		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	99		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	101		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	101		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	111		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	97		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	100		71-120		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	98		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	88		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	87		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	89		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	87		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	100		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	93		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	95		72-119		
Batch number: 112990025A	Sample number(s): 6446809-6446812,6446814-6446822									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	85	61	36-106	32*	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	117		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	153*		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 112971026003A	Sample number(s): 6446809-6446813,6446816-6446822									
Antimony	0.0705	U	0.0705	0.190	mg/kg	79		40-227		
Arsenic	0.0762	U	0.0762	0.381	mg/kg	105		83-111		
Beryllium	0.0152	U	0.0152	0.0952	mg/kg	104		84-112		
Cadmium	0.0419	U	0.0419	0.0952	mg/kg	102		83-111		
Chromium	0.114	U	0.114	0.381	mg/kg	112		77-123		
Cobalt	0.0190	U	0.0190	0.0952	mg/kg	107		85-114		
Copper	0.0762	U	0.0762	0.381	mg/kg	107		81-110		
Lead	0.0121	J	0.0097	0.190	mg/kg	101		84-112		
Nickel	0.0952	U	0.0952	0.381	mg/kg	101		81-110		
Silver	0.0135	U	0.0135	0.0952	mg/kg	103		83-112		
Thallium	0.0286	U	0.0286	0.0952	mg/kg	100		82-112		
Vanadium	0.0210	U	0.0210	0.0952	mg/kg	102		76-110		
Zinc	0.533	U	0.533	2.86	mg/kg	99		82-110		
Batch number: 112971026003B	Sample number(s): 6446809-6446813,6446816-6446822									
Selenium	0.0552	U	0.0552	0.381	mg/kg	101		79-110		
Batch number: 112971026003C	Sample number(s): 6446809-6446813,6446816-6446822									
Molybdenum	0.0476	U	0.0476	0.0952	mg/kg	101		80-110		
Batch number: 112971026003D	Sample number(s): 6446809-6446813,6446816-6446822									
Barium	0.101	U	0.101	0.381	mg/kg	102		83-110		
Batch number: 112975708006	Sample number(s): 6446809-6446813,6446816-6446822									
Aluminum	6.05	U	6.05	20.0	mg/kg	88		40-127		
Boron	0.447	J	0.360	5.00	mg/kg	102		83-110		
Calcium	17.2	J	2.50	20.0	mg/kg	95		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	88		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	101		80-120		
Magnesium	2.05	J	0.440	10.0	mg/kg	91		63-116		
Manganese	0.0480	J	0.0360	0.500	mg/kg	101		85-116		
Phosphorus	1.14	J	0.350	10.0	mg/kg	103		80-120		
Potassium	11.3	U	11.3	50.0	mg/kg	103		71-110		
Sodium	5.95	U	5.95	100	mg/kg	103		76-110		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Strontium	0.0770	J	0.0250	0.500	mg/kg	101		84-110		
Tin	1.18	J	0.320	10.0	mg/kg	94		86-120		
Titanium	0.0710	U	0.0710	1.00	mg/kg	91		80-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	101		80-120		
Batch number: 112975711003	Sample number(s): 6446809-6446813,6446816-6446822									
Mercury	0.0070	U	0.0070	0.0989	mg/kg	111		83-119		
Batch number: 11298621202A	Sample number(s): 6446809-6446811,6446813,6446816-6446822									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	106		85-115		
Batch number: 11305243201A	Sample number(s): 6446809-6446811,6446813,6446816-6446822									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	95		80-120		
Batch number: 11306621203B	Sample number(s): 6446809-6446810,6446813,6446816-6446822									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	101		90-110		
Batch number: 11313621201A	Sample number(s): 6446811									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	106		90-110		
Batch number: 11300039403B	Sample number(s): 6446809-6446810,6446813,6446816-6446822									
17a pH by 9045C						100		95-105		
Batch number: 11305162401A	Sample number(s): 6446809-6446814,6446816-6446822									
28a Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11297SLF026	Sample number(s): 6446809-6446812,6446816-6446822 UNSPK: 6446810								
Acenaphthene	97	95	75-115	2	30				
Acenaphthylene	104	104	81-110	0	30				
Aniline	75	70	18-116	8	30				
Anthracene	100	97	75-115	4	30				
Benzidine	27*	27*	35-141	2	30				
Benzo(a)anthracene	93	95	65-122	1	30				
Benzo(a)pyrene	102	99	57-126	3	30				
Benzo(b)fluoranthene	101	98	59-125	4	30				
Benzo(g,h,i)perylene	96	95	59-127	1	30				
Benzo(k)fluoranthene	104	103	56-132	2	30				
Benzoic acid	28	29	10-173	0	30				
Benzyl alcohol	96	95	67-115	1	30				
4-Bromophenyl-phenylether	96	91	67-129	6	30				
Butylbenzylphthalate	96	98	73-134	1	30				
Di-n-butylphthalate	98	97	67-123	2	30				
Carbazole	96	96	64-120	1	30				
4-Chloro-3-methylphenol	99	99	62-122	0	30				
4-Chloroaniline	66	66	13-107	1	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
bis(2-Chloroethoxy)methane	98	98	75-104	1	30				
bis(2-Chloroethyl)ether	91	89	60-116	3	30				
bis(2-Chloroisopropyl)ether	89	86	55-142	4	30				
2-Chloronaphthalene	84	91	50-141	8	30				
2-Chlorophenol	98	96	73-121	3	30				
4-Chlorophenyl-phenylether	97	95	80-109	2	30				
Chrysene	90	92	62-128	1	30				
Dibenz(a,h)anthracene	96	94	65-125	2	30				
Dibenzofuran	95	95	71-112	0	30				
1,2-Dichlorobenzene	85	85	66-108	1	30				
1,3-Dichlorobenzene	81	81	63-109	0	30				
1,4-Dichlorobenzene	83	83	58-108	0	30				
3,3'-Dichlorobenzidine	48	49	28-109	1	30				
2,4-Dichlorophenol	101	98	66-123	3	30				
Diethylphthalate	96	97	66-118	0	30				
2,4-Dimethylphenol	99	96	68-118	4	30				
3,5-Dimethylphenol	105	103	71-127	3	30				
Dimethylphthalate	98	98	64-118	1	30				
4,6-Dinitro-2-methylphenol	67	69	11-126	2	30				
2,4-Dinitrophenol	40	40	20-143	0	30				
2,4-Dinitrotoluene	97	101	56-129	4	30				
2,6-Dinitrotoluene	101	102	69-123	1	30				
1,2-Diphenylhydrazine	100	95	71-129	6	30				
bis(2-Ethylhexyl)phthalate	93	95	63-122	1	30				
Fluoranthene	101	103	73-112	2	30				
Fluorene	97	98	63-121	1	30				
Hexachlorobenzene	96	93	77-114	4	30				
Hexachlorobutadiene	91	88	62-120	4	30				
Hexachlorocyclopentadiene	90	85	10-153	6	30				
Hexachloroethane	80	80	57-109	0	30				
Indeno(1,2,3-cd)pyrene	97	95	61-126	2	30				
Isophorone	97	96	73-102	1	30				
1-Methylnaphthalene	93	92	64-122	1	30				
2-Methylnaphthalene	97	96	76-114	1	30				
2-Methylphenol	99	96	75-111	3	30				
4-Methylphenol	97	94	59-123	4	30				
Naphthalene	93	92	72-116	2	30				
2-Nitroaniline	100	100	67-125	1	30				
3-Nitroaniline	97	98	59-122	1	30				
4-Nitroaniline	81	85	41-109	5	30				
Nitrobenzene	95	95	57-125	1	30				
2-Nitrophenol	93	93	56-127	0	30				
4-Nitrophenol	88	94	37-129	6	30				
N-Nitroso-di-n-propylamine	90	87	60-116	4	30				
N-Nitrosodimethylamine	86	87	47-116	1	30				
N-Nitrosodiphenylamine	99	95	71-122	5	30				
Di-n-octylphthalate	108	106	56-126	2	30				
Pentachlorophenol	84	80	28-127	6	30				
Phenanthrene	97	95	65-125	3	30				
Phenol	102	99	58-126	4	30				
Pyrene	96	94	74-126	3	30				
1,2,4-Trichlorobenzene	92	91	72-115	1	30				
2,4,5-Trichlorophenol	95	93	58-129	3	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
2,4,6-Trichlorophenol	97	96	56-134	2	30				
Batch number: 11299SLF026	Sample number(s): 6446809-6446812,6446816-6446822 UNSPK: 6446810								
Acenaphthene	87	94	63-105	6	30				
Acenaphthylene	85	92	67-114	6	30				
Anthracene	90	94	73-115	3	30				
Benzo(a)anthracene	92	98	59-128	4	30				
Benzo(a)pyrene	91	96	58-142	3	30				
Benzo(b)fluoranthene	93	99	54-163	5	30				
Benzo(g,h,i)perylene	91	93	33-141	1	30				
Benzo(k)fluoranthene	98	103	57-153	4	30				
Butylbenzylphthalate	97	105	57-173	6	30				
Di-n-butylphthalate	105	109	65-148	2	30				
Chrysene	91	96	67-123	3	30				
Dibenz(a,h)anthracene	95	98	22-133	1	30				
Diethylphthalate	98	101	70-136	2	30				
Dimethylphthalate	97	101	74-118	3	30				
Bis(2-Ethylhexyl)phthalate	132	148	39-167	9	30				
Fluoranthene	95	99	51-149	3	30				
Fluorene	95	99	66-122	2	30				
Indeno(1,2,3-cd)pyrene	94	97	21-143	1	30				
1-Methylnaphthalene	83	88	72-123	4	30				
2-Methylnaphthalene	82	87	64-103	5	30				
Naphthalene	84	90	61-102	5	30				
N-Nitrosodimethylamine	86	93	48-113	6	30				
Di-n-octylphthalate	145	182	40-192	21	30				
Phenanthrene	88	93	62-122	4	30				
Pyrene	92	97	51-131	4	30				
Batch number: 112990025A	Sample number(s): 6446809-6446812,6446814-6446822 UNSPK: 6446810								
PCB-1016	109	123	29-146	12	50				
PCB-1260	110	118	39-149	7	50				
Batch number: 112971026003A	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Antimony	28*	28*	75-125	1	20	0.103 J	0.0806 J	25* (1)	20
Arsenic	82	57*	75-125	6	20	6.62	6.98	5	20
Beryllium	90	72*	75-125	10	20	0.824	0.814	1	20
Cadmium	105	96	75-125	9	20	0.0882 J	0.0745 J	17 (1)	20
Chromium	88	60*	75-125	9	20	25.6	25.3	1	20
Cobalt	101	97	75-125	4	20	7.66	7.86	3	20
Copper	95	89	75-125	3	20	11.4	11.8	4	20
Lead	101	50*	75-125	15	20	7.46	7.35	1	20
Nickel	92	85	75-125	3	20	15.3	15.6	2	20
Silver	104	102	75-125	2	20	0.0299 J	0.0293 J	2 (1)	20
Thallium	92	79	75-125	8	20	0.319	0.280	13 (1)	20
Vanadium	80 (2)	51 (2)	75-125	5	20	49.7	50.1	1	20
Zinc	67 (2)	45 (2)	75-125	4	20	53.4	53.2	0	20
Batch number: 112971026003B	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Selenium	91	97	75-125	5	20	0.0790 J	0.0998 J	23* (1)	20
Batch number: 112971026003C	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Molybdenum	94	92	75-125	3	20	0.533	0.502	6	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 112971026003D	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Barium	43 (2)	-80 (2)	75-125	11	20	109	113	3	20
Batch number: 112975708006	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Aluminum	1918 (2)	-1788 (2)	75-125	27*	20	27,400	28,100	2	20
Boron	96	92	84-115	2	20	9.74	9.76	0 (1)	20
Calcium	-52 (2)	77 (2)	75-125	4	20	12,800	11,100	14	20
Iron	2334 (2)	-2778 (2)	75-125	20	20	25,600	27,400	7	20
Lithium	103	91	82-114	8	20	26.0	27.0	4	20
Magnesium	254 (2)	-105 (2)	75-125	14	20	5,070	5,250	4	20
Manganese	42 (2)	52 (2)	75-125	2	20	282	320	13	20
Phosphorus	87	98	75-125	5	20	168	165	2	20
Potassium	151*	80	75-125	18	20	2,640	2,740	3	20
Sodium	100	93	75-125	6	20	75.4 J	75.9 J	1 (1)	20
Strontium	99	96	75-115	1	20	19.6	19.5	0	20
Tin	81	80	80-110	1	20	2.73 J	2.88 J	5 (1)	20
Titanium	218 (2)	155 (2)	75-125	5	20	1,070	1,110	4	20
Zirconium	96	88	81-110	6	20	5.00	6.41	25* (1)	20
Batch number: 112975711003	Sample number(s): 6446809-6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
Mercury	95	102	65-135	9	20	0.0150 J	0.0204 J	30* (1)	20
Batch number: 11298621202A	Sample number(s): 6446809-6446811,6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
7a Perchlorate EPA 314.0	107		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11305243201A	Sample number(s): 6446809-6446811,6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
3a Cr VI by EPA 7199	94		75-125			0.21 J	0.56 J	90* (1)	20
Batch number: 11306621203B	Sample number(s): 6446809-6446810,6446813,6446816-6446822 UNSPK: 6446810 BKG: 6446810								
11a Anions by 300.0 - Fluoride	76*		80-120			1.3	1.3	0 (1)	20
Batch number: 11313621201A	Sample number(s): 6446811 UNSPK: P462616 BKG: P462616								
11a Anions by 300.0 - Fluoride	88		80-120			0.80 U	1.3	200* (1)	20
Batch number: 11300039403B	Sample number(s): 6446809-6446810,6446813,6446816-6446822 BKG: 6446810								
17a pH by 9045C						7.87	7.91	1	3
Batch number: 11305162401A	Sample number(s): 6446809-6446814,6446816-6446822 BKG: 6446810								
28a Moisture Content by 160.3						10.5	10.7	1	20
Moisture Content by 160.3						10.5	10.7	1	20
Moisture Content by 160.3						10.5	10.7	1	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11297SLF026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6446809	94	97	80	89	92	98
6446810	89	93	82	88	88	98
6446811	94	97	83	91	91	96
6446812	94	97	87	91	91	97
6446816	91	95	85	89	90	98
6446817	78	80	71	74	75	84
6446818	90	94	80	86	88	96
6446819	91	94	81	89	91	94
6446820	90	92	81	84	86	95
6446821	93	95	84	86	88	94
6446822	92	94	85	88	89	96
Blank	92	97	83	92	93	103
LCS	95	99	88	92	93	99
MS	94	97	83	91	91	96
MSD	94	97	87	91	91	97
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11299SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6446809	91	87	94
6446810	84	80	87
6446811	88	84	89
6446812	94	87	91
6446816	91	86	95
6446817	85	84	90
6446818	91	86	91
6446819	91	87	91
6446820	92	87	90
6446821	91	88	94
6446822	88	84	88
Blank	97	95	102
LCS	92	87	90
MS	88	84	89
MSD	94	87	91
Limits:	67-129	63-129	51-141

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 112990025A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6446809	106	111
6446810	112	124*
6446811	108	109
6446812	104	118
6446814	120	141*
6446815	98	113

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272728
Reported: 11/18/11 at 11:59 AM

Surrogate Quality Control

6446816	108	124*
6446817	217*	247*
6446818	109	120
6446819	96	117
6446820	102	133*
6446821	99	113
6446822	116	130*
Blank	103	124*
LCS	136	163*
LCSD	101	113
MS	108	109
MSD	104	118
Limits:	53-139	45-120

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acct# 13013 Cap# 1272728 Sample# 6446809-24

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-017-SA8S-SB-4.0-5.0	10.21.11	1113	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-018-SA8S-SB-4.0-5.0MS	10.21.11	1023	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X													MS.MSD
SL-018-SA8S-SB-7.5-8.5	10.21.11	0930	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
DUP02-SA8S-QC-102111	10.21.11	1015	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-065-SA7-SB-2.0-3.0	10.21.11	1100	SOIL	NONE	1-SS Sleeve			X	X																	
SL-065-SA7-SB-2.0-3.0	10.21.11	1100	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X													
SL-014-SA8S-SB-4.0-5.0	10.21.11	1431	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-014-SA8S-SB-7.0-8.0	10.21.11	1422	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-015-SA8S-SB-4.0-5.0	10.21.11	1523	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-015-SA8S-SB-9.0-10.0	10.21.11	1519	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
EB-SA8S-SB-102111	10.21.11	1430	SOIL	NONE	1-1 L Amber														X							HGL ASTM II WATER-DPTcrew
TB-1012111	10.21.11	0800	WATER	NONE	2-40 mL Vials										X											

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/20/2011 / 1630	10/22/11 0930	Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8767 9858 7592,7630	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 08, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/22/2011
Group Number: 1272729
SDG: DX152
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-017-SA8S-SB-4.0-5.0 Soil	6446825
SL-018-SA8S-SB-4.0-5.0 Soil	6446826
SL-018-SA8S-SB-4.0-5.0MS Soil	6446827
SL-018-SA8S-SB-4.0-5.0MSD Soil	6446828
SL-018-SA8S-SB-7.5-8.5 Soil	6446829
DUP02-SA8S-QC-102111 Soil	6446830
SL-065-SA7-SB-2.0-3.0 Soil	6446831
SL-014-SA8S-SB-4.0-5.0 Soil	6446832
SL-014-SA8S-SB-7.0-8.0 Soil	6446833
SL-015-SA8S-SB-4.0-5.0 Soil	6446834
SL-015-SA8S-SB-9.0-10.0 Soil	6446835

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446825
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5201 SDG#: DX152-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446825
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5201 SDG#: DX152-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0210 U	0.0210	1.06	1
11031	12378-PeCDD	40321-76-4	0.0221 U	0.0221	5.31	1
11031	123478-HxCDD	39227-28-6	0.0181 U	0.0181	5.31	1
11031	123678-HxCDD	57653-85-7	0.0497 JBQ	0.0184	5.31	1
11031	123789-HxCDD	19408-74-3	0.0529 JBQ	0.0183	5.31	1
11031	1234678-HpCDD	35822-46-9	0.257 JB	0.0249	5.31	1
11031	OCDD	3268-87-9	0.605 JB	0.0304	10.6	1
11031	2378-TCDF	51207-31-9	0.0192 U	0.0192	1.06	1
11031	12378-PeCDF	57117-41-6	0.0279 JB	0.0141	5.31	1
11031	23478-PeCDF	57117-31-4	0.0470 JB	0.0144	5.31	1
11031	123478-HxCDF	70648-26-9	0.0490 JBQ	0.0154	5.31	1
11031	123678-HxCDF	57117-44-9	0.0296 JBQ	0.0117	5.31	1
11031	123789-HxCDF	72918-21-9	0.0615 JBQ	0.0122	5.31	1
11031	234678-HxCDF	60851-34-5	0.0396 JB	0.0108	5.31	1
11031	1234678-HpCDF	67562-39-4	0.140 JB	0.0111	5.31	1
11031	1234789-HpCDF	55673-89-7	0.0257 JBQ	0.0146	5.31	1
11031	OCDF	39001-02-0	0.149 JB	0.0234	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	82	25 - 164
13C12-12378-PeCDD	84	25 - 181
13C12-123478-HxCDD	85	32 - 141
13C12-123678-HxCDD	84	28 - 130
13C12-123789-HxCDD	87	28 - 130
13C12-1234678-HpCDD	94	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	79	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	64	26 - 123
13C12-234678-HxCDF	74	28 - 136
13C12-123789-HxCDF	70	29 - 147
13C12-1234678-HpCDF	81	28 - 143
13C12-1234789-HpCDF	73	26 - 138
13C12-OCDF	73	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-017-SA8S-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446825
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5201 SDG#: DX152-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-017-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-017-SA8S-SB-4.0-5.0

LLI Sample # SW 6446825
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:13

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5201 SDG#: DX152-01

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 02:47	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446826
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446826
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0263 U	0.0263	1.11	1
11031	12378-PeCDD	40321-76-4	0.0308 U	0.0308	5.56	1
11031	123478-HxCDD	39227-28-6	0.0229 JBQ	0.0184	5.56	1
11031	123678-HxCDD	57653-85-7	0.0187 U	0.0187	5.56	1
11031	123789-HxCDD	19408-74-3	0.0178 U	0.0178	5.56	1
11031	1234678-HpCDD	35822-46-9	0.226 JBQ	0.0219	5.56	1
11031	OCDD	3268-87-9	1.04 JB	0.0330	11.1	1
11031	2378-TCDF	51207-31-9	0.0257 U	0.0257	1.11	1
11031	12378-PeCDF	57117-41-6	0.0171 U	0.0171	5.56	1
11031	23478-PeCDF	57117-31-4	0.0480 JBQ	0.0179	5.56	1
11031	123478-HxCDF	70648-26-9	0.0341 JBQ	0.0161	5.56	1
11031	123678-HxCDF	57117-44-9	0.0279 JB	0.0141	5.56	1
11031	123789-HxCDF	72918-21-9	0.0151 U	0.0151	5.56	1
11031	234678-HxCDF	60851-34-5	0.0260 JBQ	0.0124	5.56	1
11031	1234678-HpCDF	67562-39-4	0.142 JB	0.0104	5.56	1
11031	1234789-HpCDF	55673-89-7	0.0336 JBQ	0.0143	5.56	1
11031	OCDF	39001-02-0	0.173 JBQ	0.0280	11.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	81	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	81	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	91	23 - 140
13C12-OCDD	92	17 - 157
13C12-2378-TCDF	67	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	59	26 - 152
13C12-123678-HxCDF	63	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	82	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	70	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446826
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446826
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02BKG

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 03:44	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446827
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446827
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	21.1	B	0.0299	1.09	1
11031	12378-PeCDD	40321-76-4	98.6	B	0.0431	5.45	1
11031	123478-HxCDD	39227-28-6	97.6	B	0.0332	5.45	1
11031	123678-HxCDD	57653-85-7	97.4	B	0.0341	5.45	1
11031	123789-HxCDD	19408-74-3	108	B	0.0333	5.45	1
11031	1234678-HpCDD	35822-46-9	105	B	0.0644	5.45	1
11031	OCDD	3268-87-9	201	B	0.0361	10.9	1
11031	2378-TCDF	51207-31-9	20.3	B	0.0494	1.09	1
11031	12378-PeCDF	57117-41-6	99.9	B	0.0344	5.45	1
11031	23478-PeCDF	57117-31-4	95.1	B	0.0334	5.45	1
11031	123478-HxCDF	70648-26-9	101	B	0.0645	5.45	1
11031	123678-HxCDF	57117-44-9	101	B	0.0542	5.45	1
11031	123789-HxCDF	72918-21-9	105	B	0.0600	5.45	1
11031	234678-HxCDF	60851-34-5	96.6	B	0.0512	5.45	1
11031	1234678-HpCDF	67562-39-4	92.7	B	0.0413	5.45	1
11031	1234789-HpCDF	55673-89-7	102	B	0.0577	5.45	1
11031	OCDF	39001-02-0	203	B	0.0391	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	82	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	78	28 - 130
13C12-123789-HxCDD	81	28 - 130
13C12-1234678-HpCDD	90	23 - 140
13C12-OCDD	91	17 - 157
13C12-2378-TCDF	66	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	58	26 - 152
13C12-123678-HxCDF	65	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	70	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446827
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MS Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446827
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MS

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 04:40	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446828
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446828
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	20.7	B	0.0442	1.10	1
11031	12378-PeCDD	40321-76-4	103	B	0.0403	5.49	1
11031	123478-HxCDD	39227-28-6	102	B	0.0534	5.49	1
11031	123678-HxCDD	57653-85-7	99.5	B	0.0544	5.49	1
11031	123789-HxCDD	19408-74-3	106	B	0.0495	5.49	1
11031	1234678-HpCDD	35822-46-9	108	B	0.0684	5.49	1
11031	OCDD	3268-87-9	196	B	0.0422	11.0	1
11031	2378-TCDF	51207-31-9	20.5	B	0.0526	1.10	1
11031	12378-PeCDF	57117-41-6	98.7	B	0.0372	5.49	1
11031	23478-PeCDF	57117-31-4	95.5	B	0.0368	5.49	1
11031	123478-HxCDF	70648-26-9	100	B	0.0759	5.49	1
11031	123678-HxCDF	57117-44-9	102	B	0.0630	5.49	1
11031	123789-HxCDF	72918-21-9	102	B	0.0523	5.49	1
11031	234678-HxCDF	60851-34-5	99.7	B	0.0456	5.49	1
11031	1234678-HpCDF	67562-39-4	93.4	B	0.0589	5.49	1
11031	1234789-HpCDF	55673-89-7	98.6	B	0.0668	5.49	1
11031	OCDF	39001-02-0	205	B	0.0493	11.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	78	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	88	23 - 140
13C12-OCDD	93	17 - 157
13C12-2378-TCDF	64	24 - 169
13C12-12378-PeCDF	74	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	48	26 - 152
13C12-123678-HxCDF	54	26 - 123
13C12-234678-HxCDF	74	28 - 136
13C12-123789-HxCDF	76	29 - 147
13C12-1234678-HpCDF	71	28 - 143
13C12-1234789-HpCDF	74	26 - 138
13C12-OCDF	70	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446828
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-4.0-5.0MSD Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-4.0-5.0

LLI Sample # SW 6446828
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5202 SDG#: DX152-02MSD

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 05:37	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446829
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5203 SDG#: DX152-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446829
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5203 SDG#: DX152-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0275 U	0.0275	1.07	1
11031	12378-PeCDD	40321-76-4	0.0308 JBQ	0.0275	5.34	1
11031	123478-HxCDD	39227-28-6	0.0541 JBQ	0.0220	5.34	1
11031	123678-HxCDD	57653-85-7	0.0639 JB	0.0227	5.34	1
11031	123789-HxCDD	19408-74-3	0.0335 JBQ	0.0208	5.34	1
11031	1234678-HpCDD	35822-46-9	0.184 JBQ	0.0256	5.34	1
11031	OCDD	3268-87-9	0.489 JB	0.0336	10.7	1
11031	2378-TCDF	51207-31-9	0.0341 U	0.0341	1.07	1
11031	12378-PeCDF	57117-41-6	0.0509 JBQ	0.0174	5.34	1
11031	23478-PeCDF	57117-31-4	0.0758 JB	0.0176	5.34	1
11031	123478-HxCDF	70648-26-9	0.0575 JBQ	0.0207	5.34	1
11031	123678-HxCDF	57117-44-9	0.0452 JBQ	0.0162	5.34	1
11031	123789-HxCDF	72918-21-9	0.0557 JBQ	0.0173	5.34	1
11031	234678-HxCDF	60851-34-5	0.0667 JB	0.0143	5.34	1
11031	1234678-HpCDF	67562-39-4	0.136 JB	0.0114	5.34	1
11031	1234789-HpCDF	55673-89-7	0.0488 JBQ	0.0176	5.34	1
11031	OCDF	39001-02-0	0.246 JBQ	0.0323	10.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	79	25 - 164
13C12-12378-PeCDD	80	25 - 181
13C12-123478-HxCDD	84	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	92	23 - 140
13C12-OCDD	93	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	76	24 - 185
13C12-23478-PeCDF	68	21 - 178
13C12-123478-HxCDF	52	26 - 152
13C12-123678-HxCDF	63	26 - 123
13C12-234678-HxCDF	71	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	87	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	68	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446829
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5203 SDG#: DX152-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-018-SA8S-SB-7.5-8.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-018-SA8S-SB-7.5-8.5

LLI Sample # SW 6446829
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 09:30

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5203 SDG#: DX152-03

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 06:33	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446830
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5204 SDG#: DX152-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446830
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5204 SDG#: DX152-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0243 U	0.0243	1.10	1
11031	12378-PeCDD	40321-76-4	0.0588 JB	0.0299	5.48	1
11031	123478-HxCDD	39227-28-6	0.0401 JBQ	0.0207	5.48	1
11031	123678-HxCDD	57653-85-7	0.0562 JBQ	0.0210	5.48	1
11031	123789-HxCDD	19408-74-3	0.0766 JBQ	0.0189	5.48	1
11031	1234678-HpCDD	35822-46-9	0.211 JB	0.0230	5.48	1
11031	OCDD	3268-87-9	0.563 JB	0.0341	11.0	1
11031	2378-TCDF	51207-31-9	0.0236 U	0.0236	1.10	1
11031	12378-PeCDF	57117-41-6	0.0565 JBQ	0.0166	5.48	1
11031	23478-PeCDF	57117-31-4	0.0699 JBQ	0.0180	5.48	1
11031	123478-HxCDF	70648-26-9	0.0763 JBQ	0.0197	5.48	1
11031	123678-HxCDF	57117-44-9	0.0378 JBQ	0.0164	5.48	1
11031	123789-HxCDF	72918-21-9	0.0635 JBQ	0.0174	5.48	1
11031	234678-HxCDF	60851-34-5	0.0628 JBQ	0.0151	5.48	1
11031	1234678-HpCDF	67562-39-4	0.135 JBQ	0.0116	5.48	1
11031	1234789-HpCDF	55673-89-7	0.0401 JBQ	0.0155	5.48	1
11031	OCDF	39001-02-0	0.200 JB	0.0294	11.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	77	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	83	23 - 140
13C12-OCDD	83	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	74	24 - 185
13C12-23478-PeCDF	64	21 - 178
13C12-123478-HxCDF	54	26 - 152
13C12-123678-HxCDF	62	26 - 123
13C12-234678-HxCDF	67	28 - 136
13C12-123789-HxCDF	64	29 - 147
13C12-1234678-HpCDF	80	28 - 143
13C12-1234789-HpCDF	69	26 - 138
13C12-OCDF	63	17 - 157

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*
Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446830
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5204 SDG#: DX152-04FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: DUP02-SA8S-QC-102111 Soil
SSFL Area IV Collocated Soil Sampling
DUP02-SA8S-QC-102111

LLI Sample # SW 6446830
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 10:15

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5204 SDG#: DX152-04FD

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 07:30	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446831
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5205 SDG#: DX152-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.0	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446831
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5205 SDG#: DX152-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0244	U	0.0244	0.994	1
11031	12378-PeCDD	40321-76-4	0.109	JB	0.0250	4.97	1
11031	123478-HxCDD	39227-28-6	0.102	JBQ	0.0305	4.97	1
11031	123678-HxCDD	57653-85-7	0.199	JBQ	0.0308	4.97	1
11031	123789-HxCDD	19408-74-3	0.162	JBQ	0.0293	4.97	1
11031	1234678-HpCDD	35822-46-9	4.42	JB	0.0386	4.97	1
11031	OCDD	3268-87-9	42.6	B	0.0292	9.94	1
11031	2378-TCDF	51207-31-9	0.0253	U	0.0253	0.994	1
11031	12378-PeCDF	57117-41-6	0.173	JB	0.0249	4.97	1
11031	23478-PeCDF	57117-31-4	0.178	JB	0.0253	4.97	1
11031	123478-HxCDF	70648-26-9	1.17	JB	0.0413	4.97	1
11031	123678-HxCDF	57117-44-9	0.160	JBQ	0.0358	4.97	1
11031	123789-HxCDF	72918-21-9	0.0732	JB	0.0411	4.97	1
11031	234678-HxCDF	60851-34-5	0.127	JBQ	0.0343	4.97	1
11031	1234678-HpCDF	67562-39-4	1.27	JB	0.0146	4.97	1
11031	1234789-HpCDF	55673-89-7	0.116	JBQ	0.0231	4.97	1
11031	OCDF	39001-02-0	3.79	JB	0.0335	9.94	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	88	25 - 164
13C12-12378-PeCDD	95	25 - 181
13C12-123478-HxCDD	93	32 - 141
13C12-123678-HxCDD	96	28 - 130
13C12-123789-HxCDD	99	28 - 130
13C12-1234678-HpCDD	108	23 - 140
13C12-OCDD	105	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	93	24 - 185
13C12-23478-PeCDF	83	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	82	26 - 123
13C12-234678-HxCDF	83	28 - 136
13C12-123789-HxCDF	81	29 - 147
13C12-1234678-HpCDF	110	28 - 143
13C12-1234789-HpCDF	80	26 - 138
13C12-OCDF	73	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446831
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5205 SDG#: DX152-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-065-SA7-SB-2.0-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-065-SA7-SB-2.0-3.0

LLI Sample # SW 6446831
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 11:00

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5205 SDG#: DX152-05

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 08:27	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446832
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5206 SDG#: DX152-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446832
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5206 SDG#: DX152-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0364 JBQ	0.0269	1.06	1
11031	12378-PeCDD	40321-76-4	0.225 JB	0.0282	5.28	1
11031	123478-HxCDD	39227-28-6	0.112 JB	0.0208	5.28	1
11031	123678-HxCDD	57653-85-7	0.112 JBQ	0.0216	5.28	1
11031	123789-HxCDD	19408-74-3	0.0927 JBQ	0.0200	5.28	1
11031	1234678-HpCDD	35822-46-9	0.294 JB	0.0262	5.28	1
11031	OCDD	3268-87-9	0.521 JB	0.0294	10.6	1
11031	2378-TCDF	51207-31-9	0.0466 JBQ	0.0247	1.06	1
11031	12378-PeCDF	57117-41-6	0.177 JB	0.0161	5.28	1
11031	23478-PeCDF	57117-31-4	0.192 JB	0.0167	5.28	1
11031	123478-HxCDF	70648-26-9	0.153 JBQ	0.0198	5.28	1
11031	123678-HxCDF	57117-44-9	0.146 JB	0.0164	5.28	1
11031	123789-HxCDF	72918-21-9	0.101 JBQ	0.0198	5.28	1
11031	234678-HxCDF	60851-34-5	0.108 JB	0.0165	5.28	1
11031	1234678-HpCDF	67562-39-4	0.142 JBQ	0.00947	5.28	1
11031	1234789-HpCDF	55673-89-7	0.0817 JB	0.0144	5.28	1
11031	OCDF	39001-02-0	0.174 JB	0.0280	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	83	25 - 181
13C12-123478-HxCDD	75	32 - 141
13C12-123678-HxCDD	73	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	86	23 - 140
13C12-OCDD	90	17 - 157
13C12-2378-TCDF	64	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	53	26 - 152
13C12-123678-HxCDF	63	26 - 123
13C12-234678-HxCDF	65	28 - 136
13C12-123789-HxCDF	60	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	64	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446832
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5206 SDG#: DX152-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-4.0-5.0

LLI Sample # SW 6446832
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:31

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5206 SDG#: DX152-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 09:23	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446833
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5207 SDG#: DX152-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	9.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446833
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5207 SDG#: DX152-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.137	JBQ	0.0205	1.08	1
11031	12378-PeCDD	40321-76-4	0.312	JB	0.0275	5.40	1
11031	123478-HxCDD	39227-28-6	0.156	JB	0.0224	5.40	1
11031	123678-HxCDD	57653-85-7	0.135	JB	0.0216	5.40	1
11031	123789-HxCDD	19408-74-3	0.162	JB	0.0206	5.40	1
11031	1234678-HpCDD	35822-46-9	0.334	JB	0.0238	5.40	1
11031	OCDD	3268-87-9	0.627	JB	0.0315	10.8	1
11031	2378-TCDF	51207-31-9	0.137	JB	0.0200	1.08	1
11031	12378-PeCDF	57117-41-6	0.391	JB	0.0157	5.40	1
11031	23478-PeCDF	57117-31-4	0.353	JB	0.0165	5.40	1
11031	123478-HxCDF	70648-26-9	0.285	JBQ	0.0346	5.40	1
11031	123678-HxCDF	57117-44-9	0.236	JB	0.0257	5.40	1
11031	123789-HxCDF	72918-21-9	0.205	JBQ	0.0244	5.40	1
11031	234678-HxCDF	60851-34-5	0.156	JB	0.0195	5.40	1
11031	1234678-HpCDF	67562-39-4	0.237	JB	0.0139	5.40	1
11031	1234789-HpCDF	55673-89-7	0.164	JB	0.0173	5.40	1
11031	OCDF	39001-02-0	0.308	JBQ	0.0276	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	74	32 - 141
13C12-123678-HxCDD	76	28 - 130
13C12-123789-HxCDD	81	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	81	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	66	21 - 178
13C12-123478-HxCDF	37	26 - 152
13C12-123678-HxCDF	49	26 - 123
13C12-234678-HxCDF	67	28 - 136
13C12-123789-HxCDF	59	29 - 147
13C12-1234678-HpCDF	64	28 - 143
13C12-1234789-HpCDF	61	26 - 138
13C12-OCDF	59	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446833
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5207 SDG#: DX152-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-014-SA8S-SB-7.0-8.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-014-SA8S-SB-7.0-8.0

LLI Sample # SW 6446833
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 14:22

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5207 SDG#: DX152-07

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 13:23	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446834
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5208 SDG#: DX152-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	7.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446834
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5208 SDG#: DX152-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0439 JQ	0.0251	1.08	1
11031	12378-PeCDD	40321-76-4	0.142 JQ	0.0260	5.39	1
11031	123478-HxCDD	39227-28-6	0.0475 JB	0.0213	5.39	1
11031	123678-HxCDD	57653-85-7	0.0751 JBQ	0.0222	5.39	1
11031	123789-HxCDD	19408-74-3	0.0631 JBQ	0.0212	5.39	1
11031	1234678-HpCDD	35822-46-9	0.297 JB	0.0223	5.39	1
11031	OCDD	3268-87-9	0.704 JB	0.0277	10.8	1
11031	2378-TCDF	51207-31-9	0.0507 JQ	0.0194	1.08	1
11031	12378-PeCDF	57117-41-6	0.130 JBQ	0.0124	5.39	1
11031	23478-PeCDF	57117-31-4	0.132 JBQ	0.0128	5.39	1
11031	123478-HxCDF	70648-26-9	0.0805 JB	0.0130	5.39	1
11031	123678-HxCDF	57117-44-9	0.0425 JB	0.0111	5.39	1
11031	123789-HxCDF	72918-21-9	0.0553 JBQ	0.0158	5.39	1
11031	234678-HxCDF	60851-34-5	0.0793 JB	0.0123	5.39	1
11031	1234678-HpCDF	67562-39-4	0.0947 JB	0.00898	5.39	1
11031	1234789-HpCDF	55673-89-7	0.0393 J	0.0194	5.39	1
11031	OCDF	39001-02-0	0.233 JBQ	0.0421	10.8	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	84	25 - 164
13C12-12378-PeCDD	85	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	90	28 - 130
13C12-123789-HxCDD	87	28 - 130
13C12-1234678-HpCDD	91	23 - 140
13C12-OCDD	90	17 - 157
13C12-2378-TCDF	86	24 - 169
13C12-12378-PeCDF	97	24 - 185
13C12-23478-PeCDF	82	21 - 178
13C12-123478-HxCDF	79	26 - 152
13C12-123678-HxCDF	93	26 - 123
13C12-234678-HxCDF	82	28 - 136
13C12-123789-HxCDF	73	29 - 147
13C12-1234678-HpCDF	118	28 - 143
13C12-1234789-HpCDF	67	26 - 138
13C12-OCDF	58	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446834
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5208 SDG#: DX152-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-4.0-5.0

LLI Sample # SW 6446834
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:23

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5208 SDG#: DX152-08

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/05/2011 23:05	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	2	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

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Analysis Report

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446835
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5209 SDG#: DX152-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446835
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5209 SDG#: DX152-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0198 U	0.0198	1.10	1
11031	12378-PeCDD	40321-76-4	0.0958 JBQ	0.0247	5.48	1
11031	123478-HxCDD	39227-28-6	0.0461 JBQ	0.0175	5.48	1
11031	123678-HxCDD	57653-85-7	0.0523 JBQ	0.0178	5.48	1
11031	123789-HxCDD	19408-74-3	0.0465 JB	0.0182	5.48	1
11031	1234678-HpCDD	35822-46-9	0.248 JBQ	0.0217	5.48	1
11031	OCDD	3268-87-9	0.509 JB	0.0258	11.0	1
11031	2378-TCDF	51207-31-9	0.0269 JB	0.0178	1.10	1
11031	12378-PeCDF	57117-41-6	0.106 JB	0.0137	5.48	1
11031	23478-PeCDF	57117-31-4	0.114 JBQ	0.0142	5.48	1
11031	123478-HxCDF	70648-26-9	0.0940 JBQ	0.0145	5.48	1
11031	123678-HxCDF	57117-44-9	0.0644 JBQ	0.0131	5.48	1
11031	123789-HxCDF	72918-21-9	0.0482 JBQ	0.0151	5.48	1
11031	234678-HxCDF	60851-34-5	0.0588 JB	0.0121	5.48	1
11031	1234678-HpCDF	67562-39-4	0.106 JB	0.00919	5.48	1
11031	1234789-HpCDF	55673-89-7	0.0557 JBQ	0.0137	5.48	1
11031	OCDF	39001-02-0	0.158 JBQ	0.0247	11.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	83	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	79	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	88	17 - 157
13C12-2378-TCDF	68	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	63	26 - 152
13C12-123678-HxCDF	67	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	86	28 - 143
13C12-1234789-HpCDF	67	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446835
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5209 SDG#: DX152-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-015-SA8S-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-015-SA8S-SB-9.0-10.0

LLI Sample # SW 6446835
LLI Group # 1272729
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/21/2011 15:19

Submitted: 10/22/2011 09:30
Reported: 11/08/2011 23:08

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5209 SDG#: DX152-09

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11301002	10/31/2011 15:16	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11301002	10/28/2011 10:00	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11305162401A	11/01/2011 21:43	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272729
Reported: 11/08/11 at 11:08 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11305162401A	Sample number(s): 6446825-6446835								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11301002	Sample number(s): 6446825-6446833,6446835								
2378-TCDD	0.0738 J	0.0256	1.00	ng/kg	94		67-158		
12378-PeCDD	0.349 J	0.0297	5.00	ng/kg	91		70-142		
123478-HxCDD	0.147 J	0.0239	5.00	ng/kg	88		70-164		
123678-HxCDD	0.124 J	0.0230	5.00	ng/kg	91		76-134		
123789-HxCDD	0.145 J	0.0233	5.00	ng/kg	93		64-162		
1234678-HpCDD	0.286 J	0.0210	5.00	ng/kg	93		70-140		
OCDD	0.418 J	0.0269	10.0	ng/kg	91		78-144		
2378-TCDF	0.0617 J	0.0236	1.00	ng/kg	93		75-158		
12378-PeCDF	0.328 J	0.0165	5.00	ng/kg	88		80-134		
23478-PeCDF	0.295 J	0.0166	5.00	ng/kg	86		68-160		
123478-HxCDF	0.197 J	0.0257	5.00	ng/kg	90		72-134		
123678-HxCDF	0.216 J	0.0212	5.00	ng/kg	90		84-130		
123789-HxCDF	0.174 J	0.0210	5.00	ng/kg	94		78-130		
234678-HxCDF	0.159 J	0.0196	5.00	ng/kg	89		70-156		
1234678-HpCDF	0.172 J	0.0113	5.00	ng/kg	85		82-122		
1234789-HpCDF	0.0917 J	0.0149	5.00	ng/kg	88		78-138		
OCDF	0.220 J	0.0265	10.0	ng/kg	91		63-170		
Batch number: 11307002	Sample number(s): 6446834								
2378-TCDD	0.0250 U	0.0250	1.00	ng/kg	110		67-158		
12378-PeCDD	0.0263 U	0.0263	5.00	ng/kg	108		70-142		
123478-HxCDD	0.0229 J	0.0182	5.00	ng/kg	103		70-164		
123678-HxCDD	0.0323 J	0.0182	5.00	ng/kg	99		76-134		
123789-HxCDD	0.0212 J	0.0186	5.00	ng/kg	105		64-162		
1234678-HpCDD	0.268 J	0.0221	5.00	ng/kg	102		70-140		
OCDD	0.412 J	0.0259	10.0	ng/kg	98		78-144		
2378-TCDF	0.0197 U	0.0197	1.00	ng/kg	108		75-158		
12378-PeCDF	0.0304 J	0.0104	5.00	ng/kg	105		80-134		
23478-PeCDF	0.0732 J	0.0110	5.00	ng/kg	99		68-160		
123478-HxCDF	0.0245 J	0.0131	5.00	ng/kg	100		72-134		
123678-HxCDF	0.0169 J	0.0110	5.00	ng/kg	99		84-130		
123789-HxCDF	0.0396 J	0.0154	5.00	ng/kg	101		78-130		
234678-HxCDF	0.0200 J	0.0127	5.00	ng/kg	100		70-156		
1234678-HpCDF	0.0783 J	0.00700	5.00	ng/kg	93		82-122		
1234789-HpCDF	0.0162 U	0.0162	5.00	ng/kg	101		78-138		
OCDF	0.185 J	0.0413	10.0	ng/kg	101		63-170		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272729
Reported: 11/08/11 at 11:08 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11305162401A	Sample number(s): 6446825-6446835					BKG: P446810			
Moisture Content by 160.3						10.5	10.7	1	20
Batch number: 11301002	Sample number(s): 6446825-6446833,6446835 UNSPK: 6446826								
2378-TCDD	97	94	67-158	2	25				
12378-PeCDD	91	93	70-142	4	25				
123478-HxCDD	90	92	70-164	4	25				
123678-HxCDD	89	91	76-134	2	25				
123789-HxCDD	99	96	64-162	2	25				
1234678-HpCDD	96	98	70-140	2	25				
OCDD	92	89	78-144	2	25				
2378-TCDF	93	93	75-158	1	25				
12378-PeCDF	92	90	80-134	1	25				
23478-PeCDF	87	87	68-160	0	25				
123478-HxCDF	93	91	72-134	1	25				
123678-HxCDF	93	93	84-130	1	25				
123789-HxCDF	96	93	78-130	3	25				
234678-HxCDF	89	91	70-156	3	25				
1234678-HpCDF	85	85	82-122	1	25				
1234789-HpCDF	93	90	78-138	3	25				
OCDF	93	93	63-170	1	25				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11301002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6446825	82	71	52	64	74	70
6446826	76	69	59	63	72	68
6446827	74	69	58	65	72	68
6446828	74	67	48	54	74	76
6446829	79	68	52	63	71	67
6446830	74	64	54	62	67	64
6446831	88	83	72	82	83	81
6446832	74	69	53	63	65	60
6446833	76	66	37	49	67	59
6446835	76	71	63	67	72	68
Blank	73	71	53	62	66	67
MS	74	69	58	65	72	68
MSD	74	67	48	54	74	76
OPR	83	72	42	55	73	73
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272729
Reported: 11/08/11 at 11:08 PM

Surrogate Quality Control

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6446825	81	73	73	84	85	84
6446826	82	71	70	81	78	81
6446827	84	70	70	82	80	78
6446828	71	74	70	77	80	78
6446829	87	71	68	80	84	83
6446830	80	69	63	76	78	77
6446831	110	80	73	95	93	96
6446832	84	64	64	83	75	73
6446833	64	61	59	77	74	76
6446835	86	67	64	83	78	79
Blank	80	69	66	79	77	77
MS	84	70	70	82	80	78
MSD	71	74	70	77	80	78
OPR	71	74	69	88	83	79
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6446825	87	94	95	73	79
6446826	83	91	92	67	75
6446827	81	90	91	66	75
6446828	83	88	93	64	74
6446829	86	92	93	65	76
6446830	79	83	83	65	74
6446831	99	108	105	76	93
6446832	79	86	90	64	78
6446833	81	79	81	65	75
6446835	80	87	88	68	78
Blank	79	86	87	60	73
MS	81	90	91	66	75
MSD	83	88	93	64	74
OPR	90	96	94	67	81
Limits:	28-130	23-140	17-157	24-169	24-185

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11307002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6446834	84	82	79	93	82	73
Blank	65	65	64	76	67	64
OPR	71	66	63	79	67	58
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6446834	118	67	58	85	89	90
Blank	102	55	46	69	74	78
OPR	107	50	42	73	79	80
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1272729
Reported: 11/08/11 at 11:08 PM

Surrogate Quality Control

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6446834	87	91	90	86	97
Blank	75	78	75	64	75
OPR	81	81	78	68	80
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Gp# 1272729 Sample# 0446825-35

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-017-SA8S-SB-4.0-5.0	10.21.11	1113	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-018-SA8S-SB-4.0-5.0MS	10.21.11	1023	SOIL	NONE	6-16 oz Jars	X	X	X	X	X	X	X	X													MS.MSD
SL-018-SA8S-SB-7.5-8.5	10.21.11	0930	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
DUP02-SA8S-QC-102111	10.21.11	1015	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-065-SA7-SB-2.0-3.0	10.21.11	1100	SOIL	NONE	1-SS Sleeve			X	X																	
SL-065-SA7-SB-2.0-3.0	10.21.11	1100	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X													
SL-014-SA8S-SB-4.0-5.0	10.21.11	1431	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-014-SA8S-SB-7.0-8.0	10.21.11	1422	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-015-SA8S-SB-4.0-5.0	10.21.11	1523	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
SL-015-SA8S-SB-9.0-10.0	10.21.11	1519	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X													
EB-SA8S-SB-102111	10.21.11	1430	SOIL	NONE	1-1 L Amber																					
TB-1012111	10.21.11	0800	WATER	NONE	2-40 mL Vials										X				X							HGL ASTM II WATER-DPTcrew

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/20/2011 / 1630	10/22/11 0930	Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8767 9858 7592,7630	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 20, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/27/2011
Group Number: 1273439
SDG: DE274
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-033-SA7-SB-4.0-5.0 Soil	6451564
SL-033-SA7-SB-9.0-10.0 Soil	6451565
SL-038-SA7-SB-4.0-5.0 Soil	6451566
SL-082-SA7-SB-4.0-5.0 Soil	6451567
SL-086-SA7-SB-3.0-4.0 Soil	6451568
SL-157-SA7-SB-2.5-3.5 Soil	6451569
TB-102611 Water	6451570
EB-SA7-SB-102611 Water	6451571
FB-SA7-102611 Water	6451572

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Matthew E. Barton
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451564
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7401 SDG#: DE274-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	540		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	U	180	540		1
04688	Benzyl alcohol	100-51-6	180	U	180	540		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	72	U	72	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	540		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	18	U	18	360		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	72	U	72	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	540		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	72	U	72	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	540		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	540		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451564
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7401 SDG#: DE274-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19		1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8		1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19		1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19		1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8		1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8		1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19		1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8		1
10138	Pyrene	129-00-0	0.92	J	0.72	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5		1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8		1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8		1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8		1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8		1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8		1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8		1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8		1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8		1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451564
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7401 SDG#: DE274-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,700		6.30	20.8		1
07914	Boron	7440-42-8	4.29	J	0.375	5.21		1
01650	Calcium	7440-70-2	2,720		2.60	20.8		1
01654	Iron	7439-89-6	22,900		2.72	20.8		1
01656	Lithium	7439-93-2	27.5		0.65	2.1		1
01657	Magnesium	7439-95-4	5,480		0.458	10.4		1
06958	Manganese	7439-96-5	354		0.0375	0.521		1
10145	Phosphorus	7723-14-0	490		0.365	10.4		1
01662	Potassium	7440-09-7	3,960		11.8	52.1		1
01667	Sodium	7440-23-5	82.3	J	6.20	104		1
07968	Strontium	7440-24-6	17.3		0.0260	0.521		1
06969	Tin	7440-31-5	2.72	J	0.333	10.4		1
06970	Titanium	7440-32-6	1,420		0.0740	1.04		1
10146	Zirconium	7440-67-7	2.24	J	0.479	5.21		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.168	J	0.0771	0.208		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.15		0.0833	0.417		2
06126	Barium	7440-39-3	129		0.110	0.417		2
06127	Beryllium	7440-41-7	0.694		0.0167	0.104		2
06128	Cadmium	7440-43-9	0.207		0.0458	0.104		2
06131	Chromium	7440-47-3	24.8		0.125	0.417		2
06132	Cobalt	7440-48-4	8.51		0.0208	0.104		2
06133	Copper	7440-50-8	11.9		0.0833	0.417		2
06135	Lead	7439-92-1	5.66		0.0106	0.208		2
06138	Molybdenum	7439-98-7	0.616		0.0521	0.104		2
06139	Nickel	7440-02-0	16.3		0.104	0.417		2
06141	Selenium	7782-49-2	0.184	J	0.0604	0.417		2
06142	Silver	7440-22-4	0.0410	J	0.0148	0.104		2
06145	Thallium	7440-28-0	0.415		0.0313	0.104		2
06148	Vanadium	7440-62-2	50.4		0.0229	0.104		2
06149	Zinc	7440-66-6	66.3		0.583	3.13		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0072	U	0.0072	0.102		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	0.85	U	0.85	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.7	U	9.7	32.2		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.46	J	0.21	1.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451564
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7401 SDG#: DE274-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.66	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	6.8	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011	09:31	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011	09:40	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011	10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011	10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	07:51	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011	08:56	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011	21:58	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011	21:58	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011	21:58	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011	21:58	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011	21:58	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451564
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7401 SDG#: DE274-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 21:58	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 21:58	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 21:58	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:00	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 10:39	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 17:49	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 13:02	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451565
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7402 SDG#: DE274-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	180	U	180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	180		1
04688	4-Chloroaniline	106-47-8	73	U	73	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	180		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	18	U	18	370		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	37	U	37	180		1
04688	4-Methylphenol	106-44-5	37	U	37	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	37	U	37	180		1
04688	4-Nitroaniline	100-01-6	73	U	73	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451565
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7402 SDG#: DE274-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	180		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.73	U	0.73	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.73	U	0.73	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.73	U	0.73	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.73	U	0.73	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.73	U	0.73	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.73	U	0.73	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.6	U	6.6	20		1
10138	Di-n-butylphthalate	84-74-2	6.6	U	6.6	20		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.73	U	0.73	1.8		1
10138	Diethylphthalate	84-66-2	6.6	U	6.6	20		1
10138	Dimethylphthalate	131-11-3	6.6	U	6.6	20		1
10138	Fluoranthene	206-44-0	0.73	U	0.73	1.8		1
10138	Fluorene	86-73-7	0.73	U	0.73	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	U	0.73	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.73	U	0.73	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.73	U	0.73	1.8		1
10138	Naphthalene	91-20-3	0.73	U	0.73	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.73	U	0.73	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.6	U	6.6	20		1
10138	Phenanthrene	85-01-8	0.73	U	0.73	1.8		1
10138	Pyrene	129-00-0	0.73	U	0.73	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	5.0		1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1
10225	PCB-1254	11097-69-1	3.1		0.36	1.9		1
10225	PCB-1260	11096-82-5	1.7	J	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451565
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7402 SDG#: DE274-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	16,800		6.37	21.1		1
07914	Boron	7440-42-8	2.97	J	0.379	5.27		1
01650	Calcium	7440-70-2	2,630		2.63	21.1		1
01654	Iron	7439-89-6	21,100		2.75	21.1		1
01656	Lithium	7439-93-2	21.8		0.65	2.1		1
01657	Magnesium	7439-95-4	4,800		0.463	10.5		1
06958	Manganese	7439-96-5	310		0.0379	0.527		1
10145	Phosphorus	7723-14-0	370		0.369	10.5		1
01662	Potassium	7440-09-7	2,830		11.9	52.7		1
01667	Sodium	7440-23-5	87.9	J	6.27	105		1
07968	Strontium	7440-24-6	14.7		0.0263	0.527		1
06969	Tin	7440-31-5	2.71	J	0.337	10.5		1
06970	Titanium	7440-32-6	1,290		0.0748	1.05		1
10146	Zirconium	7440-67-7	1.92	J	0.484	5.27		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.132	J	0.0779	0.211		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	5.39		0.0843	0.421		2
06126	Barium	7440-39-3	90.8		0.112	0.421		2
06127	Beryllium	7440-41-7	0.684		0.0169	0.105		2
06128	Cadmium	7440-43-9	0.115		0.0463	0.105		2
06131	Chromium	7440-47-3	22.8		0.126	0.421		2
06132	Cobalt	7440-48-4	7.57		0.0211	0.105		2
06133	Copper	7440-50-8	9.75		0.0843	0.421		2
06135	Lead	7439-92-1	6.84		0.0107	0.211		2
06138	Molybdenum	7439-98-7	0.599		0.0527	0.105		2
06139	Nickel	7440-02-0	14.1		0.105	0.421		2
06141	Selenium	7782-49-2	0.187	J	0.0611	0.421		2
06142	Silver	7440-22-4	0.0285	J	0.0150	0.105		2
06145	Thallium	7440-28-0	0.303		0.0316	0.105		2
06148	Vanadium	7440-62-2	45.3		0.0232	0.105		2
06149	Zinc	7440-66-6	64.3		0.590	3.16		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0131	J	0.0075	0.106		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.5		0.89	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.9	U	9.9	32.9		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	1.3		0.22	1.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451565
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7402 SDG#: DE274-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.28	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	8.7	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 10:47	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011 11:26	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011 10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011 08:10	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011 18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011 09:01	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011 22:23	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451565
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7402 SDG#: DE274-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 22:23	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 22:23	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 22:23	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:08	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 11:23	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 18:53	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 14:03	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451566
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7403 SDG#: DE274-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	180	U	180	550		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,600		1
04688	Benzoic acid	65-85-0	180	U	180	550		1
04688	Benzyl alcohol	100-51-6	180	U	180	550		1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180		1
04688	Carbazole	86-74-8	18	U	18	180		1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180		1
04688	4-Chloroaniline	106-47-8	73	U	73	180		1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180		1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180		1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180		1
04688	2-Chlorophenol	95-57-8	18	U	18	180		1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180		1
04688	Dibenzofuran	132-64-9	18	U	18	180		1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180		1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180		1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360		1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180		1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180		1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	550		1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180		1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180		1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	25	J	18	360		1
04688	Hexachlorobenzene	118-74-1	18	U	18	180		1
04688	Hexachlorobutadiene	87-68-3	73	U	73	180		1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	550		1
04688	Hexachloroethane	67-72-1	18	U	18	180		1
04688	Isophorone	78-59-1	18	U	18	180		1
04688	2-Methylphenol	95-48-7	36	U	36	180		1
04688	4-Methylphenol	106-44-5	36	U	36	180		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	18	U	18	180		1
04688	3-Nitroaniline	99-09-2	36	U	36	180		1
04688	4-Nitroaniline	100-01-6	73	U	73	180		1
04688	Nitrobenzene	98-95-3	18	U	18	180		1
04688	2-Nitrophenol	88-75-5	18	U	18	180		1
04688	4-Nitrophenol	100-02-7	180	U	180	550		1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180		1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	180	U	180	550		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451566
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7403 SDG#: DE274-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	18	U	18	180		1
04688	Tetralin	119-64-2	180	U	180	180		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180		1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180		1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.72	U	0.72	1.8		1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8		1
10138	Anthracene	120-12-7	0.36	U	0.36	1.8		1
10138	Benzo(a)anthracene	56-55-3	0.72	U	0.72	1.8		1
10138	Benzo(a)pyrene	50-32-8	0.72	U	0.72	1.8		1
10138	Benzo(b)fluoranthene	205-99-2	0.72	U	0.72	1.8		1
10138	Benzo(g,h,i)perylene	191-24-2	0.72	U	0.72	1.8		1
10138	Benzo(k)fluoranthene	207-08-9	0.72	U	0.72	1.8		1
10138	Butylbenzylphthalate	85-68-7	6.5	U	6.5	19		1
10138	Di-n-butylphthalate	84-74-2	6.5	U	6.5	19		1
10138	Chrysene	218-01-9	0.36	U	0.36	1.8		1
10138	Dibenz(a,h)anthracene	53-70-3	0.72	U	0.72	1.8		1
10138	Diethylphthalate	84-66-2	6.5	U	6.5	19		1
10138	Dimethylphthalate	131-11-3	6.5	U	6.5	19		1
10138	Fluoranthene	206-44-0	0.72	U	0.72	1.8		1
10138	Fluorene	86-73-7	0.72	U	0.72	1.8		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	U	0.72	1.8		1
10138	1-Methylnaphthalene	90-12-0	0.72	U	0.72	1.8		1
10138	2-Methylnaphthalene	91-57-6	0.72	U	0.72	1.8		1
10138	Naphthalene	91-20-3	0.72	U	0.72	1.8		1
10138	N-Nitrosodimethylamine	62-75-9	0.72	U	0.72	1.8		1
10138	Di-n-octylphthalate	117-84-0	6.5	U	6.5	19		1
10138	Phenanthrene	85-01-8	0.72	U	0.72	1.8		1
10138	Pyrene	129-00-0	0.72	U	0.72	1.8		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.6		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.6		1
10225	Aroclor 5460	11126-42-4	1.3	J	1.1	3.6		1
10225	PCB-1016	12674-11-2	0.36	U	0.36	1.9		1
10225	PCB-1221	11104-28-2	0.36	U	0.36	1.9		1
10225	PCB-1232	11141-16-5	0.36	U	0.36	1.9		1
10225	PCB-1242	53469-21-9	0.36	U	0.36	1.9		1
10225	PCB-1248	12672-29-6	0.36	U	0.36	1.9		1
10225	PCB-1254	11097-69-1	7.3		0.36	1.9		1
10225	PCB-1260	11096-82-5	1.8	J	0.43	1.9		1
10225	PCB-1262	37324-23-5	0.36	U	0.36	1.9		1
10225	PCB-1268	11100-14-4	0.36	U	0.36	1.9		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451566
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7403 SDG#: DE274-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	19,200		6.48	21.4		1
07914	Boron	7440-42-8	4.05	J	0.386	5.36		1
01650	Calcium	7440-70-2	2,750		2.68	21.4		1
01654	Iron	7439-89-6	23,100		2.80	21.4		1
01656	Lithium	7439-93-2	24.7		0.66	2.1		1
01657	Magnesium	7439-95-4	4,600		0.471	10.7		1
06958	Manganese	7439-96-5	288		0.0386	0.536		1
10145	Phosphorus	7723-14-0	312		0.375	10.7		1
01662	Potassium	7440-09-7	2,290		12.1	53.6		1
01667	Sodium	7440-23-5	82.3	J	6.38	107		1
07968	Strontium	7440-24-6	18.7		0.0268	0.536		1
06969	Tin	7440-31-5	2.83	J	0.343	10.7		1
06970	Titanium	7440-32-6	1,300		0.0761	1.07		1
10146	Zirconium	7440-67-7	1.99	J	0.493	5.36		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.139	J	0.0793	0.214		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.97		0.0857	0.429		2
06126	Barium	7440-39-3	105		0.114	0.429		2
06127	Beryllium	7440-41-7	0.816		0.0171	0.107		2
06128	Cadmium	7440-43-9	0.130		0.0471	0.107		2
06131	Chromium	7440-47-3	24.6		0.129	0.429		2
06132	Cobalt	7440-48-4	7.88		0.0214	0.107		2
06133	Copper	7440-50-8	9.93		0.0857	0.429		2
06135	Lead	7439-92-1	6.78		0.0109	0.214		2
06138	Molybdenum	7439-98-7	0.673		0.0536	0.107		2
06139	Nickel	7440-02-0	15.0		0.107	0.429		2
06141	Selenium	7782-49-2	0.158	J	0.0621	0.429		2
06142	Silver	7440-22-4	0.0334	J	0.0152	0.107		2
06145	Thallium	7440-28-0	0.304		0.0321	0.107		2
06148	Vanadium	7440-62-2	49.5		0.0236	0.107		2
06149	Zinc	7440-66-6	59.9		0.600	3.21		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0099	J	0.0075	0.107		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	1.5		0.89	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.8	U	9.8	32.8		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.69	J	0.22	1.1		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451566
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7403 SDG#: DE274-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	6.84	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	8.5	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011	11:12	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011	12:02	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011	10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011	10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	08:29	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011	18:15	Sally L Appleyard	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011	09:05	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011	22:26	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011	22:26	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011	22:26	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011	22:26	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011	22:26	Choon Y Tian	2

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451566
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7403 SDG#: DE274-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 22:26	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 22:26	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 22:26	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:09	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 11:38	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 19:35	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 14:16	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451567
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7404 SDG#: DE274-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	190	U	190	560		1
04688	Benzidine	92-87-5	1,300	U	1,300	3,700		1
04688	Benzoic acid	65-85-0	190	U	190	560		1
04688	Benzyl alcohol	100-51-6	190	U	190	560		1
04688	4-Bromophenyl-phenylether	101-55-3	19	U	19	190		1
04688	Carbazole	86-74-8	19	U	19	190		1
04688	4-Chloro-3-methylphenol	59-50-7	37	U	37	190		1
04688	4-Chloroaniline	106-47-8	75	U	75	190		1
04688	bis(2-Chloroethoxy)methane	111-91-1	19	U	19	190		1
04688	bis(2-Chloroethyl)ether	111-44-4	19	U	19	190		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	19	U	19	190		1
04688	2-Chloronaphthalene	91-58-7	19	U	19	190		1
04688	2-Chlorophenol	95-57-8	19	U	19	190		1
04688	4-Chlorophenyl-phenylether	7005-72-3	37	U	37	190		1
04688	Dibenzofuran	132-64-9	19	U	19	190		1
04688	1,2-Dichlorobenzene	95-50-1	19	U	19	190		1
04688	1,3-Dichlorobenzene	541-73-1	19	U	19	190		1
04688	1,4-Dichlorobenzene	106-46-7	19	U	19	190		1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	370		1
04688	2,4-Dichlorophenol	120-83-2	19	U	19	190		1
04688	2,4-Dimethylphenol	105-67-9	37	U	37	190		1
04688	3,5-Dimethylphenol	108-68-9	37	U	37	190		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	190	U	190	560		1
04688	2,4-Dinitrophenol	51-28-5	370	U	370	1,100		1
04688	2,4-Dinitrotoluene	121-14-2	37	U	37	190		1
04688	2,6-Dinitrotoluene	606-20-2	19	U	19	190		1
04688	1,2-Diphenylhydrazine	122-66-7	19	U	19	190		1
04688	Hexachlorobenzene	118-74-1	19	U	19	190		1
04688	Hexachlorobutadiene	87-68-3	75	U	75	190		1
04688	Hexachlorocyclopentadiene	77-47-4	190	U	190	560		1
04688	Hexachloroethane	67-72-1	19	U	19	190		1
04688	Isophorone	78-59-1	19	U	19	190		1
04688	2-Methylphenol	95-48-7	37	U	37	190		1
04688	4-Methylphenol	106-44-5	37	U	37	190		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	19	U	19	190		1
04688	3-Nitroaniline	99-09-2	37	U	37	190		1
04688	4-Nitroaniline	100-01-6	75	U	75	190		1
04688	Nitrobenzene	98-95-3	19	U	19	190		1
04688	2-Nitrophenol	88-75-5	19	U	19	190		1
04688	4-Nitrophenol	100-02-7	190	U	190	560		1
04688	N-Nitroso-di-n-propylamine	621-64-7	19	U	19	190		1
04688	N-Nitrosodiphenylamine	86-30-6	19	U	19	190		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	190	U	190	560		1
04688	Phenol	108-95-2	19	U	19	190		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451567
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7404 SDG#: DE274-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	190	U	190	190		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	19	U	19	190		1
04688	2,4,5-Trichlorophenol	95-95-4	37	U	37	190		1
04688	2,4,6-Trichlorophenol	88-06-2	37	U	37	190		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.75	U	0.75	1.9		1
10138	Acenaphthylene	208-96-8	0.37	U	0.37	1.9		1
10138	Anthracene	120-12-7	0.37	U	0.37	1.9		1
10138	Benzo(a)anthracene	56-55-3	0.75	U	0.75	1.9		1
10138	Benzo(a)pyrene	50-32-8	0.75	U	0.75	1.9		1
10138	Benzo(b)fluoranthene	205-99-2	0.75	U	0.75	1.9		1
10138	Benzo(g,h,i)perylene	191-24-2	0.75	U	0.75	1.9		1
10138	Benzo(k)fluoranthene	207-08-9	0.75	U	0.75	1.9		1
10138	Butylbenzylphthalate	85-68-7	6.7	U	6.7	20		1
10138	Di-n-butylphthalate	84-74-2	6.7	U	6.7	20		1
10138	Chrysene	218-01-9	0.37	U	0.37	1.9		1
10138	Dibenz(a,h)anthracene	53-70-3	0.75	U	0.75	1.9		1
10138	Diethylphthalate	84-66-2	6.7	U	6.7	20		1
10138	Dimethylphthalate	131-11-3	6.7	U	6.7	20		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	6.7	U	6.7	20		1
10138	Fluoranthene	206-44-0	0.75	U	0.75	1.9		1
10138	Fluorene	86-73-7	0.75	U	0.75	1.9		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.75	U	0.75	1.9		1
10138	1-Methylnaphthalene	90-12-0	0.75	U	0.75	1.9		1
10138	2-Methylnaphthalene	91-57-6	0.75	U	0.75	1.9		1
10138	Naphthalene	91-20-3	0.75	U	0.75	1.9		1
10138	N-Nitrosodimethylamine	62-75-9	0.75	U	0.75	1.9		1
10138	Di-n-octylphthalate	117-84-0	6.7	U	6.7	20		1
10138	Phenanthrene	85-01-8	0.75	U	0.75	1.9		1
10138	Pyrene	129-00-0	0.75	U	0.75	1.9		1
Perchlorate	**SW-846 6850 1/2007**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
06557	6a Perchlorate EPA 6850	14797-73-0	2.3	U	2.3	5.6		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.7		1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.7		1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.7		1
10225	PCB-1016	12674-11-2	0.37	U	0.37	1.9		1
10225	PCB-1221	11104-28-2	0.37	U	0.37	1.9		1
10225	PCB-1232	11141-16-5	0.37	U	0.37	1.9		1
10225	PCB-1242	53469-21-9	0.37	U	0.37	1.9		1
10225	PCB-1248	12672-29-6	0.37	U	0.37	1.9		1
10225	PCB-1254	11097-69-1	0.37	U	0.37	1.9		1
10225	PCB-1260	11096-82-5	0.44	U	0.44	1.9		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451567
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7404 SDG#: DE274-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1262	37324-23-5	0.37	U	0.37	1.9		1
10225	PCB-1268	11100-14-4	0.37	U	0.37	1.9		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,100		6.63	21.9		1
07914	Boron	7440-42-8	2.74	J	0.395	5.48		1
01650	Calcium	7440-70-2	1,390		2.74	21.9		1
01654	Iron	7439-89-6	16,200		2.86	21.9		1
01656	Lithium	7439-93-2	14.7		0.68	2.2		1
01657	Magnesium	7439-95-4	3,330		0.483	11.0		1
06958	Manganese	7439-96-5	127		0.0395	0.548		1
10145	Phosphorus	7723-14-0	84.5		0.384	11.0		1
01662	Potassium	7440-09-7	1,200		12.4	54.8		1
01667	Sodium	7440-23-5	152		6.52	110		1
07968	Strontium	7440-24-6	12.3		0.0274	0.548		1
06969	Tin	7440-31-5	2.74	J	0.351	11.0		1
06970	Titanium	7440-32-6	1,150		0.0779	1.10		1
10146	Zirconium	7440-67-7	2.03	J	0.504	5.48		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.115	J	0.0812	0.219		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.82		0.0877	0.439		2
06126	Barium	7440-39-3	46.8		0.116	0.439		2
06127	Beryllium	7440-41-7	0.849		0.0175	0.110		2
06128	Cadmium	7440-43-9	0.0483	U	0.0483	0.110		2
06131	Chromium	7440-47-3	18.2		0.132	0.439		2
06132	Cobalt	7440-48-4	5.66		0.0219	0.110		2
06133	Copper	7440-50-8	5.38		0.0877	0.439		2
06135	Lead	7439-92-1	5.96		0.0112	0.219		2
06138	Molybdenum	7439-98-7	0.500		0.0548	0.110		2
06139	Nickel	7440-02-0	8.01		0.110	0.439		2
06141	Selenium	7782-49-2	0.129	J	0.0636	0.439		2
06142	Silver	7440-22-4	0.0597	J	0.0156	0.110		2
06145	Thallium	7440-28-0	0.263		0.0329	0.110		2
06148	Vanadium	7440-62-2	40.7		0.0241	0.110		2
06149	Zinc	7440-66-6	37.4		0.614	3.29		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0136	J	0.0076	0.108		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.4		0.89	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	10.1	U	10.1	33.6		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451567
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7404 SDG#: DE274-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 7199**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.31 J	0.22	1.1		1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.83	0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	10.6	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011	11:38	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011	12:37	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011	10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011	10:10	Denise L Trimby	1
06557	6a Perchlorate EPA 6850	SW-846 6850 1/2007	1	113060017A	11/03/2011	19:12	Richard A Shober	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011	08:47	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011	18:15	Sally L Appleyard	1
06568	Perchlorate Soil Prep	SW-846 6850 1/2007	1	113060017A	11/03/2011	07:10	Maria Davenport	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011	09:09	Tara L Snyder	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451567
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7404 SDG#: DE274-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:09	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011 09:09	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011 22:29	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 22:29	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 22:29	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 22:29	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:10	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 11:53	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 19:56	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11312243201A	11/09/2011 14:50	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	520		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500		1
04688	Benzoic acid	65-85-0	170	U	170	520		1
04688	Benzyl alcohol	100-51-6	170	U	170	520		1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170		1
04688	2-butoxy-Ethanol	111-76-2	1,700	U	1,700	1,700		1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	Carbazole	86-74-8	17	U	17	170		1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170		1
04688	4-Chloroaniline	106-47-8	69	U	69	170		1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170		1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170		1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170		1
04688	2-Chlorophenol	95-57-8	17	U	17	170		1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170		1
04688	Dibenzofuran	132-64-9	17	U	17	170		1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170		1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170		1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170		1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350		1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170		1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170		1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520		1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000		1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170		1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170		1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170		1
04688	Hexachlorobenzene	118-74-1	17	U	17	170		1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170		1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520		1
04688	Hexachloroethane	67-72-1	17	U	17	170		1
04688	Isophorone	78-59-1	17	U	17	170		1
04688	2-Methylphenol	95-48-7	35	U	35	170		1
04688	4-Methylphenol	106-44-5	35	U	35	170		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	17	U	17	170		1
04688	3-Nitroaniline	99-09-2	35	U	35	170		1
04688	4-Nitroaniline	100-01-6	69	U	69	170		1
04688	Nitrobenzene	98-95-3	17	U	17	170		1
04688	2-Nitrophenol	88-75-5	17	U	17	170		1
04688	4-Nitrophenol	100-02-7	170	U	170	520		1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170		1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170		1

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Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	170	U	170	520		1
04688	Phenol	108-95-2	17	U	17	170		1
04688	2-phenoxy-Ethanol	122-99-6	1,700	U	1,700	1,700		1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	Tetralin	119-64-2	170	U	170	170		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170		1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170		1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	1.8		0.69	1.7		1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.7		1
10138	Anthracene	120-12-7	2.4		0.35	1.7		1
10138	Benzo(a)anthracene	56-55-3	10		0.69	1.7		1
10138	Benzo(a)pyrene	50-32-8	11		0.69	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	17		0.69	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	6.3		0.69	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	6.3		0.69	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	19		1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19		1
10138	Chrysene	218-01-9	15		0.35	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	1.7	J	0.69	1.7		1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19		1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	54		6.2	19		1
10138	Fluoranthene	206-44-0	35		0.69	1.7		1
10138	Fluorene	86-73-7	1.2	J	0.69	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	5.7		0.69	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7		1
10138	Naphthalene	91-20-3	1.3	J	0.69	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19		1
10138	Phenanthrene	85-01-8	24		0.69	1.7		1
10138	Pyrene	129-00-0	22		0.69	1.7		1
	Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of 8.6 ug/kg. The blank value was not subtracted from the analytical result.							
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0		24.7

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4		1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4		1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4		1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8		1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8		1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8		1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8		1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8		1
10225	PCB-1254	11097-69-1	0.34	U	0.34	1.8		1
10225	PCB-1260	11096-82-5	0.57	J	0.41	1.8		1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8		1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8		1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520		1
10501	Isopropanol	67-63-0	100	U	100	520		1
10501	Methanol	67-56-1	100	U	100	520		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10		1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10		1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.6		1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.6		1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.6		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.2		1
10199	EFH (C15-C20)	n.a.	0.49	J	0.42	1.2		1
10199	EFH (C21-C30)	n.a.	2.6		0.42	1.2		1
10199	EFH (C30 - C40)	n.a.	7.9		0.42	1.2		1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.2		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,500		6.23	20.6		1
07914	Boron	7440-42-8	4.45	J	0.371	5.15		1
01650	Calcium	7440-70-2	5,390		2.58	20.6		1
01654	Iron	7439-89-6	26,500		2.69	20.6		1
01656	Lithium	7439-93-2	29.4		0.64	2.1		1
01657	Magnesium	7439-95-4	5,280		0.453	10.3		1
06958	Manganese	7439-96-5	347		0.0371	0.515		1
10145	Phosphorus	7723-14-0	622		0.361	10.3		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01662	Potassium	7440-09-7	2,850		11.6	51.5		1
01667	Sodium	7440-23-5	94.2	J	6.13	103		1
07968	Strontium	7440-24-6	17.5		0.0258	0.515		1
06969	Tin	7440-31-5	2.97	J	0.330	10.3		1
06970	Titanium	7440-32-6	1,290		0.0731	1.03		1
10146	Zirconium	7440-67-7	2.13	J	0.474	5.15		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.177	J	0.0762	0.206		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	6.30		0.0824	0.412		2
06126	Barium	7440-39-3	83.0		0.109	0.412		2
06127	Beryllium	7440-41-7	0.498		0.0165	0.103		2
06128	Cadmium	7440-43-9	0.0915	J	0.0453	0.103		2
06131	Chromium	7440-47-3	22.9		0.124	0.412		2
06132	Cobalt	7440-48-4	7.21		0.0206	0.103		2
06133	Copper	7440-50-8	13.1		0.0824	0.412		2
06135	Lead	7439-92-1	6.79		0.0105	0.206		2
06138	Molybdenum	7439-98-7	0.660		0.0515	0.103		2
06139	Nickel	7440-02-0	18.8		0.103	0.412		2
06141	Selenium	7782-49-2	0.0598	U	0.0598	0.412		2
06142	Silver	7440-22-4	0.0411	J	0.0146	0.103		2
06145	Thallium	7440-28-0	0.280		0.0309	0.103		2
06148	Vanadium	7440-62-2	48.5		0.0227	0.103		2
06149	Zinc	7440-66-6	63.3		0.577	3.09		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0083	J	0.0072	0.102		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.3		0.84	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.2		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.36	J	0.21	1.0		1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19	U	0.19	0.52		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.51		0.0100	0.0100		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	%	
11624	Moisture Content by 160.3	n.a.	3.9	0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-086-SA7-SB-3.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 12:03	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011 13:12	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011 10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16B	11/01/2011 20:04	Laura M Krieger	24.7
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130025984	10/27/2011 14:22	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130025984	10/27/2011 14:22	Christopher D Meeks	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011 09:06	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011 18:15	Sally L Appleyard	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011 19:43	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/04/2011 22:19	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113060014A	11/09/2011 17:36	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011 06:26	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113060014A	11/02/2011 18:00	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011 09:13	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011 22:32	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 22:32	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 22:32	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 22:32	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:12	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 12:08	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 20:17	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 14:56	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11312102202A	11/08/2011 19:45	Venia B McFadden	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11312102202A	11/08/2011 16:25	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451568
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7405 SDG#: DE274-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	510		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400		1
04688	Benzoic acid	65-85-0	170	U	170	510		1
04688	Benzyl alcohol	100-51-6	170	U	170	510		1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170		1
04688	Carbazole	86-74-8	17	U	17	170		1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170		1
04688	4-Chloroaniline	106-47-8	68	U	68	170		1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170		1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170		1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170		1
04688	2-Chlorophenol	95-57-8	17	U	17	170		1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170		1
04688	Dibenzofuran	132-64-9	17	U	17	170		1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170		1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170		1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170		1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340		1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170		1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170		1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	510		1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000		1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170		1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170		1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170		1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	59	J	17	340		1
04688	Hexachlorobenzene	118-74-1	17	U	17	170		1
04688	Hexachlorobutadiene	87-68-3	68	U	68	170		1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	510		1
04688	Hexachloroethane	67-72-1	17	U	17	170		1
04688	Isophorone	78-59-1	17	U	17	170		1
04688	2-Methylphenol	95-48-7	34	U	34	170		1
04688	4-Methylphenol	106-44-5	34	U	34	170		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	17	U	17	170		1
04688	3-Nitroaniline	99-09-2	34	U	34	170		1
04688	4-Nitroaniline	100-01-6	68	U	68	170		1
04688	Nitrobenzene	98-95-3	17	U	17	170		1
04688	2-Nitrophenol	88-75-5	17	U	17	170		1
04688	4-Nitrophenol	100-02-7	170	U	170	510		1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170		1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	170	U	170	510		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	17	U	17	170		1
04688	Tetralin	119-64-2	170	U	170	170		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170		1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170		1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.69	U	0.69	1.7		1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7		1
10138	Anthracene	120-12-7	0.63	J	0.34	1.7		1
10138	Benzo(a)anthracene	56-55-3	5.3		0.69	1.7		1
10138	Benzo(a)pyrene	50-32-8	5.7		0.69	1.7		1
10138	Benzo(b)fluoranthene	205-99-2	11		0.69	1.7		1
10138	Benzo(g,h,i)perylene	191-24-2	4.2		0.69	1.7		1
10138	Benzo(k)fluoranthene	207-08-9	3.4		0.69	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	19		1
10138	Di-n-butylphthalate	84-74-2	6.2	U	6.2	19		1
10138	Chrysene	218-01-9	8.6		0.34	1.7		1
10138	Dibenz(a,h)anthracene	53-70-3	0.93	J	0.69	1.7		1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	19		1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	19		1
10138	Fluoranthene	206-44-0	21		0.69	1.7		1
10138	Fluorene	86-73-7	0.69	U	0.69	1.7		1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	3.5		0.69	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.69	U	0.69	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.69	U	0.69	1.7		1
10138	Naphthalene	91-20-3	0.69	U	0.69	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.69	U	0.69	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.2	U	6.2	19		1
10138	Phenanthrene	85-01-8	8.0		0.69	1.7		1
10138	Pyrene	129-00-0	12		0.69	1.7		1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4		1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4		1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4		1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8		1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8		1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8		1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8		1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8		1
10225	PCB-1254	11097-69-1	0.35	J	0.34	1.8		1
10225	PCB-1260	11096-82-5	0.98	J	0.40	1.8		1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8		1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8		1

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Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520		1
10501	Isopropanol	67-63-0	100	U	100	520		1
10501	Methanol	67-56-1	100	U	100	520		1
The sample was analyzed 19 minutes outside the client requested 7 day hold time.								
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10		1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10		1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10		1
08283	Triethylene glycol	112-27-6	5.2	U	5.2	10		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.5	U	1.5	3.6		1
10318	o-Terphenyl	84-15-1	1.5	U	1.5	3.6		1
10318	p-Terphenyl	92-94-4	1.5	U	1.5	3.6		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.41	U	0.41	1.2		1
10199	EFH (C15-C20)	n.a.	0.60	J	0.41	1.2		1
10199	EFH (C21-C30)	n.a.	3.4		0.41	1.2		1
10199	EFH (C30 - C40)	n.a.	5.0		0.41	1.2		1
10199	EFH (C8-C11)	n.a.	0.41	U	0.41	1.2		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	10,500		6.13	20.3		1
07914	Boron	7440-42-8	2.23	J	0.365	5.06		1
01650	Calcium	7440-70-2	2,520		2.53	20.3		1
01654	Iron	7439-89-6	18,300		2.64	20.3		1
01656	Lithium	7439-93-2	25.2		0.63	2.0		1
01657	Magnesium	7439-95-4	3,670		0.446	10.1		1
06958	Manganese	7439-96-5	256		0.0365	0.506		1
10145	Phosphorus	7723-14-0	353		0.354	10.1		1
01662	Potassium	7440-09-7	3,210		11.4	50.6		1
01667	Sodium	7440-23-5	82.1	J	6.03	101		1
07968	Strontium	7440-24-6	9.48		0.0253	0.506		1
06969	Tin	7440-31-5	2.77	J	0.324	10.1		1
06970	Titanium	7440-32-6	1,150		0.0719	1.01		1
10146	Zirconium	7440-67-7	1.01	J	0.466	5.06		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0757	U	0.0757	0.205		2
Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.								

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06125	Arsenic	7440-38-2	3.68		0.0818	0.409		2
06126	Barium	7440-39-3	68.7		0.108	0.409		2
06127	Beryllium	7440-41-7	0.434		0.0164	0.102		2
06128	Cadmium	7440-43-9	0.0691	J	0.0450	0.102		2
06131	Chromium	7440-47-3	11.5		0.123	0.409		2
06132	Cobalt	7440-48-4	4.18		0.0205	0.102		2
06133	Copper	7440-50-8	4.54		0.0818	0.409		2
06135	Lead	7439-92-1	5.53		0.0104	0.205		2
06138	Molybdenum	7439-98-7	0.160		0.0511	0.102		2
06139	Nickel	7440-02-0	6.64		0.102	0.409		2
06141	Selenium	7782-49-2	0.0593	U	0.0593	0.409		2
06142	Silver	7440-22-4	0.0145	U	0.0145	0.102		2
06145	Thallium	7440-28-0	0.242		0.0307	0.102		2
06148	Vanadium	7440-62-2	21.1		0.0225	0.102		2
06149	Zinc	7440-66-6	61.3		0.573	3.07		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0069	U	0.0069	0.0982		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	0.84	U	0.84	1.1		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.3	U	9.3	31.0		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.32	J	0.21	1.0		1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18	U	0.18	0.51		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.23		0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	3.2		0.50	0.50		1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 12:28	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011 13:48	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011 10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113010003A	11/02/2011 09:25	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113010003A	10/28/2011 18:15	Sally L Appleyard	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113060028A	11/03/2011 00:18	Elizabeth J Marin	1
08283	Glycols in Soil	SW-846 8015B modified	1	113080023A	11/04/2011 22:32	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113060014A	11/09/2011 19:26	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011 05:38	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113060014A	11/02/2011 18:00	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113060028A	11/02/2011 19:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113005708002	10/31/2011 09:17	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113001026002D	11/02/2011 22:36	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451569
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7406 SDG#: DE274-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06138	Molybdenum	SW-846 6020	1	113001026002C	11/02/2011 22:36	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113001026002B	11/02/2011 22:36	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113001026002A	11/02/2011 22:36	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113005711002	10/31/2011 09:13	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113005708002	10/30/2011 20:31	Annamaria Stipkovits	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113001026002	10/30/2011 20:55	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113005711002	10/31/2011 01:45	Annamaria Stipkovits	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 12:23	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 20:38	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11312243201A	11/09/2011 15:16	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11312102202A	11/08/2011 19:49	Venia B McFadden	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11312102202A	11/08/2011 16:25	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: TB-102611 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6451570
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 14:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7407 SDG#: DE274-07TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11304A20A	11/01/2011 15:49	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11304A20A	11/01/2011 15:49	Marie D John	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-102611 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451571
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7408 SDG#: DE274-08EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	ug/l	ug/l	
04678	Aniline	62-53-3	1	U	1	5		1
04678	Benzidine	92-87-5	22	U	22	65		1
04678	Benzoic acid	65-85-0	7	U	7	16		1
04678	Benzyl alcohol	100-51-6	5	U	5	16		1
04678	4-Bromophenyl-phenylether	101-55-3	1	U	1	5		1
04678	2-butoxy-Ethanol	111-76-2	55	U	55	55		1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	Carbazole	86-74-8	1	U	1	5		1
04678	4-Chloro-3-methylphenol	59-50-7	1	U	1	5		1
04678	4-Chloroaniline	106-47-8	1	U	1	5		1
04678	bis(2-Chloroethoxy)methane	111-91-1	1	U	1	5		1
04678	bis(2-Chloroethyl)ether	111-44-4	1	U	1	5		1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	1	U	1	5		1
04678	2-Chloronaphthalene	91-58-7	2	U	2	5		1
04678	2-Chlorophenol	95-57-8	1	U	1	5		1
04678	4-Chlorophenyl-phenylether	7005-72-3	2	U	2	5		1
04678	Dibenzofuran	132-64-9	1	U	1	5		1
04678	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
04678	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
04678	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
04678	3,3'-Dichlorobenzidine	91-94-1	2	U	2	5		1
04678	2,4-Dichlorophenol	120-83-2	1	U	1	5		1
04678	2,4-Dimethylphenol	105-67-9	3	U	3	11		1
04678	3,5-Dimethylphenol	108-68-9	3	U	3	11		1
04678	4,6-Dinitro-2-methylphenol	534-52-1	5	U	5	16		1
04678	2,4-Dinitrophenol	51-28-5	11	U	11	33		1
04678	2,4-Dinitrotoluene	121-14-2	1	U	1	5		1
04678	2,6-Dinitrotoluene	606-20-2	1	U	1	5		1
04678	1,2-Diphenylhydrazine	122-66-7	1	U	1	5		1
04678	Hexachlorobenzene	118-74-1	1	U	1	5		1
04678	Hexachlorobutadiene	87-68-3	1	U	1	5		1
04678	Hexachlorocyclopentadiene	77-47-4	5	U	5	16		1
04678	Hexachloroethane	67-72-1	1	U	1	5		1
04678	Isophorone	78-59-1	1	U	1	5		1
04678	2-Methylphenol	95-48-7	1	U	1	5		1
04678	4-Methylphenol	106-44-5	2	U	2	5		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04678	2-Nitroaniline	88-74-4	1	U	1	5		1
04678	3-Nitroaniline	99-09-2	1	U	1	5		1
04678	4-Nitroaniline	100-01-6	1	U	1	5		1
04678	Nitrobenzene	98-95-3	1	U	1	5		1
04678	2-Nitrophenol	88-75-5	1	U	1	5		1
04678	4-Nitrophenol	100-02-7	11	U	11	33		1
04678	N-Nitroso-di-n-propylamine	621-64-7	1	U	1	5		1
04678	N-Nitrosodiphenylamine	86-30-6	2	U	2	5		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA7-SB-102611 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451571
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7408 SDG#: DE274-08EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04678	Pentachlorophenol	87-86-5	3	U	3	16		1
04678	Phenol	108-95-2	1	U	1	5		1
04678	2-phenoxy-Ethanol	122-99-6	55	U	55	55		1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	Tetralin	119-64-2	5	U	5	5		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
04678	2,4,5-Trichlorophenol	95-95-4	1	U	1	5		1
04678	2,4,6-Trichlorophenol	88-06-2	1	U	1	5		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10137	Acenaphthene	83-32-9	0.010	U	0.010	0.050		1
10137	Acenaphthylene	208-96-8	0.010	U	0.010	0.050		1
10137	Anthracene	120-12-7	0.010	U	0.010	0.050		1
10137	Benzo(a)anthracene	56-55-3	0.010	U	0.010	0.050		1
10137	Benzo(a)pyrene	50-32-8	0.010	U	0.010	0.050		1
10137	Benzo(b)fluoranthene	205-99-2	0.010	U	0.010	0.050		1
10137	Benzo(g,h,i)perylene	191-24-2	0.010	U	0.010	0.050		1
10137	Benzo(k)fluoranthene	207-08-9	0.010	U	0.010	0.050		1
10137	Butylbenzylphthalate	85-68-7	0.050	U	0.050	1.0		1
10137	Di-n-butylphthalate	84-74-2	0.28	J	0.050	1.0		1
10137	Chrysene	218-01-9	0.010	U	0.010	0.050		1
10137	Dibenz(a,h)anthracene	53-70-3	0.010	U	0.010	0.050		1
10137	Diethylphthalate	84-66-2	0.075	J	0.050	1.0		1
10137	Dimethylphthalate	131-11-3	0.050	U	0.050	1.0		1
10137	Bis(2-Ethylhexyl)phthalate	117-81-7	0.17	J	0.050	1.0		1
10137	Fluoranthene	206-44-0	0.010	U	0.010	0.050		1
10137	Fluorene	86-73-7	0.010	U	0.010	0.050		1
10137	Indeno(1,2,3-cd)pyrene	193-39-5	0.010	U	0.010	0.050		1
10137	1-Methylnaphthalene	90-12-0	0.010	U	0.010	0.050		1
10137	2-Methylnaphthalene	91-57-6	0.010	U	0.010	0.050		1
10137	Naphthalene	91-20-3	0.037	J	0.030	0.050		1
10137	N-Nitrosodimethylamine	62-75-9	0.010	U	0.010	0.050		1
10137	Di-n-octylphthalate	117-84-0	0.050	U	0.050	1.0		1
10137	Phenanthrene	85-01-8	0.030	U	0.030	0.050		1
10137	Pyrene	129-00-0	0.010	U	0.010	0.050		1
	Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of .11 ug/l. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and bis(2-ethylhexyl)phthalate was again detected in the method blank and the re-analysis of the sample. The data reported here is from the initial extraction of the sample.							

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: EB-SA7-SB-102611 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451571
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7408 SDG#: DE274-08EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		ug/l		ug/l	ug/l	ug/l	
10227	Aroclor 5432	63496-31-1	0.10	U	0.10	0.51		1
10227	Aroclor 5442	12642-23-8	0.10	U	0.10	0.51		1
10227	Aroclor 5460	11126-42-4	0.10	U	0.10	0.51		1
10227	PCB-1016	12674-11-2	0.10	U	0.10	0.51		1
10227	PCB-1221	11104-28-2	0.10	U	0.10	0.51		1
10227	PCB-1232	11141-16-5	0.20	U	0.20	0.51		1
10227	PCB-1242	53469-21-9	0.10	U	0.10	0.51		1
10227	PCB-1248	12672-29-6	0.10	U	0.10	0.51		1
10227	PCB-1254	11097-69-1	0.10	U	0.10	0.51		1
10227	PCB-1260	11096-82-5	0.15	U	0.15	0.50		1
10227	PCB-1262	37324-23-5	0.20	U	0.20	0.51		1
10227	PCB-1268	11100-14-4	0.16	U	0.16	0.51		1
Metals	**SW-846 6010B**		mg/l		mg/l	mg/l	mg/l	
01743	Aluminum	7429-90-5	0.0801	U	0.0801	0.200		1
08014	Boron	7440-42-8	0.0056	J	0.0022	0.0500		1
01750	Calcium	7440-70-2	0.0705	U	0.0705	0.200		1
01754	Iron	7439-89-6	0.0424	J	0.0141	0.200		1
01756	Lithium	7439-93-2	0.0076	U	0.0076	0.0200		1
01757	Magnesium	7439-95-4	0.0067	U	0.0067	0.100		1
07058	Manganese	7439-96-5	0.00052	J	0.00044	0.0050		1
10143	Phosphorus	7723-14-0	0.0047	U	0.0047	0.100		1
01762	Potassium	7440-09-7	0.0874	U	0.0874	0.500		1
01767	Sodium	7440-23-5	0.0647	U	0.0647	1.00		1
08068	Strontium	7440-24-6	0.00022	U	0.00022	0.0050		1
07069	Tin	7440-31-5	0.0043	U	0.0043	0.0200		1
07070	Titanium	7440-32-6	0.00046	U	0.00046	0.0100		1
10144	Zirconium	7440-67-7	0.0042	U	0.0042	0.0500		1
	SW-846 6020		mg/l		mg/l	mg/l	mg/l	
06024	Antimony	7440-36-0	0.00042	U	0.00042	0.0010		1
06025	Arsenic	7440-38-2	0.00095	U	0.00095	0.0020		1
06026	Barium	7440-39-3	0.00069	U	0.00069	0.0020		1
06027	Beryllium	7440-41-7	0.00013	U	0.00013	0.00050		1
06028	Cadmium	7440-43-9	0.00020	U	0.00020	0.00050		1
06031	Chromium	7440-47-3	0.00060	U	0.00060	0.0020		1
06032	Cobalt	7440-48-4	0.00010	U	0.00010	0.00050		1
06033	Copper	7440-50-8	0.00038	U	0.00038	0.0020		1
06035	Lead	7439-92-1	0.000080	U	0.000080	0.0010		1
06038	Molybdenum	7439-98-7	0.00025	U	0.00025	0.00050		1
06039	Nickel	7440-02-0	0.00050	U	0.00050	0.0020		1
06041	Selenium	7782-49-2	0.00027	U	0.00027	0.0020		1
06042	Silver	7440-22-4	0.000098	U	0.000098	0.00050		1
06045	Thallium	7440-28-0	0.00015	U	0.00015	0.00050		1
06048	Vanadium	7440-62-2	0.00018	U	0.00018	0.00050		1
06049	Zinc	7440-66-6	0.0040	U	0.0040	0.0150		1
	SW-846 7470A		mg/l		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000026	U	0.000026	0.00020		1

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Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-102611 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451571
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7408 SDG#: DE274-08EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**EPA 300.0**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
01504	11b Anions by 300.0 - Fluoride	16984-48-8	0.080	U	0.080	0.10		1
	EPA 314.0		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06019	7b Perchlorate EPA 314.0	14797-73-0	0.70	U	0.70	2.0		1
	SW-846 7199		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06467	3b Cr VI by EPA 7199	18540-29-9	5.0	U	5.0	10.0		1
	The sample was analyzed outside of the 24 hour holding time for hexavalent chromium.							
	SW-846 9040B		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00200	17b pH by 9040B	n.a.	5.7		0.010	0.010		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	5b Semivolatiles by 8270C	SW-846 8270C	1	11306WAA026	11/07/2011 21:00	Holly Berry	1
10137	4b Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304WAF026	11/12/2011 00:03	Gregory J Drahovsky	1
00813	BNA Water Extraction	SW-846 3510C	1	11306WAA026	11/02/2011 16:30	Nicholas W Shroyer	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	11304WAF026	11/01/2011 09:30	Cynthia J Salvatori	1
10227	8b PCBs/PCTs by 8082	SW-846 8082	1	113050018A	11/09/2011 12:38	Jessica L Miller	1
11117	PCB Waters Extraction	SW-846 3510C	1	113050018A	11/02/2011 03:00	Sherry L Morrow	1
01743	Aluminum	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
08014	Boron	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01756	Lithium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
10143	Phosphorus	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
08068	Strontium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
07069	Tin	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
07070	Titanium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1

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Analysis Report

Sample Description: **EB-SA7-SB-102611 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451571
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7408 SDG#: DE274-08EB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10144	Zirconium	SW-846 6010B	1	113081848004	11/06/2011 22:08	Tara L Snyder	1
06024	Antimony	SW-846 6020	2	113116050002A	11/09/2011 16:07	Choon Y Tian	1
06025	Arsenic	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06026	Barium	SW-846 6020	1	113086050005D	11/07/2011 10:54	Choon Y Tian	1
06027	Beryllium	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06028	Cadmium	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06031	Chromium	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06032	Cobalt	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06033	Copper	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06035	Lead	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06038	Molybdenum	SW-846 6020	1	113086050005C	11/07/2011 10:54	Choon Y Tian	1
06039	Nickel	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06041	Selenium	SW-846 6020	2	113116050002B	11/09/2011 16:07	Choon Y Tian	1
06042	Silver	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06045	Thallium	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06048	Vanadium	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
06049	Zinc	SW-846 6020	1	113086050005A	11/07/2011 10:54	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	113015713007	10/31/2011 12:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	113081848004	11/06/2011 07:10	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	113086050005	11/06/2011 07:05	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	2	113116050002	11/08/2011 09:23	Denise K Conners	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	113015713007	10/28/2011 17:53	Nelli S Markaryan	1
01504	11b Anions by 300.0 - Fluoride	EPA 300.0	1	11311196603B	11/08/2011 02:41	Ashley M Adams	1
06019	7b Perchlorate EPA 314.0	EPA 314.0	1	11307281101A	11/04/2011 07:23	Elyse P Brunstetter	1
06467	3b Cr VI by EPA 7199	SW-846 7199	1	11300281401A	10/27/2011 11:01	Elyse P Brunstetter	1
00200	17b pH by 9040B	SW-846 9040B	1	11300020001A	10/27/2011 21:30	Luz M Groff	1

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Lancaster Laboratories

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Analysis Report

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	ug/l	
10904	Acetone	67-64-1	6	U	6	20		1
10904	Benzene	71-43-2	0.5	U	0.5	5		1
10904	Bromobenzene	108-86-1	1	U	1	5		1
10904	Bromochloromethane	74-97-5	1	U	1	5		1
10904	Bromodichloromethane	75-27-4	1	U	1	5		1
10904	Bromoform	75-25-2	1	U	1	5		1
10904	Bromomethane	74-83-9	1	U	1	5		1
10904	2-Butanone	78-93-3	3	U	3	10		1
10904	n-Butylbenzene	104-51-8	1	U	1	5		1
10904	sec-Butylbenzene	135-98-8	1	U	1	5		1
10904	tert-Butylbenzene	98-06-6	1	U	1	5		1
10904	Carbon Tetrachloride	56-23-5	1	U	1	5		1
10904	Chlorobenzene	108-90-7	0.8	U	0.8	5		1
10904	Chloroethane	75-00-3	1	U	1	5		1
10904	2-Chloroethyl Vinyl Ether	110-75-8	2	U	2	10		1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.							
10904	Chloroform	67-66-3	0.8	U	0.8	5		1
10904	Chloromethane	74-87-3	1	U	1	5		1
10904	2-Chlorotoluene	95-49-8	1	U	1	5		1
10904	4-Chlorotoluene	106-43-4	1	U	1	5		1
10904	Chlorotrifluoroethene	79-38-9	2	U	2	5		1
10904	1,2-Dibromo-3-chloropropane	96-12-8	2	U	2	5		1
10904	Dibromochloromethane	124-48-1	1	U	1	5		1
10904	1,2-Dibromoethane	106-93-4	1	U	1	5		1
10904	Dibromomethane	74-95-3	1	U	1	5		1
10904	1,2-Dichlorobenzene	95-50-1	1	U	1	5		1
10904	1,3-Dichlorobenzene	541-73-1	1	U	1	5		1
10904	1,4-Dichlorobenzene	106-46-7	1	U	1	5		1
10904	Dichlorodifluoromethane	75-71-8	2	U	2	5		1
10904	1,1-Dichloroethane	75-34-3	1	U	1	5		1
10904	1,2-Dichloroethane	107-06-2	1	U	1	5		1
10904	1,1-Dichloroethene	75-35-4	0.8	U	0.8	5		1
10904	cis-1,2-Dichloroethene	156-59-2	0.8	U	0.8	5		1
10904	trans-1,2-Dichloroethene	156-60-5	0.8	U	0.8	5		1
10904	1,2-Dichloropropane	78-87-5	1	U	1	5		1
10904	1,3-Dichloropropane	142-28-9	1	U	1	5		1
10904	2,2-Dichloropropane	594-20-7	1	U	1	5		1
10904	1,1-Dichloropropene	563-58-6	1	U	1	5		1
10904	cis-1,3-Dichloropropene	10061-01-5	1	U	1	5		1
10904	trans-1,3-Dichloropropene	10061-02-6	1	U	1	5		1
10904	Ethylbenzene	100-41-4	0.8	U	0.8	5		1
10904	Freon 113	76-13-1	2	U	2	10		1
10904	Freon 133a	75-88-7	2	U	2	5		1
10904	Hexachlorobutadiene	87-68-3	2	U	2	5		1
10904	2-Hexanone	591-78-6	3	U	3	10		1
10904	Isopropylbenzene	98-82-8	1	U	1	5		1
10904	p-Isopropyltoluene	99-87-6	1	U	1	5		1
10904	Methyl Tertiary Butyl Ether	1634-04-4	0.5	U	0.5	5		1
10904	4-Methyl-2-pentanone	108-10-1	3	U	3	10		1

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Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	ug/l	
10904	Methylene Chloride	75-09-2	2	U	2	5		1
10904	n-Propylbenzene	103-65-1	1	U	1	5		1
10904	Styrene	100-42-5	1	U	1	5		1
10904	1,1,1,2-Tetrachloroethane	630-20-6	1	U	1	5		1
10904	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	5		1
10904	Tetrachloroethene	127-18-4	0.8	U	0.8	5		1
10904	Toluene	108-88-3	0.7	U	0.7	5		1
10904	1,2,3-Trichlorobenzene	87-61-6	1	U	1	5		1
10904	1,2,4-Trichlorobenzene	120-82-1	1	U	1	5		1
10904	1,1,1-Trichloroethane	71-55-6	0.8	U	0.8	5		1
10904	1,1,2-Trichloroethane	79-00-5	0.8	U	0.8	5		1
10904	Trichloroethene	79-01-6	1	U	1	5		1
10904	Trichlorofluoromethane	75-69-4	2	U	2	5		1
10904	1,2,3-Trichloropropane	96-18-4	1	U	1	5		1
10904	1,2,4-Trimethylbenzene	95-63-6	1	U	1	5		1
10904	1,3,5-Trimethylbenzene	108-67-8	1	U	1	5		1
10904	Vinyl Chloride	75-01-4	1	U	1	5		1
10904	m+p-Xylene	179601-23-1	0.8	U	0.8	5		1
10904	o-Xylene	95-47-6	0.8	U	0.8	5		1
GC/MS Volatiles	**SW-846 8260B SIM**		ug/l		ug/l	ug/l	ug/l	
00527	1,4-Dioxane	123-91-1	0.5	U	0.5	2.0		1
GC/MS Semivolatiles	**EPA 1625C**		ng/l		ng/l	ng/l	ng/l	
10962	N-Nitrosodimethylamine	62-75-9	0.550	U	0.550	1.10		1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	ug/l	ug/l	
04678	Aniline	62-53-3	1	U	1	6		1
04678	Benzidine	92-87-5	22	U	22	66		1
04678	Benzoic acid	65-85-0	7	U	7	17		1
04678	Benzyl alcohol	100-51-6	6	U	6	17		1
04678	4-Bromophenyl-phenylether	101-55-3	1	U	1	6		1
04678	2-butoxy-Ethanol	111-76-2	55	U	55	55		1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	Carbazole	86-74-8	1	U	1	6		1
04678	4-Chloro-3-methylphenol	59-50-7	1	U	1	6		1
04678	4-Chloroaniline	106-47-8	1	U	1	6		1
04678	bis(2-Chloroethoxy)methane	111-91-1	1	U	1	6		1
04678	bis(2-Chloroethyl)ether	111-44-4	1	U	1	6		1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	1	U	1	6		1
04678	2-Chloronaphthalene	91-58-7	2	U	2	6		1
04678	2-Chlorophenol	95-57-8	1	U	1	6		1
04678	4-Chlorophenyl-phenylether	7005-72-3	2	U	2	6		1
04678	Dibenzofuran	132-64-9	1	U	1	6		1
04678	1,2-Dichlorobenzene	95-50-1	1	U	1	6		1
04678	1,3-Dichlorobenzene	541-73-1	1	U	1	6		1
04678	1,4-Dichlorobenzene	106-46-7	1	U	1	6		1
04678	3,3'-Dichlorobenzidine	91-94-1	2	U	2	6		1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	ug/l	ug/l	
04678	2,4-Dichlorophenol	120-83-2	1	U	1	6		1
04678	2,4-Dimethylphenol	105-67-9	3	U	3	11		1
04678	3,5-Dimethylphenol	108-68-9	3	U	3	11		1
04678	4,6-Dinitro-2-methylphenol	534-52-1	6	U	6	17		1
04678	2,4-Dinitrophenol	51-28-5	11	U	11	33		1
04678	2,4-Dinitrotoluene	121-14-2	1	U	1	6		1
04678	2,6-Dinitrotoluene	606-20-2	1	U	1	6		1
04678	1,2-Diphenylhydrazine	122-66-7	1	U	1	6		1
04678	Hexachlorobenzene	118-74-1	1	U	1	6		1
04678	Hexachlorobutadiene	87-68-3	1	U	1	6		1
04678	Hexachlorocyclopentadiene	77-47-4	6	U	6	17		1
04678	Hexachloroethane	67-72-1	1	U	1	6		1
04678	Isophorone	78-59-1	1	U	1	6		1
04678	2-Methylphenol	95-48-7	1	U	1	6		1
04678	4-Methylphenol	106-44-5	2	U	2	6		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04678	2-Nitroaniline	88-74-4	1	U	1	6		1
04678	3-Nitroaniline	99-09-2	1	U	1	6		1
04678	4-Nitroaniline	100-01-6	1	U	1	6		1
04678	Nitrobenzene	98-95-3	1	U	1	6		1
04678	2-Nitrophenol	88-75-5	1	U	1	6		1
04678	4-Nitrophenol	100-02-7	11	U	11	33		1
04678	N-Nitroso-di-n-propylamine	621-64-7	1	U	1	6		1
04678	N-Nitrosodiphenylamine	86-30-6	2	U	2	6		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04678	Pentachlorophenol	87-86-5	3	U	3	17		1
04678	Phenol	108-95-2	1	U	1	6		1
04678	2-phenoxy-Ethanol	122-99-6	55	U	55	55		1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	Tetralin	119-64-2	6	U	6	6		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04678	1,2,4-Trichlorobenzene	120-82-1	1	U	1	6		1
04678	2,4,5-Trichlorophenol	95-95-4	1	U	1	6		1
04678	2,4,6-Trichlorophenol	88-06-2	1	U	1	6		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/l		ug/l	ug/l	ug/l	
10137	Acenaphthene	83-32-9	0.0098	U	0.0098	0.049		1
10137	Acenaphthylene	208-96-8	0.0098	U	0.0098	0.049		1
10137	Anthracene	120-12-7	0.0098	U	0.0098	0.049		1
10137	Benzo(a)anthracene	56-55-3	0.0098	U	0.0098	0.049		1
10137	Benzo(a)pyrene	50-32-8	0.0098	U	0.0098	0.049		1
10137	Benzo(b)fluoranthene	205-99-2	0.0098	U	0.0098	0.049		1

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Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		ug/l		ug/l	ug/l	ug/l	
10137	Benzo(g,h,i)perylene	191-24-2	0.0098	U	0.0098	0.049		1
10137	Benzo(k)fluoranthene	207-08-9	0.0098	U	0.0098	0.049		1
10137	Butylbenzylphthalate	85-68-7	0.049	U	0.049	0.98		1
10137	Di-n-butylphthalate	84-74-2	0.049	U	0.049	0.98		1
10137	Chrysene	218-01-9	0.0098	U	0.0098	0.049		1
10137	Dibenz(a,h)anthracene	53-70-3	0.0098	U	0.0098	0.049		1
10137	Diethylphthalate	84-66-2	0.049	U	0.049	0.98		1
10137	Dimethylphthalate	131-11-3	0.049	U	0.049	0.98		1
10137	Bis(2-Ethylhexyl)phthalate	117-81-7	0.18	J	0.049	0.98		1
10137	Fluoranthene	206-44-0	0.0098	U	0.0098	0.049		1
10137	Fluorene	86-73-7	0.0098	U	0.0098	0.049		1
10137	Indeno(1,2,3-cd)pyrene	193-39-5	0.0098	U	0.0098	0.049		1
10137	1-Methylnaphthalene	90-12-0	0.0098	U	0.0098	0.049		1
10137	2-Methylnaphthalene	91-57-6	0.0098	U	0.0098	0.049		1
10137	Naphthalene	91-20-3	0.029	U	0.029	0.049		1
10137	N-Nitrosodimethylamine	62-75-9	0.0098	U	0.0098	0.049		1
10137	Di-n-octylphthalate	117-84-0	0.083	J	0.049	0.98		1
10137	Phenanthrene	85-01-8	0.029	U	0.029	0.049		1
10137	Pyrene	129-00-0	0.0098	U	0.0098	0.049		1

Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of .11 ug/l. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and bis(2-ethylhexyl)phthalate was not detected in the re-analysis of the sample. The data reported here is from the initial extraction of the sample.

GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1
Explosives	**SW-846 8330A**		ug/l		ug/l	ug/l	ug/l	
10131	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.30	U	0.30	0.60	10000000	1
10131	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Diamino-4-nitrotoluene	59229-75-3	0.20	U	0.20	0.60	10000000	1
10131	2,4-Diamino-6-nitrotoluene	6629-29-4	0.20	U	0.20	0.60	10000000	1
10131	1,3-Dinitrobenzene	99-65-0	0.20	U	0.20	0.60	10000000	1
10131	2,4-Dinitrotoluene	121-14-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Dinitrotoluene	606-20-2	0.20	U	0.20	0.60	10000000	1
10131	HMX	2691-41-0	0.65	U	0.65	2.0	10000000	1
10131	Nitrobenzene	98-95-3	0.20	U	0.20	0.60	10000000	1

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Explosives	**SW-846 8330A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10131	Nitroglycerin	55-63-0	5.2	U	5.2	15	10000000	1
10131	2-Nitrotoluene	88-72-2	0.20	U	0.20	0.60	10000000	1
10131	3-Nitrotoluene	99-08-1	0.40	U	0.40	1.2	10000000	1
10131	4-Nitrotoluene	99-99-0	0.60	U	0.60	1.2	10000000	1
10131	PETN	78-11-5	6.0	U	6.0	18	10000000	1
10131	RDX	121-82-4	0.20	U	0.20	0.60	10000000	1
10131	Tetryl	479-45-8	0.40	U	0.40	0.60	10000000	1
10131	1,3,5-Trinitrobenzene	99-35-4	0.20	U	0.20	0.60	10000000	1
10131	2,4,6-Trinitrotoluene	118-96-7	0.20	U	0.20	0.60	10000000	1
Herbicides	**SW-846 8151A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	0.17	U	0.17	0.54		1
10407	Dalapon	75-99-0	0.27	U	0.27	1.4		1
10407	2,4-DB	94-82-6	0.32	U	0.32	1.1		1
10407	Dicamba	1918-00-9	0.086	U	0.086	0.32		1
10407	Dinoseb	88-85-7	0.11	U	0.11	0.54		1
10407	2,4-DP (Dichlorprop)	120-36-5	0.17	U	0.17	0.54		1
10407	MCPA	94-74-6	320	U	320	1,100		1
10407	MCPP	93-65-2	54	U	54	220		1
10407	2,4,5-T	93-76-5	0.016	U	0.016	0.054		1
10407	2,4,5-TP	93-72-1	0.011	U	0.011	0.054		1
HPLC Organics	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50		1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	0.0051	U	0.0051	0.026		1
00177	Alpha BHC	319-84-6	0.0077	U	0.0077	0.026		1
00177	Beta BHC	319-85-7	0.0074	U	0.0074	0.026		1
00177	Gamma BHC - Lindane	58-89-9	0.0051	U	0.0051	0.026		1
00177	Chlordane	57-74-9	0.31	U	0.31	1.3		1
00177	p,p-DDD	72-54-8	0.013	U	0.013	0.051		1
00177	p,p-DDE	72-55-9	0.013	U	0.013	0.051		1
00177	p,p-DDT	50-29-3	0.013	U	0.013	0.051		1
00177	Delta BHC	319-86-8	0.0074	U	0.0074	0.026		1
00177	Dieldrin	60-57-1	0.014	U	0.014	0.051		1
00177	Endosulfan I	959-98-8	0.011	U	0.011	0.026		1
00177	Endosulfan II	33213-65-9	0.038	U	0.038	0.051		1
00177	Endosulfan Sulfate	1031-07-8	0.015	U	0.015	0.051		1
00177	Endrin	72-20-8	0.021	U	0.021	0.051		1

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Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
00177	Endrin Aldehyde	7421-93-4	0.051	U	0.051	0.26		1
00177	Endrin Ketone	53494-70-5	0.013	U	0.013	0.051		1
00177	Heptachlor	76-44-8	0.0066	U	0.0066	0.026		1
00177	Heptachlor Epoxide	1024-57-3	0.0059	U	0.0059	0.026		1
00177	Methoxychlor	72-43-5	0.077	U	0.077	0.26		1
00177	Mirex	2385-85-5	0.22	U	0.22	0.64		1
00177	Toxaphene	8001-35-2	2.6	U	2.6	7.7		1
Reporting limits were raised due to limited sample volume.								
Pesticides/PCBs	**SW-846 8082**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10227	Aroclor 5432	63496-31-1	0.098	U	0.098	0.49		1
10227	Aroclor 5442	12642-23-8	0.098	U	0.098	0.49		1
10227	Aroclor 5460	11126-42-4	0.098	U	0.098	0.49		1
10227	PCB-1016	12674-11-2	0.098	U	0.098	0.49		1
10227	PCB-1221	11104-28-2	0.098	U	0.098	0.49		1
10227	PCB-1232	11141-16-5	0.20	U	0.20	0.49		1
10227	PCB-1242	53469-21-9	0.098	U	0.098	0.49		1
10227	PCB-1248	12672-29-6	0.098	U	0.098	0.49		1
10227	PCB-1254	11097-69-1	0.098	U	0.098	0.49		1
10227	PCB-1260	11096-82-5	0.15	U	0.15	0.49		1
10227	PCB-1262	37324-23-5	0.20	U	0.20	0.49		1
10227	PCB-1268	11100-14-4	0.16	U	0.16	0.49		1
GC Miscellaneous	**SW-846 8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06624	Ethanol	64-17-5	200	U	200	1,000		1
06624	Isopropanol	67-63-0	200	U	200	1,000		1
06624	Methanol	67-56-1	200	U	200	1,000		1
The sample was analyzed 2 days outside the client requested 7 day hold time.								
GC Miscellaneous	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
08278	Diethylene glycol	111-46-6	20	U	20	200		1
08278	Ethylene glycol	107-21-1	20	U	20	200		1
08278	Propylene glycol	57-55-6	20	U	20	200		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10319	m-Terphenyl	92-06-8	0.085	U	0.085	0.26		1
10319	o-Terphenyl	84-15-1	0.085	U	0.085	0.26		1
10319	p-Terphenyl	92-94-4	0.085	U	0.085	0.26		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10365	EFH (C12-C14)	n.a.	0.11	U	0.11	0.66		1
10365	EFH (C15-C20)	n.a.	0.11	U	0.11	0.66		1
10365	EFH (C21-C30)	n.a.	0.11	U	0.11	0.66		1
10365	EFH (C30 - C40)	n.a.	0.11	U	0.11	0.66		1

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Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10365	EFH (C8-C11)	n.a.	0.11	U	0.11	0.66		1
Metals	**SW-846 6010B**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.0801	U	0.0801	0.200		1
08014	Boron	7440-42-8	0.148		0.0022	0.0500		1
01750	Calcium	7440-70-2	9.89		0.0705	0.200		1
01754	Iron	7439-89-6	0.0141	U	0.0141	0.200		1
01756	Lithium	7439-93-2	0.0076	U	0.0076	0.0200		1
01757	Magnesium	7439-95-4	1.22		0.0067	0.100		1
07058	Manganese	7439-96-5	0.00044	U	0.00044	0.0050		1
10143	Phosphorus	7723-14-0	0.0047	U	0.0047	0.100		1
01762	Potassium	7440-09-7	0.0874	U	0.0874	0.500		1
01767	Sodium	7440-23-5	8.30		0.0647	1.00		1
08068	Strontium	7440-24-6	0.0018	J	0.00022	0.0050		1
07069	Tin	7440-31-5	0.0043	U	0.0043	0.0200		1
07070	Titanium	7440-32-6	0.00060	J	0.00046	0.0100		1
10144	Zirconium	7440-67-7	0.0042	U	0.0042	0.0500		1
	SW-846 6020		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
06024	Antimony	7440-36-0	0.00042	U	0.00042	0.0010		1
06025	Arsenic	7440-38-2	0.00095	U	0.00095	0.0020		1
06026	Barium	7440-39-3	0.00069	U	0.00069	0.0020		1
06027	Beryllium	7440-41-7	0.00013	U	0.00013	0.00050		1
06028	Cadmium	7440-43-9	0.00020	U	0.00020	0.00050		1
06031	Chromium	7440-47-3	0.00060	U	0.00060	0.0020		1
06032	Cobalt	7440-48-4	0.00010	U	0.00010	0.00050		1
06033	Copper	7440-50-8	0.00038	U	0.00038	0.0020		1
06035	Lead	7439-92-1	0.000080	U	0.000080	0.0010		1
06038	Molybdenum	7439-98-7	0.00025	U	0.00025	0.00050		1
06039	Nickel	7440-02-0	0.00050	U	0.00050	0.0020		1
06041	Selenium	7782-49-2	0.00027	U	0.00027	0.0020		1
06042	Silver	7440-22-4	0.000098	U	0.000098	0.00050		1
06045	Thallium	7440-28-0	0.00015	U	0.00015	0.00050		1
06048	Vanadium	7440-62-2	0.00018	U	0.00018	0.00050		1
06049	Zinc	7440-66-6	0.0040	U	0.0040	0.0150		1
	SW-846 7470A		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000026	U	0.000026	0.00020		1
Wet Chemistry	**EPA 300.0**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
01504	11b Anions by 300.0 - Fluoride	16984-48-8	0.080	U	0.080	0.10		1
00368	11b Anions by 300.0 - Nitrate	14797-55-8	0.050	U	0.050	0.10		1
	EPA 314.0		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06019	7b Perchlorate EPA 314.0	14797-73-0	0.70	U	0.70	2.0		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**SW-846 7199**		ug/l	ug/l	ug/l	ug/l	
06467	3b Cr VI by EPA 7199	18540-29-9	5.0 U	5.0	10.0		1
	SW-846 9012B		mg/l	mg/l	mg/l	mg/l	
08255	16b Cyanide by 9012B	57-12-5	0.0050 U	0.0050	0.010		1
	SW-846 9040B		Std. Units	Std. Units	Std. Units	Std. Units	
00200	17b pH by 9040B	n.a.	7.2	0.010	0.010		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10904	1b Volatile Organics EPA8260B	SW-846 8260B	1	Y113052AA	11/01/2011 18:40	Frank A Valla, Jr	1
00527	14b 1,4-Dioxane by 8260B SIM	SW-846 8260B SIM	1	E113001AA	10/27/2011 15:19	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E113001AA	10/27/2011 15:19	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y113052AA	11/01/2011 18:40	Frank A Valla, Jr	1
10962	21b NDMA by 1625C	EPA 1625C	1	11305WAA026	11/09/2011 23:53	Matthew S Woods	1
04678	5b Semivolatiles by 8270C	SW-846 8270C	1	11306WAA026	11/07/2011 21:25	Holly Berry	1
10137	4b Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304WAF026	11/12/2011 00:38	Gregory J Drahovsky	1
00813	BNA Water Extraction	SW-846 3510C	1	11306WAA026	11/02/2011 16:30	Nicholas W Shroyer	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	11304WAF026	11/01/2011 09:30	Cynthia J Salvatori	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11305WAA026	11/01/2011 13:50	Wanda F Oswald	1
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11304A20A	11/01/2011 17:17	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11304A20A	11/01/2011 17:17	Marie D John	1
10131	15b Energetics by 8330A	SW-846 8330A	1	113040017A	11/03/2011 11:02	James H Place	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	113000025A	10/31/2011 23:28	James H Place	1
10407	13b Herbicides by EPA 8151	SW-846 8151A	1	113020010A	11/01/2011 19:18	John W Perkins	1
00177	12b Pesticides by 8081A	SW-846 8081A	1	113050028A	11/05/2011 18:16	Lisa A Reinert	1
10227	8b PCBs/PCTs by 8082	SW-846 8082	1	113050018A	11/09/2011 12:56	Jessica L Miller	1
11117	PCB Waters Extraction	SW-846 3510C	1	113050018A	11/02/2011 03:00	Sherry L Morrow	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	113050028A	11/02/2011 09:15	Kerrie A Freeburn	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: **FB-SA7-102611 Water**
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00816	Water Sample Herbicide Extract	SW-846 8151A	1	113020010A	10/31/2011 09:00	Kerrie A Freeburn	1
01013	Formaldehyde Extraction	SW-846 8315A	1	113000025A	10/28/2011 13:40	Kelli M Barto	1
11122	Energetics Extraction	SW-846 8330	1	113040017A	11/01/2011 13:15	Kelli M Barto	1
06624	18b Alcohols by 8015B	SW-846 8015B	1	113070034A	11/04/2011 19:45	Elizabeth J Marin	1
08278	19b Glycols by 8015B	SW-846 8015B modified	1	113040032A	10/31/2011 21:24	Tyler O Griffin	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	113040009A	11/02/2011 13:14	Robert Brown	1
10365	9b TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113040007A	11/02/2011 18:23	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	113040007A	10/31/2011 18:00	Kathryn I DeHaven	1
10304	Terphenyls water prep	SW-846 3510C	1	113040009A	10/31/2011 17:00	Bronson L Cole	1
01743	Aluminum	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
08014	Boron	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01756	Lithium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
10143	Phosphorus	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
08068	Strontium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
07069	Tin	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
07070	Titanium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
10144	Zirconium	SW-846 6010B	1	113081848004	11/06/2011 22:12	Tara L Snyder	1
06024	Antimony	SW-846 6020	2	113116050002A	11/09/2011 16:10	Choon Y Tian	1
06025	Arsenic	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06026	Barium	SW-846 6020	1	113086050005D	11/07/2011 10:57	Choon Y Tian	1
06027	Beryllium	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06028	Cadmium	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06031	Chromium	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06032	Cobalt	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06033	Copper	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06035	Lead	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06038	Molybdenum	SW-846 6020	1	113086050005C	11/07/2011 10:57	Choon Y Tian	1
06039	Nickel	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06041	Selenium	SW-846 6020	2	113116050002B	11/09/2011 16:10	Choon Y Tian	1
06042	Silver	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06045	Thallium	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06048	Vanadium	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
06049	Zinc	SW-846 6020	1	113086050005A	11/07/2011 10:57	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	113015713007	10/31/2011 12:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	113081848004	11/06/2011 07:10	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	113086050005	11/06/2011 07:05	Denise K Conners	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	2	113116050002	11/08/2011 09:23	Denise K Conners	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	113015713007	10/28/2011 17:53	Nelli S Markaryan	1
01504	11b Anions by 300.0 - Fluoride	EPA 300.0	1	11300196903B	10/28/2011 05:29	Ashley M Adams	1

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Analysis Report

Sample Description: **FB-SA7-102611 Water**
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451572
LLI Group # 1273439
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/20/2011 09:00

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7409 SDG#: DE274-09FB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	11b Anions by 300.0 - Nitrate	EPA 300.0	1	11300196903B	10/28/2011 05:29	Ashley M Adams	1
06019	7b Perchlorate EPA 314.0	EPA 314.0	1	11307281101A	11/04/2011 07:44	Elyse P Brunstetter	1
06467	3b Cr VI by EPA 7199	SW-846 7199	1	11300281401A	10/27/2011 11:14	Elyse P Brunstetter	1
08255	16b Cyanide by 9012B	SW-846 9012B	1	11311117101A	11/08/2011 17:33	Venia B McFadden	1
08256	Cyanide Water Distillation	SW-846 9012B	1	11311117101A	11/07/2011 10:00	Nancy J Shoop	1
00200	17b pH by 9040B	SW-846 9040B	1	11300020001A	10/27/2011 21:30	Luz M Groff	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E113001AA	Sample number(s): 6451572									
1,4-Dioxane	0.5	U	0.5	2.0	ug/l	104	104	80-123	1	30
Batch number: Y113052AA	Sample number(s): 6451572									
Acetone	6	U	6.	20	ug/l	67	64	49-234	5	30
Benzene	0.5	U	0.5	5	ug/l	96	97	79-120	1	30
Bromobenzene	1	U	1.	5	ug/l	99	100	80-120	1	30
Bromochloromethane	1	U	1.	5	ug/l	102	103	80-120	1	30
Bromodichloromethane	1	U	1.	5	ug/l	94	94	80-120	0	30
Bromoform	1	U	1.	5	ug/l	90	90	61-120	0	30
Bromomethane	1	U	1.	5	ug/l	80	83	44-120	4	30
2-Butanone	3	U	3.	10	ug/l	82	82	66-151	0	30
n-Butylbenzene	1	U	1.	5	ug/l	98	98	74-120	0	30
sec-Butylbenzene	1	U	1.	5	ug/l	100	101	78-120	1	30
tert-Butylbenzene	1	U	1.	5	ug/l	98	97	80-120	0	30
Carbon Tetrachloride	1	U	1.	5	ug/l	93	95	75-123	2	30
Chlorobenzene	0.8	U	0.8	5	ug/l	98	98	80-120	0	30
Chloroethane	1	U	1.	5	ug/l	69	85	49-129	21	30
2-Chloroethyl Vinyl Ether	2	U	2.	10	ug/l	102	101	56-129	1	30
Chloroform	0.8	U	0.8	5	ug/l	98	99	77-122	1	30
Chloromethane	1	U	1.	5	ug/l	90	95	60-129	6	30
2-Chlorotoluene	1	U	1.	5	ug/l	98	100	80-120	2	30
4-Chlorotoluene	1	U	1.	5	ug/l	96	98	80-120	2	30
Chlorotrifluoroethene	2	U	2.	5	ug/l	69	70	38-136	2	30
1,2-Dibromo-3-chloropropane	2	U	2.	5	ug/l	92	92	56-126	0	30
Dibromochloromethane	1	U	1.	5	ug/l	94	94	80-120	0	30
1,2-Dibromoethane	1	U	1.	5	ug/l	98	98	80-120	0	30
Dibromomethane	1	U	1.	5	ug/l	97	98	80-120	1	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	99	99	80-120	0	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	98	99	80-120	1	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	98	99	80-120	2	30
Dichlorodifluoromethane	2	U	2.	5	ug/l	87	90	47-120	2	30
1,1-Dichloroethane	1	U	1.	5	ug/l	96	97	79-120	1	30
1,2-Dichloroethane	1	U	1.	5	ug/l	100	100	70-130	1	30
1,1-Dichloroethene	0.8	U	0.8	5	ug/l	93	95	74-123	1	30
cis-1,2-Dichloroethene	0.8	U	0.8	5	ug/l	99	99	80-120	1	30
trans-1,2-Dichloroethene	0.8	U	0.8	5	ug/l	96	98	80-120	2	30
1,2-Dichloropropane	1	U	1.	5	ug/l	95	97	78-120	2	30
1,3-Dichloropropane	1	U	1.	5	ug/l	97	98	80-120	1	30
2,2-Dichloropropane	1	U	1.	5	ug/l	94	97	77-124	3	30
1,1-Dichloropropene	1	U	1.	5	ug/l	95	97	80-120	2	30
cis-1,3-Dichloropropene	1	U	1.	5	ug/l	92	95	80-120	3	30
trans-1,3-Dichloropropene	1	U	1.	5	ug/l	92	93	79-120	1	30
Ethylbenzene	0.8	U	0.8	5	ug/l	96	97	79-120	1	30
Freon 113	2	U	2.	10	ug/l	92	94	69-128	2	30
Freon 133a	2	U	2.	5	ug/l	82	83	77-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachlorobutadiene	2	U	2.	5	ug/l	90	91	58-120	0	30
2-Hexanone	3	U	3.	10	ug/l	90	92	65-136	2	30
Isopropylbenzene	1	U	1.	5	ug/l	99	99	77-120	0	30
p-Isopropyltoluene	1	U	1.	5	ug/l	100	101	80-120	0	30
Methyl Tertiary Butyl Ether	0.5	U	0.5	5	ug/l	97	99	76-120	2	30
4-Methyl-2-pentanone	3	U	3.	10	ug/l	93	94	70-121	1	30
Methylene Chloride	2	U	2.	5	ug/l	97	100	80-120	3	30
n-Propylbenzene	1	U	1.	5	ug/l	101	102	80-120	1	30
Styrene	1	U	1.	5	ug/l	97	97	80-120	0	30
1,1,1,2-Tetrachloroethane	1	U	1.	5	ug/l	96	96	80-120	0	30
1,1,2,2-Tetrachloroethane	1	U	1.	5	ug/l	98	99	71-120	1	30
Tetrachloroethene	0.8	U	0.8	5	ug/l	97	99	80-121	2	30
Toluene	0.7	U	0.7	5	ug/l	96	97	79-120	1	30
1,2,3-Trichlorobenzene	1	U	1.	5	ug/l	98	97	65-120	0	30
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	97	97	67-120	0	30
1,1,1-Trichloroethane	0.8	U	0.8	5	ug/l	93	95	75-127	2	30
1,1,2-Trichloroethane	0.8	U	0.8	5	ug/l	98	99	80-120	1	30
Trichloroethene	1	U	1.	5	ug/l	95	96	80-120	1	30
Trichlorofluoromethane	2	U	2.	5	ug/l	93	94	64-129	1	30
1,2,3-Trichloropropane	1	U	1.	5	ug/l	99	101	80-120	1	30
1,2,4-Trimethylbenzene	1	U	1.	5	ug/l	101	102	74-120	1	30
1,3,5-Trimethylbenzene	1	U	1.	5	ug/l	100	101	75-120	1	30
Vinyl Chloride	1	U	1.	5	ug/l	90	94	65-125	4	30
m+p-Xylene	0.8	U	0.8	5	ug/l	98	99	80-120	1	30
o-Xylene	0.8	U	0.8	5	ug/l	96	98	80-120	1	30
Batch number: 11304SLB026	Sample number(s): 6451564-6451569									
Aniline	170 U		170.	500	ug/kg	65		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	53		15-121		
Benzoic acid	170 U		170.	500	ug/kg	72		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	86		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	107		73-114		
2-butoxy-Ethanol	1,700 U		1,700.	1,700	ug/kg					
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	89		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	45		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	95		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	85		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	85		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	92		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	95		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	100		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	99		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	88		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	86		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	86		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	55		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	103		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	93		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	104		83-120		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	90		46-120		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	77		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	99		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	90		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	87		75-117		
Hexachlorobenzene	17	U	17.	170	ug/kg	112		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	99		65-117		
Hexachlorocyclopentadiene	170 U		170.	500	ug/kg	63		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	79		61-109		
Isophorone	17	U	17.	170	ug/kg	85		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	96		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	89		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	94		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	88		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	66		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	86		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	90		76-111		
4-Nitrophenol	170 U		170.	500	ug/kg	66		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	76		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	106		67-141		
Pentachlorophenol	170 U		170.	500	ug/kg	111		51-117		
Phenol	17	U	17.	170	ug/kg	90		58-112		
2-phenoxy-Ethanol	1,700 U		1,700.	1,700	ug/kg					
Tetralin	170 U		170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	98		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	99		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	101		78-111		
Batch number: 11304SLC026	Sample number(s): 6451564-6451569									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	88		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	88		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	94		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	91		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	93		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	108		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	107		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	96		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	81		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	98		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	95		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	107		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	99		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	99		79-121		
Bis(2-Ethylhexyl)phthalate	8.6	J	6.0	18	ug/kg	95		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	100		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	96		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	106		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	84		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	80		55-118		
Di-n-octylphthalate	22		6.0	18	ug/kg	84		68-162		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Phenanthrene	0.67	U	0.67	1.7	ug/kg	92		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	83		72-119		
Batch number: 11304WAF026	Sample number(s): 6451571-6451572									
Acenaphthene	0.010	U	0.010	0.050	ug/l	91	90	74-109	1	30
Acenaphthylene	0.010	U	0.010	0.050	ug/l	91	90	70-110	1	30
Anthracene	0.010	U	0.010	0.050	ug/l	92	92	66-111	1	30
Benzo(a)anthracene	0.010	U	0.010	0.050	ug/l	93	92	72-114	2	30
Benzo(a)pyrene	0.010	U	0.010	0.050	ug/l	93	92	60-127	1	30
Benzo(b)fluoranthene	0.010	U	0.010	0.050	ug/l	95	95	58-151	0	30
Benzo(g,h,i)perylene	0.010	U	0.010	0.050	ug/l	96	96	57-131	0	30
Benzo(k)fluoranthene	0.010	U	0.010	0.050	ug/l	97	97	59-130	0	30
Butylbenzylphthalate	0.050	U	0.050	1.0	ug/l	94	93	40-138	1	30
Di-n-butylphthalate	0.050	U	0.050	1.0	ug/l	94	98	56-148	4	30
Chrysene	0.010	U	0.010	0.050	ug/l	95	94	76-116	1	30
Dibenz(a,h)anthracene	0.010	U	0.010	0.050	ug/l	94	94	55-134	0	30
Diethylphthalate	0.050	U	0.050	1.0	ug/l	95	94	37-148	1	30
Dimethylphthalate	0.050	U	0.050	1.0	ug/l	94	94	40-119	0	30
Bis(2-Ethylhexyl)phthalate	0.11	J	0.050	1.0	ug/l	119	124	57-154	5	30
Fluoranthene	0.010	U	0.010	0.050	ug/l	92	93	75-116	1	30
Fluorene	0.010	U	0.010	0.050	ug/l	96	94	75-114	1	30
Indeno(1,2,3-cd)pyrene	0.010	U	0.010	0.050	ug/l	94	94	53-158	0	30
1-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	89	88	71-117	1	30
2-Methylnaphthalene	0.010	U	0.010	0.050	ug/l	88	87	75-115	2	30
Naphthalene	0.030	U	0.030	0.050	ug/l	91	90	72-109	1	30
N-Nitrosodimethylamine	0.010	U	0.010	0.050	ug/l	65	65	36-89	0	30
Di-n-octylphthalate	0.050	U	0.050	1.0	ug/l	95	97	57-145	2	30
Phenanthrene	0.030	U	0.030	0.050	ug/l	91	91	76-111	0	30
Pyrene	0.010	U	0.010	0.050	ug/l	94	92	69-118	2	30
Batch number: 11305WAA026	Sample number(s): 6451572									
N-Nitrosodimethylamine	0.500	U	0.500	1.00	ng/l	93	95	70-130	2	30
Batch number: 11306WAA026	Sample number(s): 6451571-6451572									
Aniline	1	U	1.	5	ug/l	75	76	38-116	1	30
Benzidine	20	U	20.	60	ug/l	69	64	34-117	7	30
Benzoic acid	6	U	6.	15	ug/l	22	26	10-69	18	30
Benzyl alcohol	5	U	5.	15	ug/l	84	83	66-97	1	30
4-Bromophenyl-phenylether	1	U	1.	5	ug/l	91	95	75-115	4	30
2-butoxy-Ethanol	50	U	50.	50	ug/l					
Carbazole	1	U	1.	5	ug/l	98	100	75-120	2	30
4-Chloro-3-methylphenol	1	U	1.	5	ug/l	102	104	70-123	2	30
4-Chloroaniline	1	U	1.	5	ug/l	65	61	24-128	7	30
bis(2-Chloroethoxy)methane	1	U	1.	5	ug/l	92	96	74-124	5	30
bis(2-Chloroethyl)ether	1	U	1.	5	ug/l	92	100	77-108	8	30
bis(2-Chloroisopropyl)ether	1	U	1.	5	ug/l	89	95	62-127	7	30
2-Chloronaphthalene	2	U	2.	5	ug/l	73	75	54-132	4	30
2-Chlorophenol	1	U	1.	5	ug/l	99	101	71-114	2	30
4-Chlorophenyl-phenylether	2	U	2.	5	ug/l	95	101	77-114	6	30
Dibenzofuran	1	U	1.	5	ug/l	92	97	75-117	5	30
1,2-Dichlorobenzene	1	U	1.	5	ug/l	83	85	55-118	2	30
1,3-Dichlorobenzene	1	U	1.	5	ug/l	82	84	61-111	3	30
1,4-Dichlorobenzene	1	U	1.	5	ug/l	83	85	53-119	3	30
3,3'-Dichlorobenzidine	2	U	2.	5	ug/l	55	59	37-117	7	30
2,4-Dichlorophenol	1	U	1.	5	ug/l	102	103	77-117	1	30
2,4-Dimethylphenol	3	U	3.	10	ug/l	97	101	72-110	4	30
3,5-Dimethylphenol	3	U	3.	10	ug/l	100	102	70-130	2	30
4,6-Dinitro-2-methylphenol	5	U	5.	15	ug/l	98	102	65-126	4	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrophenol	10	U	10.	30	ug/l	84	97	52-131	15	30
2,4-Dinitrotoluene	1	U	1.	5	ug/l	106	110	76-119	4	30
2,6-Dinitrotoluene	1	U	1.	5	ug/l	103	107	76-118	4	30
1,2-Diphenylhydrazine	1	U	1.	5	ug/l	97	101	68-127	4	30
Hexachlorobenzene	1	U	1.	5	ug/l	90	93	75-119	3	30
Hexachlorobutadiene	1	U	1.	5	ug/l	83	82	57-124	1	30
Hexachlorocyclopentadiene	5	U	5.	15	ug/l	63	66	36-118	5	30
Hexachloroethane	1	U	1.	5	ug/l	80	81	52-113	1	30
Isophorone	1	U	1.	5	ug/l	97	100	74-117	4	30
2-Methylphenol	1	U	1.	5	ug/l	93	95	58-110	2	30
4-Methylphenol	2	U	2.	5	ug/l	91	92	49-108	1	30
2-Nitroaniline	1	U	1.	5	ug/l	102	109	75-120	7	30
3-Nitroaniline	1	U	1.	5	ug/l	101	105	74-113	5	30
4-Nitroaniline	1	U	1.	5	ug/l	82	87	59-100	6	30
Nitrobenzene	1	U	1.	5	ug/l	94	100	75-109	5	30
2-Nitrophenol	1	U	1.	5	ug/l	97	99	76-118	2	30
4-Nitrophenol	10	U	10.	30	ug/l	45	45	16-78	2	30
N-Nitroso-di-n-propylamine	1	U	1.	5	ug/l	94	99	69-110	5	30
N-Nitrosodiphenylamine	2	U	2.	5	ug/l	94	96	67-136	2	30
Pentachlorophenol	3	U	3.	15	ug/l	90	96	53-110	6	30
Phenol	1	U	1.	5	ug/l	51	46	21-67	9	30
2-phenoxy-Ethanol	50	U	50.	50	ug/l					
Tetralin	5	U	5.	5	ug/l					
1,2,4-Trichlorobenzene	1	U	1.	5	ug/l	86	88	71-112	2	30
2,4,5-Trichlorophenol	1	U	1.	5	ug/l	96	98	79-107	3	30
2,4,6-Trichlorophenol	1	U	1.	5	ug/l	100	103	76-120	3	30
Batch number: 11299A16B	Sample number(s): 6451568									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	74	75	67-119	2	30
Batch number: 11304A20A	Sample number(s): 6451570,6451572									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 113040017A	Sample number(s): 6451572									
4-Amino-2,6-Dinitrotoluene	0.30	U	0.30	0.60	ug/l	110	110	80-120	0	30
2-Amino-4,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	80-120	0	30
2,6-Diamino-4-nitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	50-122	0	30
2,4-Diamino-6-nitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	50-122	0	30
1,3-Dinitrobenzene	0.20	U	0.20	0.60	ug/l	110	110	72-117	0	30
2,4-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	98	98	80-120	0	30
2,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	110	110	80-120	0	30
HMX	0.65	U	0.65	2.0	ug/l	99	100	65-125	1	30
Nitrobenzene	0.20	U	0.20	0.60	ug/l	89	93	75-121	4	30
Nitroglycerin	5.2	U	5.2	15	ug/l	100	100	80-120	0	30
2-Nitrotoluene	0.20	U	0.20	0.60	ug/l	97	96	74-120	1	30
3-Nitrotoluene	0.40	U	0.40	1.2	ug/l	100	100	69-107	0	30
4-Nitrotoluene	0.60	U	0.60	1.2	ug/l	95	94	80-120	1	30
PETN	6.0	U	6.0	18	ug/l	104	104	80-120	0	30
RDX	0.20	U	0.20	0.60	ug/l	97	96	70-125	1	30
Tetryl	0.40	U	0.40	0.60	ug/l	89	78	31-148	13	30
1,3,5-Trinitrobenzene	0.20	U	0.20	0.60	ug/l	100	91	53-129	9	30
2,4,6-Trinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	76-109	0	30
Batch number: 113000025A	Sample number(s): 6451572									
20b Formaldehyde 8315A	10	U	10.	50	ug/l	98	100	69-130	2	30
Batch number: 113020010A	Sample number(s): 6451572									
2,4-D	0.16	U	0.16	0.50	ug/l	132	112	73-157	16	30

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Dalapon	0.25	U	0.25	1.3	ug/l	86	76	40-100	12	30
2,4-DB	0.30	U	0.30	1.0	ug/l	108	92	65-130	16	30
Dicamba	0.080	U	0.080	0.30	ug/l	104	92	68-135	12	30
Dinoseb	0.10	U	0.10	0.50	ug/l	74	72	32-91	3	30
2,4-DP (Dichlorprop)	0.16	U	0.16	0.50	ug/l	132	120	76-170	10	30
MCPA	300 U		300.	1,000	ug/l	100	90	65-128	11	30
MCPP	50	U	50.	200	ug/l	100	96	67-137	4	30
2,4,5-T	0.015	U	0.015	0.050	ug/l	128	116	63-147	10	30
2,4,5-TP	0.010	U	0.010	0.050	ug/l	104	92	63-134	12	30
Batch number: 113060017A	Sample number(s): 6451567									
6a Perchlorate EPA 6850	2.1	U	2.1	5.0	ug/kg	104		85-115		
Batch number: 113010003A	Sample number(s): 6451564-6451569									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	70	68	36-106	3	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	80		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	95		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 113050018A	Sample number(s): 6451571-6451572									
Aroclor 5432	0.10	U	0.10	0.50	ug/l					
Aroclor 5442	0.10	U	0.10	0.50	ug/l	82	78	35-84	5	30
Aroclor 5460	0.10	U	0.10	0.50	ug/l					
PCB-1016	0.10	U	0.10	0.50	ug/l	104	98	51-128	6	30
PCB-1221	0.10	U	0.10	0.50	ug/l					
PCB-1232	0.20	U	0.20	0.50	ug/l					
PCB-1242	0.10	U	0.10	0.50	ug/l					
PCB-1248	0.10	U	0.10	0.50	ug/l					
PCB-1254	0.10	U	0.10	0.50	ug/l					
PCB-1260	0.15	U	0.15	0.50	ug/l	106	108	56-135	2	30
PCB-1262	0.20	U	0.20	0.50	ug/l					
PCB-1268	0.16	U	0.16	0.50	ug/l					
Batch number: 113050028A	Sample number(s): 6451572									
Aldrin	0.0020	U	0.0020	0.010	ug/l	100	97	54-159	3	30
Alpha BHC	0.0030	U	0.0030	0.010	ug/l	110	100	59-146	10	30
Beta BHC	0.0029	U	0.0029	0.010	ug/l	103	101	73-147	2	30
Gamma BHC - Lindane	0.0020	U	0.0020	0.010	ug/l	110	100	68-128	10	30
Chlordane	0.12	U	0.12	0.50	ug/l					
p,p-DDD	0.0050	U	0.0050	0.020	ug/l	115	105	71-139	9	30
p,p-DDE	0.0050	U	0.0050	0.020	ug/l	116	111	66-130	5	30
p,p-DDT	0.0050	U	0.0050	0.020	ug/l	105	100	53-126	5	30
Delta BHC	0.0029	U	0.0029	0.010	ug/l	113	113	76-148	0	30
Dieldrin	0.0053	U	0.0053	0.020	ug/l	110	100	76-132	10	30
Endosulfan I	0.0043	U	0.0043	0.010	ug/l	110	100	68-128	10	30
Endosulfan II	0.015	U	0.015	0.020	ug/l	110	105	59-144	5	30
Endosulfan Sulfate	0.0058	U	0.0058	0.020	ug/l	105	100	71-142	5	30
Endrin	0.0081	U	0.0081	0.020	ug/l	105	100	52-132	5	30
Endrin Aldehyde	0.020	U	0.020	0.10	ug/l	105	95	68-139	10	20

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Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Endrin Ketone	0.0050 U	0.0050	0.020	ug/l	100	100	69-146	0	30
Heptachlor	0.0026 U	0.0026	0.010	ug/l	100	99	57-126	1	30
Heptachlor Epoxide	0.0023 U	0.0023	0.010	ug/l	112	102	73-156	10	30
Methoxychlor	0.030 U	0.030	0.10	ug/l	110	100	52-133	10	30
Mirex	0.085 U	0.085	0.25	ug/l					
Toxaphene	1.0 U	1.0	3.0	ug/l					
Batch number: 113040032A	Sample number(s): 6451572								
Diethylene glycol	20 U	20.	200	mg/l	105	115	67-126	9	20
Ethylene glycol	20 U	20.	200	mg/l	85	110	78-136	26*	20
Propylene glycol	20 U	20.	200	mg/l	80	110	65-132	32*	20
Batch number: 113040033A	Sample number(s): 6451568								
Ethanol	100 U	100.	500	ug/kg	93		71-129		
Isopropanol	100 U	100.	500	ug/kg	90		75-125		
Methanol	100 U	100.	500	ug/kg	106		68-129		
Batch number: 113060028A	Sample number(s): 6451569								
Ethanol	100 U	100.	500	ug/kg	92		71-129		
Isopropanol	100 U	100.	500	ug/kg	90		75-125		
Methanol	100 U	100.	500	ug/kg	95		68-129		
Batch number: 113070034A	Sample number(s): 6451572								
Ethanol	200 U	200.	1,000	ug/l	100		78-116		
Isopropanol	200 U	200.	1,000	ug/l	100		75-125		
Methanol	200 U	200.	1,000	ug/l	116		76-122		
Batch number: 113080023A	Sample number(s): 6451568-6451569								
Diethylene glycol	5.0 U	5.0	10	mg/kg	99		75-125		
Ethylene glycol	5.0 U	5.0	10	mg/kg	103		53-149		
Propylene glycol	5.0 U	5.0	10	mg/kg	96		67-131		
Triethylene glycol	5.0 U	5.0	10	mg/kg	97		52-150		
Batch number: 113040007A	Sample number(s): 6451572								
EFH (C12-C14)	0.10 U	0.10	0.60	mg/l	106	108	63-121	2	30
EFH (C15-C20)	0.10 U	0.10	0.60	mg/l	105	105	72-124	0	30
EFH (C21-C30)	0.10 U	0.10	0.60	mg/l	100	100	64-123	0	30
EFH (C30 - C40)	0.10 U	0.10	0.60	mg/l	93	93	73-124	0	30
EFH (C8-C11)	0.10 U	0.10	0.60	mg/l	140*	142*	43-107	1	30
Batch number: 113040009A	Sample number(s): 6451572								
m-Terphenyl	0.080 U	0.080	0.25	mg/l	90	98	61-108	9	20
o-Terphenyl	0.080 U	0.080	0.25	mg/l	90	98	75-125	9	20
p-Terphenyl	0.080 U	0.080	0.25	mg/l	90	98	63-110	8	20
Batch number: 113060014A	Sample number(s): 6451568-6451569								
m-Terphenyl	1.5 U	1.5	3.5	mg/kg	105		64-111		
o-Terphenyl	1.5 U	1.5	3.5	mg/kg	107		75-125		
p-Terphenyl	1.5 U	1.5	3.5	mg/kg	107		69-109		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 113070014A	Sample number(s): 6451568-6451569									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	123		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	112		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	117		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	91		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	142*		49-107		
Batch number: 113001026002A	Sample number(s): 6451564-6451569									
Antimony	0.0740	U	0.0740	0.200	mg/kg	119		40-227		
Arsenic	0.0800	U	0.0800	0.400	mg/kg	99		83-111		
Beryllium	0.0160	U	0.0160	0.100	mg/kg	107		84-112		
Cadmium	0.0440	U	0.0440	0.100	mg/kg	101		83-111		
Chromium	0.120	U	0.120	0.400	mg/kg	117		77-123		
Cobalt	0.0200	U	0.0200	0.100	mg/kg	113		85-114		
Copper	0.0800	U	0.0800	0.400	mg/kg	102		81-110		
Lead	0.0102	U	0.0102	0.200	mg/kg	101		84-112		
Nickel	0.100	U	0.100	0.400	mg/kg	100		81-110		
Silver	0.0142	U	0.0142	0.100	mg/kg	102		83-112		
Thallium	0.0300	U	0.0300	0.100	mg/kg	102		82-112		
Vanadium	0.0220	U	0.0220	0.100	mg/kg	106		76-110		
Zinc	0.560	U	0.560	3.00	mg/kg	103		82-110		
Batch number: 113001026002B	Sample number(s): 6451564-6451569									
Selenium	0.0580	U	0.0580	0.400	mg/kg	101		79-110		
Batch number: 113001026002C	Sample number(s): 6451564-6451569									
Molybdenum	0.0500	U	0.0500	0.100	mg/kg	101		80-110		
Batch number: 113001026002D	Sample number(s): 6451564-6451569									
Barium	0.106	U	0.106	0.400	mg/kg	100		83-110		
Batch number: 113005708002	Sample number(s): 6451564-6451569									
Aluminum	6.05	U	6.05	20.0	mg/kg	95		40-127		
Boron	0.360	U	0.360	5.00	mg/kg	102		83-110		
Calcium	5.91	J	2.50	20.0	mg/kg	104		81-110		
Iron	2.61	U	2.61	20.0	mg/kg	98		47-129		
Lithium	0.62	U	0.62	2.0	mg/kg	100		80-120		
Magnesium	0.440	U	0.440	10.0	mg/kg	96		63-116		
Manganese	0.0360	U	0.0360	0.500	mg/kg	104		85-116		
Phosphorus	0.977	J	0.350	10.0	mg/kg	104		80-120		
Potassium	11.3	U	11.3	50.0	mg/kg	107		71-110		
Sodium	5.95	U	5.95	100	mg/kg	105		76-110		
Strontium	0.0370	J	0.0250	0.500	mg/kg	103		84-110		
Tin	1.16	J	0.320	10.0	mg/kg	101		86-120		
Titanium	0.0710	U	0.0710	1.00	mg/kg	119		80-120		
Zirconium	0.460	U	0.460	5.00	mg/kg	102		80-120		
Batch number: 113005711002	Sample number(s): 6451564-6451569									
Mercury	0.0068	U	0.0068	0.0973	mg/kg	104		83-119		
Batch number: 113015713007	Sample number(s): 6451571-6451572									
Mercury	0.000026 U		0.00002 6	0.00020	mg/l	98	97	80-120	1	20
Batch number: 113081848004	Sample number(s): 6451571-6451572									
Aluminum	0.0801	U	0.0801	0.200	mg/l	98	100	90-112	3	20
Boron	0.0028	J	0.0022	0.0500	mg/l	91	93	89-110	2	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Calcium	0.0705 U	0.0705	0.200	mg/l	102	103	90-110	2	20
Iron	0.0141 U	0.0141	0.200	mg/l	101	105	90-112	4	20
Lithium	0.0076 U	0.0076	0.0200	mg/l	99	101	90-110	2	20
Magnesium	0.0067 U	0.0067	0.100	mg/l	99	101	90-110	2	20
Manganese	0.00044 U	0.00044	0.0050	mg/l	99	101	90-110	2	20
Phosphorus	0.0047 U	0.0047	0.100	mg/l	99	101	90-110	2	20
Potassium	0.0874 U	0.0874	0.500	mg/l	100	103	85-115	3	20
Sodium	0.0647 U	0.0647	1.00	mg/l	98	100	87-114	1	20
Strontium	0.00022 U	0.00022	0.0050	mg/l	99	102	90-110	2	20
Tin	0.0043 U	0.0043	0.0200	mg/l	96	97	90-110	1	20
Titanium	0.00046 U	0.00046	0.0100	mg/l	101	101	90-113	1	20
Zirconium	0.0042 U	0.0042	0.0500	mg/l	103	105	90-110	1	20
Batch number: 113086050005A	Sample number(s): 6451571-6451572								
Arsenic	0.00095 U	0.00095	0.0020	mg/l	106	110	86-111	3	20
Beryllium	0.00013 U	0.00013	0.00050	mg/l	110	110	90-113	0	20
Cadmium	0.00020 U	0.00020	0.00050	mg/l	108	110	90-114	2	20
Chromium	0.00060 U	0.00060	0.0020	mg/l	108	110	90-118	2	20
Cobalt	0.00010 U	0.00010	0.00050	mg/l	105	108	87-113	3	20
Copper	0.00038 U	0.00038	0.0020	mg/l	107	108	90-113	1	20
Lead	0.000080 U	0.00008 0	0.0010	mg/l	107	106	90-115	2	20
Nickel	0.00050 U	0.00050	0.0020	mg/l	103	110	90-113	7	20
Silver	0.000098 U	0.00009 8	0.00050	mg/l	106	109	90-115	3	20
Thallium	0.00015 U	0.00015	0.00050	mg/l	106	109	89-116	3	20
Vanadium	0.00018 U	0.00018	0.00050	mg/l	109	106	89-116	3	20
Zinc	0.0040 U	0.0040	0.0150	mg/l	102	102	90-116	0	20
Batch number: 113086050005C	Sample number(s): 6451571-6451572								
Molybdenum	0.00025 U	0.00025	0.00050	mg/l	107	112	89-115	5	20
Batch number: 113086050005D	Sample number(s): 6451571-6451572								
Barium	0.00069 U	0.00069	0.0020	mg/l	107	112	88-113	4	20
Batch number: 113116050002A	Sample number(s): 6451571-6451572								
Antimony	0.00042 U	0.00042	0.0010	mg/l	109	108	87-110	1	20
Batch number: 113116050002B	Sample number(s): 6451571-6451572								
Selenium	0.00027 U	0.00027	0.0020	mg/l	107	113	85-114	6	20
Batch number: 11300196903B	Sample number(s): 6451572								
11b Anions by 300.0 - Fluoride	0.080 U	0.080	0.10	mg/l	105	105	90-110	0	20
11b Anions by 300.0 - Nitrate	0.050 U	0.050	0.10	mg/l	104	103	90-110	0	20
Batch number: 11300281401A	Sample number(s): 6451571-6451572								
3b Cr VI by EPA 7199	5.0 U	5.0	10.0	ug/l	100	100	90-110	0	20
Batch number: 11307281101A	Sample number(s): 6451571-6451572								
7b Perchlorate EPA 314.0	0.70 U	0.70	2.0	ug/l	106	100	85-115	6	20
Batch number: 11308621201A	Sample number(s): 6451564-6451569								
7a Perchlorate EPA 314.0	9.0 U	9.0	30.0	ug/kg	104		85-115		
Batch number: 11311117101A	Sample number(s): 6451572								
16b Cyanide by 9012B	0.0050 U	0.0050	0.010	mg/l	99	99	90-110	0	20
Batch number: 11311196603B	Sample number(s): 6451571								

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
11b Anions by 300.0 - Fluoride	0.080	U	0.080	0.10	mg/l	102	102	90-110	0	20
Batch number: 11312102202A	Sample number(s): 6451568-6451569									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	105		80-120		
Batch number: 11312243201A	Sample number(s): 6451564-6451569									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11312621202A	Sample number(s): 6451564-6451569									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11300020001A	Sample number(s): 6451571-6451572									
17b pH by 9040B						100	100	90-110	0	3
Batch number: 11311039401A	Sample number(s): 6451564-6451569									
17a pH by 9045C						100		95-105		
Batch number: 11311162401A	Sample number(s): 6451564-6451569									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11304SLB026	Sample number(s): 6451564-6451569 UNSPK: 6451564								
Aniline	52	61	18-116	17	30				
Benzidine	0*	0*	35-141	0	30				
Benzoic acid	60	58	10-173	2	30				
Benzyl alcohol	80	82	67-115	3	30				
4-Bromophenyl-phenylether	108	106	67-129	1	30				
Carbazole	103	101	64-120	1	30				
4-Chloro-3-methylphenol	85	84	62-122	0	30				
4-Chloroaniline	42	61	13-107	37*	30				
bis(2-Chloroethoxy)methane	90	90	75-104	1	30				
bis(2-Chloroethyl)ether	83	81	60-116	1	30				
bis(2-Chloroisopropyl)ether	80	80	55-142	1	30				
2-Chloronaphthalene	94	84	50-141	10	30				
2-Chlorophenol	90	92	73-121	3	30				
4-Chlorophenyl-phenylether	100	100	80-109	1	30				
Dibenzofuran	98	99	71-112	1	30				
1,2-Dichlorobenzene	85	83	66-108	2	30				
1,3-Dichlorobenzene	82	81	63-109	1	30				
1,4-Dichlorobenzene	81	80	58-108	1	30				
3,3'-Dichlorobenzidine	44	55	28-109	24	30				
2,4-Dichlorophenol	98	101	66-123	4	30				
2,4-Dimethylphenol	86	87	68-118	2	30				
3,5-Dimethylphenol	98	101	71-127	4	30				
4,6-Dinitro-2-methylphenol	83	85	11-126	3	30				
2,4-Dinitrophenol	57	58	20-143	2	30				
2,4-Dinitrotoluene	94	96	56-129	2	30				
2,6-Dinitrotoluene	99	100	69-123	1	30				

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,2-Diphenylhydrazine	91	89	71-129	1	30				
bis(2-Ethylhexyl)phthalate	92	92	63-122	1	30				
Hexachlorobenzene	114	111	77-114	2	30				
Hexachlorobutadiene	95	94	62-120	1	30				
Hexachlorocyclopentadiene	104	101	10-153	2	30				
Hexachloroethane	76	74	57-109	2	30				
Isophorone	80	81	73-102	2	30				
2-Methylphenol	87	90	75-111	3	30				
4-Methylphenol	81	83	59-123	3	30				
2-Nitroaniline	95	95	67-125	1	30				
3-Nitroaniline	89	91	59-122	3	30				
4-Nitroaniline	75	76	41-109	1	30				
Nitrobenzene	82	83	57-125	1	30				
2-Nitrophenol	85	90	56-127	6	30				
4-Nitrophenol	69	70	37-129	2	30				
N-Nitroso-di-n-propylamine	70	70	60-116	0	30				
N-Nitrosodiphenylamine	104	102	71-122	2	30				
Pentachlorophenol	114	112	28-127	1	30				
Phenol	83	85	58-126	2	30				
1,2,4-Trichlorobenzene	97	95	72-115	1	30				
2,4,5-Trichlorophenol	101	102	58-129	2	30				
2,4,6-Trichlorophenol	103	103	56-134	1	30				
Batch number: 11304SLC026	Sample number(s): 6451564-6451569 UNSPK: 6451564								
Acenaphthene	92	90	63-105	3	30				
Acenaphthylene	90	91	67-114	1	30				
Anthracene	94	96	73-115	1	30				
Benzo(a)anthracene	97	96	59-128	1	30				
Benzo(a)pyrene	94	95	58-142	0	30				
Benzo(b)fluoranthene	104	104	54-163	0	30				
Benzo(g,h,i)perylene	86	84	33-141	2	30				
Benzo(k)fluoranthene	88	89	57-153	0	30				
Butylbenzylphthalate	87	87	57-173	0	30				
Di-n-butylphthalate	98	102	65-148	4	30				
Chrysene	95	95	67-123	0	30				
Dibenz(a,h)anthracene	95	94	22-133	1	30				
Diethylphthalate	94	123	70-136	26	30				
Dimethylphthalate	100	100	74-118	1	30				
Bis(2-Ethylhexyl)phthalate	98	144	39-167	33*	30				
Fluoranthene	105	109	51-149	3	30				
Fluorene	95	95	66-122	0	30				
Indeno(1,2,3-cd)pyrene	93	91	21-143	2	30				
1-Methylnaphthalene	83	86	72-123	3	30				
2-Methylnaphthalene	83	86	64-103	4	30				
Naphthalene	86	92	61-102	6	30				
N-Nitrosodimethylamine	85	90	48-113	4	30				
Di-n-octylphthalate	90	92	40-192	2	30				
Phenanthrene	92	92	62-122	0	30				
Pyrene	71	72	51-131	0	30				
Batch number: 113060017A	Sample number(s): 6451567 UNSPK: 6451567								
6a Perchlorate EPA 6850	114	104	80-120	9	20				

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Quality Control Summary

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Reported: 11/20/11 at 09:00 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 113010003A	Sample number(s): 6451564-6451569 UNSPK: P437195								
PCB-1016	80	81	29-146	1	50				
PCB-1260	86	87	39-149	1	50				
Batch number: 113040033A	Sample number(s): 6451568 UNSPK: 6451568								
Ethanol	88	87	48-130	0	20				
Isopropanol	86	87	12-149	1	20				
Methanol	107	103	43-138	5	20				
Batch number: 113060028A	Sample number(s): 6451569 UNSPK: 6451569								
Ethanol	90	83	48-130	9	20				
Isopropanol	92	87	12-149	6	20				
Methanol	92	89	43-138	3	20				
Batch number: 113070034A	Sample number(s): 6451572 UNSPK: P453096								
Ethanol	104	104	62-145	0	20				
Isopropanol	100	100	73-131	0	20				
Methanol	116	116	52-159	0	20				
Batch number: 113080023A	Sample number(s): 6451568-6451569 UNSPK: P454453								
Diethylene glycol	3*	4*	59-109	4	20				
Ethylene glycol	39*	39*	63-107	0	20				
Propylene glycol	56*	56*	63-107	1	20				
Triethylene glycol	0*	0*	66-122	0	20				
Batch number: 113060014A	Sample number(s): 6451568-6451569 UNSPK: 6451568								
m-Terphenyl	107	105	75-125	2	20				
o-Terphenyl	109	106	75-125	2	20				
p-Terphenyl	109	106	75-125	2	20				
Batch number: 113070014A	Sample number(s): 6451568-6451569 UNSPK: 6451568								
EFH (C12-C14)	89	88	49-123	1	20				
EFH (C15-C20)	104	101	49-123	2	20				
EFH (C21-C30)	133*	112	49-123	8	20				
EFH (C30 - C40)	-54*	-67*	49-123	5	20				
EFH (C8-C11)	74	71	49-123	3	20				
Batch number: 113001026002A	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
Antimony	55*	50*	75-125	8	20	0.156 J	0.132 J	17 (1)	20
Arsenic	134*	99	75-125	9	20	5.73	5.36	7	20
Beryllium	132*	118	75-125	7	20	0.646	0.666	3	20
Cadmium	128*	110	75-125	14	20	0.192	0.183	5 (1)	20
Chromium	124	95	75-125	8	20	23.1	22.8	1	20
Cobalt	142*	123	75-125	13	20	7.93	7.98	1	20
Copper	136*	109	75-125	11	20	11.1	11.2	1	20
Lead	140*	109	75-125	10	20	5.28	5.34	1	20
Nickel	145*	109	75-125	13	20	15.2	15.3	1	20
Silver	125	112	75-125	11	20	0.0382 J	0.0492 J	25* (1)	20
Thallium	109	91	75-125	9	20	0.387	0.305	24* (1)	20
Vanadium	126 (2)	85 (2)	75-125	7	20	47.0	46.7	1	20
Zinc	150 (2)	85 (2)	75-125	9	20	61.8	63.6	3	20
Batch number: 113001026002B	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Selenium	127*	115	75-125	9	20	0.171 J	0.149 J	14 (1)	20
Batch number: 113001026002C	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
Molybdenum	130*	114	75-125	13	20	0.575	0.508	12	20
Batch number: 113001026002D	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
Barium	186 (2)	-6 (2)	75-125	15	20	120	121	1	20
Batch number: 113005708002	Sample number(s): 6451564-6451569 UNSPK: P439922 BKG: P439922								
Aluminum	2845 (2)	2727 (2)	75-125	1	20	31,300	31,800	2	20
Boron	99	97	84-115	4	20	11.0	11.3	3 (1)	20
Calcium	312 (2)	238 (2)	75-125	3	20	9,470	10,200	7	20
Iron	-907 (2)	699 (2)	75-125	5	20	32,900	31,300	5	20
Lithium	101	102	82-114	2	20	28.1	28.0	0	20
Magnesium	158 (2)	231 (2)	75-125	2	20	7,710	7,640	1	20
Manganese	77 (2)	91 (2)	75-125	1	20	320	316	1	20
Phosphorus	97	107	75-125	2	20	262	257	2	20
Potassium	142*	149*	75-125	1	20	3,630	3,610	1	20
Sodium	97	97	75-125	2	20	120	118	2 (1)	20
Strontium	101	98	75-115	4	20	41.9	42.4	1	20
Tin	88	87	80-110	4	20	2.57 J	2.63 J	2 (1)	20
Titanium	367 (2)	432 (2)	75-125	3	20	1,600	1,620	2	20
Zirconium	95	95	81-110	3	20	5.22	5.90	12 (1)	20
Batch number: 113005711002	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
Mercury	99	101	65-135	1	20	0.0067 U	0.0069 U	0 (1)	20
Batch number: 11308621201A	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
7a Perchlorate EPA 314.0	113		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11312102202A	Sample number(s): 6451568-6451569 UNSPK: 6451568 BKG: 6451568								
16a Cyanide by 9012B	106		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11312243201A	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
3a Cr VI by EPA 7199	98		75-125			0.43 J	0.47 J	10 (1)	20
Batch number: 11312621202A	Sample number(s): 6451564-6451569 UNSPK: 6451564 BKG: 6451564								
11a Anions by 300.0 - Fluoride	73*		80-120			0.80 U	0.80 U	0 (1)	20
Batch number: 11311039401A	Sample number(s): 6451564-6451569 BKG: 6451564								
17a pH by 9045C						6.66	6.67	0	3
Batch number: 11311162401A	Sample number(s): 6451564-6451569 BKG: 6451565								
Moisture Content by 160.3						8.7	9.3	7	20

Surrogate Quality Control

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 14b 1,4-Dioxane by 8260B SIM
Batch number: E113001AA

	Toluene-d8
6451572	98
Blank	99
LCS	99
LCSD	99
Limits:	80-120

Analysis Name: 1b Volatile Organics EPA8260B
Batch number: Y113052AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6451572	102	102	99	94
Blank	103	101	98	92
LCS	102	103	101	101
LCSD	101	104	100	100
Limits:	86-118	80-120	88-110	86-115

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11304SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6451564	83	95	106	77	99	112
6451565	63	71	90	60	76	87
6451566	82	93	116	77	101	116
6451567	78	87	105	71	91	110
6451568	87	96	113	78	96	116
6451569	88	96	111	77	98	116
Blank	81	92	104	77	99	117
LCS	92	100	111	80	101	115
MS	85	95	112	78	101	116
MSD	87	95	112	78	102	117
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11304SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6451564	95	85	68
6451565	90	84	67
6451566	91	86	68
6451567	92	85	70
6451568	94	88	72
6451569	92	85	66
Blank	87	83	88
LCS	87	83	78
MS	89	87	73
MSD	91	86	67

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

Limits: 40-130 45-130 45-135

Analysis Name: 4b Select SVOC EPA 8270SIM
Batch number: 11304WAF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6451571	116	87	96
6451572	90	86	93
Blank	91	85	91
LCS	92	84	87
LCSD	92	84	84
Limits:	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11305WAA026

	N-Nitrosodimethylamine-d6
6451572	138
Blank	119
LCS	120
LCSD	118
Limits:	50-150

Analysis Name: 5b Semivolatiles by EPA 8270C
Batch number: 11306WAA026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6451571	56	35	82	87	82	94
6451572	59	38	83	91	86	92
Blank	50	30	85	90	85	93
LCS	63	42	83	88	83	91
LCSD	61	38	86	92	88	91
Limits:	20-130	20-120	30-130	40-130	45-130	45-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11299A16B

	Trifluorotoluene-F
6451568	83
Blank	96
LCS	89
LCSD	93
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11304A20A

	Trifluorotoluene-F
6451570	87
6451572	89
Blank	88
LCS	114

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

LCSD 112

Limits: 63-135

Analysis Name: 20b Formaldehyde 8315A
Batch number: 113000025A

	Butyraldehyde
6451572	92
Blank	90
LCS	90
LCSD	87
Limits:	45-145

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113010003A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6451564	85	93
6451565	97	100
6451566	86	86
6451567	96	100
6451568	92	89
6451569	98	91
Blank	81	94
LCS	84	95
LCSD	90	96
MS	88	86
MSD	90	86
Limits:	53-139	45-120

Analysis Name: 13b Herbicides by EPA 8151
Batch number: 113020010A

	2,4-Dichlorophenylacetic acid
6451572	89
Blank	99
LCS	121
LCSD	106
Limits:	35-144

Analysis Name: 15b Energetics by 8330A
Batch number: 113040017A

	2-Nitro-m-xylene
6451572	93
Blank	93
LCS	92
LCSD	92
Limits:	50-134

Analysis Name: 8b PCBs/PCTs by 8082

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

Batch number: 113050018A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6451571	110	98
6451572	115	114
Blank	103	106
LCS	111	101
LCSD	111	102
Limits:	30-150	45-120

Analysis Name: 12b Pesticides by 8081A
Batch number: 113050028A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6451572	101	110
Blank	91	94
LCS	101	100
LCSD	98	90
Limits:	52-141	40-144

Analysis Name: 9b TPH by EPA 8015B Oil/Diesel
Batch number: 113040007A

	Chlorobenzene	Orthoterphenyl
6451572	92	82
Blank	89	80
LCS	89	95
LCSD	94	96
Limits:	28-152	52-131

Analysis Name: 22b Terphenyls by 8015B
Batch number: 113040009A

	n-Triacontane-d62
6451572	68
Blank	59
LCS	67
LCSD	72
Limits:	17-138

Analysis Name: 19b Glycols by 8015B
Batch number: 113040032A

	Tetramethylene glycol
6451572	101
Blank	107
LCS	105
LCSD	112
Limits:	29-157

Analysis Name: 18a Alcohols by 8015B
Batch number: 113040033A

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

	Acetone
6451568	89
Blank	93
LCS	92
MS	89
MSD	89
Limits:	42-138

Analysis Name: 22a Terphenyls by 8015B
Batch number: 113060014A

	n-Triacontane-d62
6451568	83
6451569	84
Blank	78
LCS	93
MS	84
MSD	80
Limits:	19-152

Analysis Name: 18a Alcohols by 8015B
Batch number: 113060028A

	Acetone
6451569	88
Blank	88
LCS	89
MS	91
MSD	87
Limits:	42-138

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113070014A

	Chlorobenzene	Orthoterphenyl
6451568	103	92
6451569	98	93
Blank	93	81
LCS	90	98
MS	91	93
MSD	90	90
Limits:	37-125	47-145

Analysis Name: 18b Alcohols by 8015B
Batch number: 113070034A

	Acetone
6451572	95
Blank	94
LCS	100
MS	102
MSD	104

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273439
Reported: 11/20/11 at 09:00 AM

Surrogate Quality Control

Limits: 54-147

Analysis Name: 19a Glycols by 8015B
Batch number: 113080023A

	Tetramethylene glycol
6451568	90
6451569	90
Blank	99
LCS	99
MS	88
MSD	87

Limits: 29-137

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct #13013 Cp# 1273439 Sample# 6451564-72

CHAIN OF CUSTODY RECORD

CDM — **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS: *Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	CONDARY FOR ALL LOCATIO: **TPH-EPH EPA 8015B Mod.	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	Other Instructions and Notes
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1 SS sleeve			X	X													
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-SS Sleeve			X	X													
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X	X								
SL-086-SA7-SB-3.5	10.26.11	1508	SOIL	NONE	2 Encores										X							
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	1-SS sleeve			X	X													
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X	X	X	X	X	
SL-157-SA7-SB-2.5-3.5	10.26.11	1500	SOIL	NONE	1-16 oz Jar	X	X	X	X	X	X	X	X									Was not able to collect sleeve
TB-102611	10.26.11	1430	WATER	NONE	2-40 mL Vials										X							

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		Laboratory:
[signature]	10/26/2011 / 1630			Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s) 8754 3341 0770; 8754 3341 0781 8754 3341 0792	Suzette Lehman	LLI 10/27/11 0925

Subsurface HA 7

acct# 13013 Cp# 1273439 samp6# 6451564-72

CHAIN OF CUSTODY RECORD

CDM — SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
§ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 4 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers - Signatures: [signature]

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS: *Metals EPA 6010/6020/6A7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	SS ONLY: *Pesticides EPA 8081A (surface soil only)	*Herbicides EPA 8151 (surface soil only)	VOCs: VOCs/EPA 8260B $	1,4-Dioxane EPA 8260SIM $	TPH-GRO EPA 8015B $	SECONDARY FOR ALL LOCATIONS: **TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dewonol EPA 8270	Other Instructions and Notes
EB-SA7-SB-102611	10/26/11	0730	WATER	NONE	5-1 liter ambers			X	X	X																		X	
EB-SA7-SB-102611	10/26/11	0730	WATER	NONE	1-500 mL poly		X				X	X	X																
EB-SA7-SB-102611	10/26/11	0730	WATER	HNO3	1-500 mL poly	X																							
FB-SA7-102611	10/26/11	0945	WATER	NONE	12-1 liter ambers			X	X	X				X	X				X			X	X		X			X	
FB-SA7-102611	10/26/11	0945	WATER	NONE	1-500 mL poly		X				X	X	X																
FB-SA7-102611	10/26/11	0945	WATER	HNO3	1-500 mL poly	X																							
FB-SA7-102611	10/26/11	0945	WATER	NaOH	1-500 mL poly																			X					
FB-SA7-102611	10/26/11	0945	WATER	HCl	11-40 mL vials											X	X	X									X		
FB-SA7-102611	10/26/11	0945	WATER	NONE	4-40 mL vials															X						X			
FB-SA7-102611	10/26/11	0945	WATER	NONE	2-120 mL ambers																X								

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		Laboratory:
[signature]	10/26/2011 / 1630			Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s) 8754 3341 0770; 8754 3341 0781 8754 3341 0792	Suzette Lehman	LLI 10/27/11 0925

SA 7 EB & Field Blank

Nicole Maljovec

From: Bloisa, Peggy [BloisaMJ@cdm.com]

Sent: Monday, October 31, 2011 5:59 PM

To: Nicole Maljovec

Cc: Laura Rainey; Dixie Hambrick

Subject: RE: Analyte priority for secondary suite

Nicole - regarding sample 157 collected from SA 7 that we talked about earlier in our phone call, please revise the secondary analyte order for any "left over" soil as follows:

Terphenyls first, followed by glycols, TPH-EFH, cyanide, alcohols.

Thanks! Peggy

Peggy Bloisa, P.G.
CDM
|100 Pringle Avenue Suite 300| Walnut Creek, CA 94596|
|Phone and Fax: (925) 296-8053|

Please consider the environment before printing this email.

Nicole Maljovec

From: Bloisa, Peggy [BloisaMJ@cdm.com]
Sent: Monday, October 31, 2011 11:44 AM
To: Nicole Maljovec
Subject: Revised COC for 10/26/11
Attachments: COC_10_26_11 revised.xlsx

Hi Nicole – please see revisions to COC for 10/26, attached. IF POSSIBLE, if any sample left after primary analyses have been done, perform secondary analyses (TPH-EFH, alcohol/glycols, terphenyls, cyanide) on sample SL-157-SA7-SB-2.5-3.5. Only one jar could be collected.

Thanks, Peggy

Peggy Bloisa, P.G.
CDM
|100 Pringle Avenue Suite 300| Walnut Creek, CA 94596|
|Phone and Fax: (925) 296-8053|


Please consider the environment before printing this email.

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers
Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	PRIMARY FOR ALL LOCATIONS										SECONDARY FOR ALL LOCATIO						Other Instructions and Notes
						*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1 SS sleeve			X	X													
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-SS Sleeve			X	X													
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X	X								
SL-086-SA7-SB-3.5	10.26.11	1508	SOIL	NONE	2 Encores										X							
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	1-SS sleeve			X	X													
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X	X	X	X	X	
SL-157-SA7-SB-2.5-3.5	10.26.11	1500	SOIL	NONE	1-16 oz Jar	X	X	X	X	X	X	X	X			X	X	X	X	X		**Was not able to collect sleeve**
TB-102611	10.26.11	1430	WATER	NONE	2-40 mL Vials										X							

Relinquished by: (*Signature*)	Date/Time 10/26/2011 / 1630	Received for Laboratory by: (*Signature*)	Laboratory: Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s) 8754 3341 0770; 8754 3341 0781 8754 3341 0792	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 10, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/27/2011
Group Number: 1273441
SDG: DX152
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-033-SA7-SB-4.0-5.0 Soil	6451576
SL-033-SA7-SB-9.0-10.0 Soil	6451577
SL-038-SA7-SB-4.0-5.0 Soil	6451578
SL-082-SA7-SB-4.0-5.0 Soil	6451579
SL-086-SA7-SB-3.0-4.0 Soil	6451580
SL-157-SA7-SB-2.5-3.5 Soil	6451581
EB-SA7-SB-102611 Water	6451582
FB-SA7-102611 Water	6451583

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451576
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5210 SDG#: DX152-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451576
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5210 SDG#: DX152-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0341 U	0.0341	1.05	1
11031	12378-PeCDD	40321-76-4	0.0437 JBQ	0.0307	5.26	1
11031	123478-HxCDD	39227-28-6	0.0319 JQ	0.0241	5.26	1
11031	123678-HxCDD	57653-85-7	0.0928 J	0.0255	5.26	1
11031	123789-HxCDD	19408-74-3	0.144 JQ	0.0241	5.26	1
11031	1234678-HpCDD	35822-46-9	0.766 JB	0.0289	5.26	1
11031	OCDD	3268-87-9	5.41 JB	0.0295	10.5	1
11031	2378-TCDF	51207-31-9	0.0303 U	0.0303	1.05	1
11031	12378-PeCDF	57117-41-6	0.0724 JB	0.0141	5.26	1
11031	23478-PeCDF	57117-31-4	0.0987 JBQ	0.0141	5.26	1
11031	123478-HxCDF	70648-26-9	0.0839 JBQ	0.0174	5.26	1
11031	123678-HxCDF	57117-44-9	0.0681 JBQ	0.0149	5.26	1
11031	123789-HxCDF	72918-21-9	0.127 JB	0.0211	5.26	1
11031	234678-HxCDF	60851-34-5	0.0745 JB	0.0170	5.26	1
11031	1234678-HpCDF	67562-39-4	0.267 JB	0.0106	5.26	1
11031	1234789-HpCDF	55673-89-7	0.0435 JBQ	0.0194	5.26	1
11031	OCDF	39001-02-0	0.454 JB	0.0424	10.5	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	78	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	81	23 - 140
13C12-OCDD	82	17 - 157
13C12-2378-TCDF	71	24 - 169
13C12-12378-PeCDF	84	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	98	28 - 143
13C12-1234789-HpCDF	62	26 - 138
13C12-OCDF	60	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451576
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5210 SDG#: DX152-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451576
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 13:40

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5210 SDG#: DX152-10

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/01/2011 19:55	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451577
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5211 SDG#: DX152-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451577
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5211 SDG#: DX152-11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0358	U	0.0358	1.09	1
11031	12378-PeCDD	40321-76-4	0.0565	JBQ	0.0367	5.44	1
11031	123478-HxCDD	39227-28-6	0.159	JQ	0.0330	5.44	1
11031	123678-HxCDD	57653-85-7	0.320	J	0.0335	5.44	1
11031	123789-HxCDD	19408-74-3	0.247	J	0.0348	5.44	1
11031	1234678-HpCDD	35822-46-9	10.8	B	0.0559	5.44	1
11031	OCDD	3268-87-9	107	B	0.0565	10.9	1
11031	2378-TCDF	51207-31-9	0.0505	U	0.0505	1.09	1
11031	12378-PeCDF	57117-41-6	0.393	JB	0.0253	5.44	1
11031	23478-PeCDF	57117-31-4	0.116	JB	0.0265	5.44	1
11031	123478-HxCDF	70648-26-9	0.240	JB	0.0246	5.44	1
11031	123678-HxCDF	57117-44-9	0.163	JB	0.0218	5.44	1
11031	123789-HxCDF	72918-21-9	0.0702	JB	0.0318	5.44	1
11031	234678-HxCDF	60851-34-5	0.130	JB	0.0230	5.44	1
11031	1234678-HpCDF	67562-39-4	1.78	JB	0.0154	5.44	1
11031	1234789-HpCDF	55673-89-7	0.171	JB	0.0294	5.44	1
11031	OCDF	39001-02-0	3.78	JB	0.0439	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	70	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	78	23 - 140
13C12-OCDD	79	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	94	28 - 143
13C12-1234789-HpCDF	62	26 - 138
13C12-OCDF	61	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-033-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451577
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5211 SDG#: DX152-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-033-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-033-SA7-SB

LLI Sample # SW 6451577
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 14:05

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5211 SDG#: DX152-11

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/01/2011 20:51	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451578
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5212 SDG#: DX152-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	8.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451578
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5212 SDG#: DX152-12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0353	U	0.0353	1.09	1
11031	12378-PeCDD	40321-76-4	0.0319	U	0.0319	5.43	1
11031	123478-HxCDD	39227-28-6	0.0837	J	0.0345	5.43	1
11031	123678-HxCDD	57653-85-7	0.245	JQ	0.0337	5.43	1
11031	123789-HxCDD	19408-74-3	0.198	J	0.0345	5.43	1
11031	1234678-HpCDD	35822-46-9	8.22	B	0.0518	5.43	1
11031	OCDD	3268-87-9	67.7	B	0.0494	10.9	1
11031	2378-TCDF	51207-31-9	0.0818	JBQ	0.0393	1.09	1
11031	12378-PeCDF	57117-41-6	0.114	JBQ	0.0186	5.43	1
11031	23478-PeCDF	57117-31-4	0.211	JBQ	0.0191	5.43	1
11031	123478-HxCDF	70648-26-9	0.259	JB	0.0237	5.43	1
11031	123678-HxCDF	57117-44-9	0.108	JBQ	0.0207	5.43	1
11031	123789-HxCDF	72918-21-9	0.0826	JBQ	0.0263	5.43	1
11031	234678-HxCDF	60851-34-5	0.115	JB	0.0201	5.43	1
11031	1234678-HpCDF	67562-39-4	1.03	JBQ	0.0145	5.43	1
11031	1234789-HpCDF	55673-89-7	0.0985	JB	0.0242	5.43	1
11031	OCDF	39001-02-0	2.06	JBQ	0.0364	10.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	86	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	80	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	75	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	80	26 - 123
13C12-234678-HxCDF	82	28 - 136
13C12-123789-HxCDF	72	29 - 147
13C12-1234678-HpCDF	93	28 - 143
13C12-1234789-HpCDF	66	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451578
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5212 SDG#: DX152-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-038-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-038-SA7-SB

LLI Sample # SW 6451578
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/24/2011 10:55

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5212 SDG#: DX152-12

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/01/2011 21:48	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451579
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5213 SDG#: DX152-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451579
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5213 SDG#: DX152-13

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0280	U	0.0280	1.07	1
11031	12378-PeCDD	40321-76-4	0.0247	U	0.0247	5.34	1
11031	123478-HxCDD	39227-28-6	0.0202	U	0.0202	5.34	1
11031	123678-HxCDD	57653-85-7	0.0235	JQ	0.0204	5.34	1
11031	123789-HxCDD	19408-74-3	0.0488	JQ	0.0190	5.34	1
11031	1234678-HpCDD	35822-46-9	0.349	JB	0.0206	5.34	1
11031	OCDD	3268-87-9	1.28	JB	0.0311	10.7	1
11031	2378-TCDF	51207-31-9	0.0206	U	0.0206	1.07	1
11031	12378-PeCDF	57117-41-6	0.0227	JBQ	0.0117	5.34	1
11031	23478-PeCDF	57117-31-4	0.0902	JB	0.0122	5.34	1
11031	123478-HxCDF	70648-26-9	0.0554	JBQ	0.0159	5.34	1
11031	123678-HxCDF	57117-44-9	0.0188	JB	0.0143	5.34	1
11031	123789-HxCDF	72918-21-9	0.0412	JB	0.0172	5.34	1
11031	234678-HxCDF	60851-34-5	0.0642	JB	0.0139	5.34	1
11031	1234678-HpCDF	67562-39-4	0.206	JB	0.00984	5.34	1
11031	1234789-HpCDF	55673-89-7	0.0428	JBQ	0.0172	5.34	1
11031	OCDF	39001-02-0	0.239	JBQ	0.0349	10.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	75	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	84	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	85	24 - 185
13C12-23478-PeCDF	77	21 - 178
13C12-123478-HxCDF	73	26 - 152
13C12-123678-HxCDF	84	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	74	29 - 147
13C12-1234678-HpCDF	98	28 - 143
13C12-1234789-HpCDF	66	26 - 138
13C12-OCDF	62	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451579
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5213 SDG#: DX152-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-082-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-082-SA7-SB

LLI Sample # SW 6451579
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/25/2011 09:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5213 SDG#: DX152-13

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/01/2011 22:44	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451580
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5214 SDG#: DX152-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451580
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5214 SDG#: DX152-14

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0331	U	0.0331	1.02	1
11031	12378-PeCDD	40321-76-4	0.0313	U	0.0313	5.10	1
11031	123478-HxCDD	39227-28-6	0.0673	JQ	0.0297	5.10	1
11031	123678-HxCDD	57653-85-7	0.170	JQ	0.0303	5.10	1
11031	123789-HxCDD	19408-74-3	0.144	J	0.0309	5.10	1
11031	1234678-HpCDD	35822-46-9	3.80	JB	0.0359	5.10	1
11031	OCDD	3268-87-9	33.6	B	0.0420	10.2	1
11031	2378-TCDF	51207-31-9	0.0287	JBQ	0.0247	1.02	1
11031	12378-PeCDF	57117-41-6	0.0637	JBQ	0.0157	5.10	1
11031	23478-PeCDF	57117-31-4	0.0844	JBQ	0.0154	5.10	1
11031	123478-HxCDF	70648-26-9	0.162	JBQ	0.0211	5.10	1
11031	123678-HxCDF	57117-44-9	0.0187	U	0.0187	5.10	1
11031	123789-HxCDF	72918-21-9	0.0229	U	0.0229	5.10	1
11031	234678-HxCDF	60851-34-5	0.140	JB	0.0198	5.10	1
11031	1234678-HpCDF	67562-39-4	0.686	JB	0.0139	5.10	1
11031	1234789-HpCDF	55673-89-7	0.0911	JB	0.0240	5.10	1
11031	OCDF	39001-02-0	1.38	JBQ	0.0411	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	83	23 - 140
13C12-OCDD	81	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	75	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	77	28 - 136
13C12-123789-HxCDF	76	29 - 147
13C12-1234678-HpCDF	94	28 - 143
13C12-1234789-HpCDF	67	26 - 138
13C12-OCDF	65	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451580
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5214 SDG#: DX152-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-086-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-086-SA7-SB

LLI Sample # SW 6451580
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5214 SDG#: DX152-14

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/01/2011 23:41	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451581
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5215 SDG#: DX152-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451581
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5215 SDG#: DX152-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0320 U	0.0320	1.02	1
11031	12378-PeCDD	40321-76-4	0.0504 JBQ	0.0291	5.09	1
11031	123478-HxCDD	39227-28-6	0.0532 JQ	0.0254	5.09	1
11031	123678-HxCDD	57653-85-7	0.180 J	0.0265	5.09	1
11031	123789-HxCDD	19408-74-3	0.127 J	0.0267	5.09	1
11031	1234678-HpCDD	35822-46-9	6.13 B	0.0470	5.09	1
11031	OCDD	3268-87-9	81.4 B	0.0537	10.2	1
11031	2378-TCDF	51207-31-9	0.0283 U	0.0283	1.02	1
11031	12378-PeCDF	57117-41-6	0.0894 JB	0.0162	5.09	1
11031	23478-PeCDF	57117-31-4	0.136 JBQ	0.0161	5.09	1
11031	123478-HxCDF	70648-26-9	0.124 JBQ	0.0197	5.09	1
11031	123678-HxCDF	57117-44-9	0.0909 JBQ	0.0160	5.09	1
11031	123789-HxCDF	72918-21-9	0.0438 JB	0.0244	5.09	1
11031	234678-HxCDF	60851-34-5	0.0961 JBQ	0.0181	5.09	1
11031	1234678-HpCDF	67562-39-4	0.641 JB	0.0140	5.09	1
11031	1234789-HpCDF	55673-89-7	0.0469 JB	0.0283	5.09	1
11031	OCDF	39001-02-0	1.11 JB	0.0411	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	73	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	78	32 - 141
13C12-123678-HxCDD	81	28 - 130
13C12-123789-HxCDD	81	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	73	21 - 178
13C12-123478-HxCDF	67	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	63	29 - 147
13C12-1234678-HpCDF	96	28 - 143
13C12-1234789-HpCDF	59	26 - 138
13C12-OCDF	55	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451581
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5215 SDG#: DX152-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-157-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-157-SA7-SB

LLI Sample # SW 6451581
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 15:00

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5215 SDG#: DX152-15

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/02/2011 00:37	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-102611 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451582
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5216 SDG#: DX152-16EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.367	U	0.367	2.12	1
10915	12378-PeCDD	40321-76-4	0.382	U	0.382	10.6	1
10915	123478-HxCDD	39227-28-6	0.306	U	0.306	10.6	1
10915	123678-HxCDD	57653-85-7	0.677	JBQ	0.308	10.6	1
10915	123789-HxCDD	19408-74-3	1.36	JBQ	0.314	10.6	1
10915	1234678-HpCDD	35822-46-9	4.85	JBQ	0.408	10.6	1
10915	OCDD	3268-87-9	9.34	JBQ	0.458	21.2	1
10915	2378-TCDF	51207-31-9	0.245	U	0.245	2.12	1
10915	12378-PeCDF	57117-41-6	0.323	JBQ	0.177	10.6	1
10915	23478-PeCDF	57117-31-4	0.750	JBQ	0.155	10.6	1
10915	123478-HxCDF	70648-26-9	1.20	JBQ	0.207	10.6	1
10915	123678-HxCDF	57117-44-9	0.961	JQ	0.198	10.6	1
10915	123789-HxCDF	72918-21-9	0.782	JBQ	0.198	10.6	1
10915	234678-HxCDF	60851-34-5	0.963	JB	0.185	10.6	1
10915	1234678-HpCDF	67562-39-4	2.42	JBQ	0.165	10.6	1
10915	1234789-HpCDF	55673-89-7	0.905	JBQ	0.210	10.6	1
10915	OCDF	39001-02-0	1.81	JBQ	0.554	21.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	54	25 - 164
13C12-12378-PeCDD	50	25 - 181
13C12-123478-HxCDD	44	32 - 141
13C12-123678-HxCDD	46	28 - 130
13C12-123789-HxCDD	45	28 - 130
13C12-1234678-HpCDD	41	23 - 140
13C12-OCDD	35	17 - 157
13C12-2378-TCDF	60	24 - 169
13C12-12378-PeCDF	52	24 - 185
13C12-23478-PeCDF	52	21 - 178
13C12-123478-HxCDF	43	26 - 152
13C12-123678-HxCDF	44	26 - 123
13C12-234678-HxCDF	46	28 - 136
13C12-123789-HxCDF	52	29 - 147
13C12-1234678-HpCDF	40	28 - 143
13C12-1234789-HpCDF	40	26 - 138
13C12-OCDF	34	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **EB-SA7-SB-102611 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6451582
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 07:30

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5216 SDG#: DX152-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11311001	11/08/2011 18:38	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11311001	11/07/2011 08:30	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451583
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5217 SDG#: DX152-17FB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.232	U	0.232	2.09	1
10915	12378-PeCDD	40321-76-4	0.257	U	0.257	10.4	1
10915	123478-HxCDD	39227-28-6	0.251	JQ	0.186	10.4	1
10915	123678-HxCDD	57653-85-7	0.567	JBQ	0.191	10.4	1
10915	123789-HxCDD	19408-74-3	0.565	JBQ	0.179	10.4	1
10915	1234678-HpCDD	35822-46-9	2.74	JB	0.215	10.4	1
10915	OCDD	3268-87-9	4.23	JBQ	0.264	20.9	1
10915	2378-TCDF	51207-31-9	0.180	U	0.180	2.09	1
10915	12378-PeCDF	57117-41-6	0.178	JB	0.120	10.4	1
10915	23478-PeCDF	57117-31-4	0.587	JBQ	0.109	10.4	1
10915	123478-HxCDF	70648-26-9	0.407	JB	0.116	10.4	1
10915	123678-HxCDF	57117-44-9	0.219	JQ	0.115	10.4	1
10915	123789-HxCDF	72918-21-9	0.123	U	0.123	10.4	1
10915	234678-HxCDF	60851-34-5	0.376	JB	0.112	10.4	1
10915	1234678-HpCDF	67562-39-4	1.76	JB	0.0967	10.4	1
10915	1234789-HpCDF	55673-89-7	0.341	JBQ	0.119	10.4	1
10915	OCDF	39001-02-0	1.44	JBQ	0.316	20.9	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	71	25 - 181
13C12-123478-HxCDD	73	32 - 141
13C12-123678-HxCDD	74	28 - 130
13C12-123789-HxCDD	72	28 - 130
13C12-1234678-HpCDD	71	23 - 140
13C12-OCDD	66	17 - 157
13C12-2378-TCDF	77	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	73	28 - 136
13C12-123789-HxCDF	81	29 - 147
13C12-1234678-HpCDF	70	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	63	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: FB-SA7-102611 Water
SSFL Area IV Collocated Soil Sampling
FB-SA7

LLI Sample # WW 6451583
LLI Group # 1273441
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/26/2011 09:45

Submitted: 10/27/2011 09:25
Reported: 11/10/2011 16:29

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5217 SDG#: DX152-17FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11311001	11/08/2011 19:35	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11311001	11/07/2011 08:30	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273441
Reported: 11/10/11 at 04:29 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11311162401A	Sample number(s): 6451576-6451581								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11304002	Sample number(s): 6451576-6451581								
2378-TCDD	0.0455 U	0.0455	1.00	ng/kg	112		67-158		
12378-PeCDD	0.0516 J	0.0421	5.00	ng/kg	111		70-142		
123478-HxCDD	0.0278 U	0.0278	5.00	ng/kg	103		70-164		
123678-HxCDD	0.0273 U	0.0273	5.00	ng/kg	99		76-134		
123789-HxCDD	0.0276 U	0.0276	5.00	ng/kg	108		64-162		
1234678-HpCDD	0.271 J	0.0288	5.00	ng/kg	104		70-140		
OCDD	0.375 J	0.0359	10.0	ng/kg	101		78-144		
2378-TCDF	0.0447 J	0.0380	1.00	ng/kg	104		75-158		
12378-PeCDF	0.0384 J	0.0198	5.00	ng/kg	107		80-134		
23478-PeCDF	0.0625 J	0.0202	5.00	ng/kg	100		68-160		
123478-HxCDF	0.0789 J	0.0220	5.00	ng/kg	104		72-134		
123678-HxCDF	0.0382 J	0.0176	5.00	ng/kg	102		84-130		
123789-HxCDF	0.0432 J	0.0235	5.00	ng/kg	104		78-130		
234678-HxCDF	0.0442 J	0.0194	5.00	ng/kg	101		70-156		
1234678-HpCDF	0.160 J	0.0113	5.00	ng/kg	95		82-122		
1234789-HpCDF	0.0480 J	0.0232	5.00	ng/kg	99		78-138		
OCDF	0.208 J	0.0566	10.0	ng/kg	102		63-170		
Batch number: 11311001	Sample number(s): 6451582-6451583								
2378-TCDD	0.411 J	0.274	2.00	pg/l	115		67-158		
12378-PeCDD	0.284 U	0.284	10.0	pg/l	116		70-142		
123478-HxCDD	0.185 U	0.185	10.0	pg/l	109		70-164		
123678-HxCDD	0.271 J	0.185	10.0	pg/l	107		76-134		
123789-HxCDD	0.361 J	0.173	10.0	pg/l	114		64-162		
1234678-HpCDD	3.52 J	0.246	10.0	pg/l	114		70-140		
OCDD	5.78 J	0.263	20.0	pg/l	115		78-144		
2378-TCDF	0.269 J	0.170	2.00	pg/l	102		75-158		
12378-PeCDF	0.339 J	0.126	10.0	pg/l	113		80-134		
23478-PeCDF	0.366 J	0.118	10.0	pg/l	104		68-160		
123478-HxCDF	0.775 J	0.127	10.0	pg/l	111		72-134		
123678-HxCDF	0.128 U	0.128	10.0	pg/l	109		84-130		
123789-HxCDF	0.487 J	0.123	10.0	pg/l	111		78-130		
234678-HxCDF	0.440 J	0.120	10.0	pg/l	105		70-156		
1234678-HpCDF	1.93 J	0.115	10.0	pg/l	106		82-122		
1234789-HpCDF	0.597 J	0.137	10.0	pg/l	111		78-138		
OCDF	1.71 J	0.352	20.0	pg/l	115		63-170		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273441
Reported: 11/10/11 at 04:29 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11311162401A	Sample number(s): 6451576-6451581					BKG: P451565			
Moisture Content by 160.3						8.7	9.3	7	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11304002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6451576	69	74	69	79	72	67
6451577	70	72	70	79	78	67
6451578	74	75	72	80	82	72
6451579	75	77	73	84	81	74
6451580	72	75	70	78	77	76
6451581	73	73	67	79	72	63
Blank	72	75	69	82	74	72
OPR	69	72	68	78	73	72
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6451576	98	62	60	75	78	78
6451577	94	62	61	73	80	83
6451578	93	66	64	75	83	86
6451579	98	66	62	77	84	85
6451580	94	67	65	74	78	83
6451581	96	59	55	75	78	81
Blank	107	66	63	80	82	86
OPR	101	67	64	75	82	82
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6451576	79	81	82	71	84
6451577	79	78	79	73	81
6451578	82	80	80	76	83
6451579	83	82	80	76	85
6451580	80	83	81	74	83
6451581	81	79	77	72	83
Blank	84	88	86	70	83
OPR	83	87	84	68	79

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273441
Reported: 11/10/11 at 04:29 PM

Surrogate Quality Control

Analysis Name: 10b Dioxin/Furan by EPA 1613B
Batch number: 11311001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
Limits:	28-130	23-140	17-157	24-169	24-185	
6451582	54	52	43	44	46	52
6451583	74	74	72	72	73	81
Blank	78	78	75	75	75	86
OPR	77	76	71	73	73	82
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6451582	40	40	34	50	44	46
6451583	70	71	63	71	73	74
Blank	71	69	62	74	75	77
OPR	69	67	60	73	74	74
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6451582	45	41	35	60	52
6451583	72	71	66	77	75
Blank	76	72	64	82	78
OPR	73	70	62	79	77
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Cp# 1273441 Samp6# 6451576-83

CHAIN OF CUSTODY RECORD

CDM	SSFL AREA IV COLLOCATED SOIL SAMPLING					PRIMARY FOR ALL LOCATIONS										CONDARY FOR ALL LOCATIO						Other Instructions and Notes
NOTES: *Primary Analyses as indicated on sample labels **Secondary Analyses as indicated on sample labels $ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C. Samplers Signatures:						*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonal EPA 8270	
SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers																	
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-4.0-5.0	10.24.11	1340	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1 SS sleeve			X	X													
SL-033-SA7-SB-9.0-10.0	10.24.11	1405	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1 SS sleeve			X	X													
SL-038-SA7-SB-4.0-5.0	10.24.11	1055	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X									
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-SS Sleeve			X	X													
SL-082-SA7-SB-4.0-5.0	10.25.11	0900	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X	X								
SL-086-SA7-SB-3.5	10.26.11	1508	SOIL	NONE	2 Encores										X							
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	1-SS sleeve			X	X													
SL-086-SA7-SB-3.0-4.0	10.26.11	1500	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X			X	X	X	X	X	X	
SL-157-SA7-SB-2.5-3.5	10.26.11	1500	SOIL	NONE	1-16 oz Jar	X	X	X	X	X	X	X	X									Was not able to collect sleeve
TB-102611	10.26.11	1430	WATER	NONE	2-40 mL Vials										X							
Relinquished by: (*Signature*)	Date/Time 10/26/2011 / 1630		Received for Laboratory by: (*Signature*)																			Laboratory: Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time		Airbill No.(s) 8754 3341 0770; 8754 3341 0781 8754 3341 0792																			LLI 10/27/11 0928

Subsurface HA 7

acct# 13013 Qp# 1273441 sample# 6451576-83

CHAIN OF CUSTODY RECORD

CDM | SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 8 (SA8) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers - Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	*Pesticides EPA 8081A (surface soil only)	*Herbicides EPA 8151 (surface soil only)	VOCs/EPA 8260B $	1,4-Dioxane EPA 8260SIM $	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dioxins EPA 8270	Other Instructions and Notes
EB-SA7-SB-102611	10/26/11	0730	WATER	NONE	5-1 liter ambers			X	X	X																		X	
EB-SA7-SB-102611	10/26/11	0730	WATER	NONE	1-500 mL poly		X				X	X	X																
EB-SA7-SB-102611	10/26/11	0730	WATER	HNO3	1-500 mL poly	X																							
FB-SA7-102611	10/26/11	0945	WATER	NONE	12-1 liter ambers			X	X	X				X	X				X			X	X		X			X	
FB-SA7-102611	10/26/11	0945	WATER	NONE	1-500 mL poly		X				X	X	X																
FB-SA7-102611	10/26/11	0945	WATER	HNO3	1-500 mL poly	X																							
FB-SA7-102611	10/26/11	0945	WATER	NaOH	1-500 mL poly																			X					
FB-SA7-102611	10/26/11	0945	WATER	HCl	11-40 mL vials											X	X	X									X		
FB-SA7-102611	10/26/11	0945	WATER	NONE	4-40 mL vials															X						X			
FB-SA7-102611	10/26/11	0945	WATER	NONE	2-120 mL ambers																X								

Relinquished by: (Signature) — Date/Time: 10/26/2011 / 1630 — Received for Laboratory by: (Signature)

Received by: (Signature) — Date/Time — Airbill No.(s): 8754 3341 0770; 8754 3341 0781 8754 3341 0792

Laboratory: Lancaster Laboratories, Inc.

LLI 10/27/11 0925

SA 7 EB & Field Blank

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 21, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/28/2011
Group Number: 1273654
SDG: DE275
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
EB-SA7-SB-102711 Water	6453096
SL-008-SA7-SB-2.5-3.0 Soil	6453097
TB-102711 Water	6453098

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-102711 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6453096
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 13:00

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7501 SDG#: DE275-01EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	2.02		0.494	0.987		1
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1
Explosives	**SW-846 8330A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10131	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.71		0.30	0.60	10000000	1
10131	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Diamino-4-nitrotoluene	59229-75-3	0.20	U	0.20	0.60	10000000	1
10131	2,4-Diamino-6-nitrotoluene	6629-29-4	0.20	U	0.20	0.60	10000000	1
10131	1,3-Dinitrobenzene	99-65-0	0.20	U	0.20	0.60	10000000	1
10131	2,4-Dinitrotoluene	121-14-2	0.20	U	0.20	0.60	10000000	1
10131	2,6-Dinitrotoluene	606-20-2	0.20	U	0.20	0.60	10000000	1
10131	HMX	2691-41-0	0.65	U	0.65	2.0	10000000	1
10131	Nitrobenzene	98-95-3	0.20	U	0.20	0.60	10000000	1
10131	Nitroglycerin	55-63-0	5.2	U	5.2	15	10000000	1
10131	2-Nitrotoluene	88-72-2	0.20	U	0.20	0.60	10000000	1
10131	3-Nitrotoluene	99-08-1	0.40	U	0.40	1.2	10000000	1
10131	4-Nitrotoluene	99-99-0	0.60	U	0.60	1.2	10000000	1
10131	PETN	78-11-5	6.0	U	6.0	18	10000000	1
10131	RDX	121-82-4	2.1		0.20	0.60	10000000	1
10131	Tetryl	479-45-8	0.40	U	0.40	0.60	10000000	1
10131	1,3,5-Trinitrobenzene	99-35-4	0.20	U	0.20	0.60	10000000	1
10131	2,4,6-Trinitrotoluene	118-96-7	0.20	U	0.20	0.60	10000000	1
HPLC Organics	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50		1
GC Miscellaneous	**SW-846 8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06624	Ethanol	64-17-5	200	U	200	1,000		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

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Analysis Report

Sample Description: EB-SA7-SB-102711 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6453096
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 13:00

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7501 SDG#: DE275-01EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
06624	Isopropanol	67-63-0	200	U	200	1,000		1
06624	Methanol	67-56-1	200	U	200	1,000		1
The sample was analyzed 1 day outside the client requested 7 day hold time.								
GC Miscellaneous	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
08278	Diethylene glycol	111-46-6	20	U	20	200		1
08278	Ethylene glycol	107-21-1	20	U	20	200		1
08278	Propylene glycol	57-55-6	20	U	20	200		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10319	m-Terphenyl	92-06-8	0.085	U	0.085	0.27		1
10319	o-Terphenyl	84-15-1	0.085	U	0.085	0.27		1
10319	p-Terphenyl	92-94-4	0.085	U	0.085	0.27		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
10365	EFH (C12-C14)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C15-C20)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C21-C30)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C30 - C40)	n.a.	0.11	U	0.11	0.64		1
10365	EFH (C8-C11)	n.a.	0.11	U	0.11	0.64		1
Wet Chemistry	**EPA 300.0**		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
00368	11b Anions by 300.0 - Nitrate	14797-55-8	0.050	U	0.050	0.10		1
	SW-846 9012B		**mg/l**		**mg/l**	**mg/l**	**mg/l**	
08255	16b Cyanide by 9012B	57-12-5	0.0050	U	0.0050	0.010		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11305WAA026	11/10/2011 01:28	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11305WAA026	11/01/2011 13:50	Wanda F Oswald	1

*=This limit was used in the evaluation of the final result
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Analysis Report

Sample Description: **EB-SA7-SB-102711 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6453096
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 13:00

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7501 SDG#: DE275-01EB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11304A20A	11/01/2011 17:39	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11304A20A	11/01/2011 17:39	Marie D John	1
10131	15b Energetics by 8330A	SW-846 8330A	1	113040017A	11/03/2011 11:45	James H Place	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	113000025A	10/31/2011 23:47	James H Place	1
01013	Formaldehyde Extraction	SW-846 8315A	1	113000025A	10/28/2011 13:40	Kelli M Barto	1
11122	Energetics Extraction	SW-846 8330	1	113040017A	11/01/2011 13:15	Kelli M Barto	1
06624	18b Alcohols by 8015B	SW-846 8015B	1	113070034A	11/04/2011 20:02	Elizabeth J Marin	1
08278	19b Glycols by 8015B	SW-846 8015B modified	1	113040032A	10/31/2011 21:37	Tyler O Griffin	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	113040009A	11/02/2011 13:36	Robert Brown	1
10365	9b TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113040007A	11/02/2011 18:46	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	113040007A	10/31/2011 18:00	Kathryn I DeHaven	1
10304	Terphenyls water prep	SW-846 3510C	1	113040009A	10/31/2011 17:00	Bronson L Cole	1
00368	11b Anions by 300.0 - Nitrate	EPA 300.0	1	11301196601C	10/29/2011 08:55	Ashley M Adams	1
08255	16b Cyanide by 9012B	SW-846 9012B	1	11311117101A	11/08/2011 17:34	Venia B McFadden	1
08256	Cyanide Water Distillation	SW-846 9012B	1	11311117101A	11/07/2011 10:00	Nancy J Shoop	1

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Analysis Report

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	ug/kg	
04688	Aniline	62-53-3	170	U	170	510		1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400		1
04688	Benzo(a)pyrene	50-32-8	84	J	17	170		1
04688	Benzo(b)fluoranthene	205-99-2	120	J	17	170		1
04688	Benzo(g,h,i)perylene	191-24-2	74	J	17	170		1
04688	Benzo(k)fluoranthene	207-08-9	62	J	17	170		1
04688	Benzoic acid	65-85-0	170	U	170	510		1
04688	Benzyl alcohol	100-51-6	170	U	170	510		1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170		1
04688	Carbazole	86-74-8	17	U	17	170		1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170		1
04688	4-Chloroaniline	106-47-8	68	U	68	170		1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170		1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170		1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170		1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170		1
04688	2-Chlorophenol	95-57-8	17	U	17	170		1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170		1
04688	Dibenz(a,h)anthracene	53-70-3	17	J	17	170		1
04688	Dibenzofuran	132-64-9	17	U	17	170		1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170		1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170		1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170		1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340		1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170		1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170		1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170		1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	510		1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000		1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170		1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170		1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170		1
04688	Hexachlorobenzene	118-74-1	17	U	17	170		1
04688	Hexachlorobutadiene	87-68-3	68	U	68	170		1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	510		1
04688	Hexachloroethane	67-72-1	17	U	17	170		1
04688	Indeno(1,2,3-cd)pyrene	193-39-5	62	J	17	170		1
04688	Isophorone	78-59-1	17	U	17	170		1
04688	2-Methylphenol	95-48-7	34	U	34	170		1
04688	4-Methylphenol	106-44-5	34	U	34	170		1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.							
04688	2-Nitroaniline	88-74-4	17	U	17	170		1
04688	3-Nitroaniline	99-09-2	34	U	34	170		1
04688	4-Nitroaniline	100-01-6	68	U	68	170		1
04688	Nitrobenzene	98-95-3	17	U	17	170		1
04688	2-Nitrophenol	88-75-5	17	U	17	170		1
04688	4-Nitrophenol	100-02-7	170	U	170	510		1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170		1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.							
04688	Pentachlorophenol	87-86-5	170	U	170	510		1
04688	Phenol	108-95-2	17	U	17	170		1
04688	Pyrene	129-00-0	190		17	170		1
04688	Tetralin	119-64-2	170	U	170	170		1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.							
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170		1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170		1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170		1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	5.4		0.68	1.7		1
10138	Acenaphthylene	208-96-8	0.86	J	0.34	1.7		1
10138	Anthracene	120-12-7	10		0.34	1.7		1
10138	Benzo(a)anthracene	56-55-3	70		0.68	1.7		1
10138	Butylbenzylphthalate	85-68-7	6.1	U	6.1	18		1
10138	Di-n-butylphthalate	84-74-2	8.0	J	6.1	18		1
10138	Chrysene	218-01-9	100		0.34	1.7		1
10138	Diethylphthalate	84-66-2	6.1	U	6.1	18		1
10138	Dimethylphthalate	131-11-3	6.1	U	6.1	18		1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	54		6.1	18		1
10138	Fluoranthene	206-44-0	250		0.68	1.7		1
10138	Fluorene	86-73-7	3.0		0.68	1.7		1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7		1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7		1
10138	Naphthalene	91-20-3	0.68	U	0.68	1.7		1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7		1
10138	Di-n-octylphthalate	117-84-0	6.1	U	6.1	18		1
10138	Phenanthrene	85-01-8	110		0.68	1.7		1
	Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of 8.6 ug/kg. The blank value was not subtracted from the analytical result.							
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1		25.77
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4		1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4		1
10225	Aroclor 5460	11126-42-4	5.2		1.0	3.4		1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.7		1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.7		1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.7		1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.7		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.7		1
10225	PCB-1254	11097-69-1	1.8		0.34	1.7		1
10225	PCB-1260	11096-82-5	2.4		0.40	1.7		1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.7		1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.7		1
	The sample was injected numerous times. Each time the responses for various analytes in the calibration check standard injected after the sample were outside the acceptance criteria. Therefore, this effect is attributed to the sample matrix and the data is reported.							
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	510		1
10501	Isopropanol	67-63-0	100	U	100	510		1
10501	Methanol	67-56-1	100	U	100	510		1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.1	U	5.1	10		1
08283	Ethylene glycol	107-21-1	5.1	U	5.1	10		1
08283	Propylene glycol	57-55-6	5.1	U	5.1	10		1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.5	U	1.5	3.6		1
10318	o-Terphenyl	84-15-1	1.5	U	1.5	3.6		1
10318	p-Terphenyl	92-94-4	1.5	U	1.5	3.6		1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.41	U	0.41	1.2		1
10199	EFH (C15-C20)	n.a.	1.2	J	0.41	1.2		1
10199	EFH (C21-C30)	n.a.	5.9		0.41	1.2		1
10199	EFH (C30 - C40)	n.a.	10		0.41	1.2		1
10199	EFH (C8-C11)	n.a.	0.41	U	0.41	1.2		1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	10,300		5.95	19.7		1
07914	Boron	7440-42-8	3.18	J	0.354	4.92		1
01650	Calcium	7440-70-2	2,730		2.46	19.7		1
01654	Iron	7439-89-6	19,400		2.57	19.7		1
01656	Lithium	7439-93-2	23.2		0.61	2.0		1
01657	Magnesium	7439-95-4	3,390		0.433	9.84		1
06958	Manganese	7439-96-5	253		0.0354	0.492		1
10145	Phosphorus	7723-14-0	345		0.344	9.84		1
01662	Potassium	7440-09-7	3,000		11.1	49.2		1
01667	Sodium	7440-23-5	71.3	J	5.86	98.4		1
07968	Strontium	7440-24-6	10.0		0.0246	0.492		1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06969	Tin	7440-31-5	2.49	J	0.315	9.84		1
06970	Titanium	7440-32-6	957		0.0699	0.984		1
10146	Zirconium	7440-67-7	0.593	J	0.453	4.92		1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0761	J	0.0750	0.203		2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.							
06125	Arsenic	7440-38-2	5.08		0.0811	0.405		2
06126	Barium	7440-39-3	102		0.107	0.405		2
06127	Beryllium	7440-41-7	0.649		0.0162	0.101		2
06128	Cadmium	7440-43-9	0.130		0.0446	0.101		2
06131	Chromium	7440-47-3	16.9		0.122	0.405		2
06132	Cobalt	7440-48-4	5.34		0.0203	0.101		2
06133	Copper	7440-50-8	4.72		0.0780	0.390		2
06135	Lead	7439-92-1	15.0		0.0103	0.203		2
06138	Molybdenum	7439-98-7	0.415		0.0507	0.101		2
06139	Nickel	7440-02-0	10.2		0.101	0.405		2
06141	Selenium	7782-49-2	0.0830	J	0.0588	0.405		2
06142	Silver	7440-22-4	0.0633	J	0.0144	0.101		2
06145	Thallium	7440-28-0	0.370		0.0304	0.101		2
06148	Vanadium	7440-62-2	30.2		0.0223	0.101		2
06149	Zinc	7440-66-6	94.1		0.568	3.04		2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0071	U	0.0071	0.101		1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.0		0.83	1.0		1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.2	U	9.2	30.7		1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.20	U	0.20	1.0		1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.17	U	0.17	0.47		1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	7.89		0.0100	0.0100		1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	2.3		0.50	0.50		1

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Lancaster Laboratories

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Analysis Report

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Action Limit	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	%	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-008-SA7-SB-3.0.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011	12:54	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11304SLC026	11/11/2011	14:24	Brian K Graham	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11304SLC026	11/01/2011	10:15	Denise L Trimby	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011	10:10	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16B	11/01/2011	20:41	Laura M Krieger	25.77
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130126003	10/28/2011	14:51	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130126003	10/28/2011	14:51	Larry E Bevins	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113060035A	11/09/2011	15:45	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113060035A	11/03/2011	11:00	Olivia Arosemena	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011	19:59	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/04/2011	22:45	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113060014A	11/09/2011	18:42	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011	06:02	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011	19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113060014A	11/02/2011	18:00	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011	18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011	19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113015708002	10/31/2011	02:56	Tara L Snyder	1

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Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453097
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7502 SDG#: DE275-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01662	Potassium	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113015708002	10/31/2011 02:56	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113011026002D	11/03/2011 13:15	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113111026003A	11/09/2011 20:45	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113011026002C	11/03/2011 13:15	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113011026002B	11/03/2011 13:15	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113011026002A	11/03/2011 13:15	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113015711001	10/31/2011 09:17	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113015708002	10/30/2011 09:26	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113011026002	10/30/2011 09:26	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	2	113111026003	11/08/2011 11:44	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113015711001	10/30/2011 12:34	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 13:07	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 20:59	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 15:23	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11312102202A	11/08/2011 19:50	Venia B McFadden	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11312102202A	11/08/2011 16:25	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

Lancaster Laboratories

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Analysis Report

Sample Description: TB-102711 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6453098
LLI Group # 1273654
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 14:30

Submitted: 10/28/2011 09:10
Reported: 11/21/2011 11:18

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7503 SDG#: DE275-03TB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Action Limit	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50		1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11304A20A	11/01/2011 16:11	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11304A20A	11/01/2011 16:11	Marie D John	1

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11304SLB026	Sample number(s): 6453097									
Aniline	170 U		170.	500	ug/kg	65		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	53		15-121		
Benzo(a)pyrene	17	U	17.	170	ug/kg	105		65-124		
Benzo(b)fluoranthene	17	U	17.	170	ug/kg	105		61-127		
Benzo(g,h,i)perylene	17	U	17.	170	ug/kg	96		60-125		
Benzo(k)fluoranthene	17	U	17.	170	ug/kg	109		67-125		
Benzoic acid	170 U		170.	500	ug/kg	72		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	86		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	107		73-114		
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	89		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	45		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	95		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	85		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	85		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	92		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	95		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	100		74-115		
Dibenz(a,h)anthracene	17	U	17.	170	ug/kg	97		61-126		
Dibenzofuran	17	U	17.	170	ug/kg	99		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	88		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	86		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	86		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	55		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	103		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	93		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	104		83-120		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	90		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	77		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	99		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	90		71-125		
Hexachlorobenzene	17	U	17.	170	ug/kg	112		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	99		65-117		
Hexachlorocyclopentadiene	170 U		170.	500	ug/kg	63		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	79		61-109		
Indeno(1,2,3-cd)pyrene	17	U	17.	170	ug/kg	97		64-119		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Isophorone	17	U	17.	170	ug/kg	85		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	96		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	89		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	94		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	88		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	66		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	86		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	90		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	66		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	76		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	106		67-141		
Pentachlorophenol	170	U	170.	500	ug/kg	111		51-117		
Phenol	17	U	17.	170	ug/kg	90		58-112		
Pyrene	17	U	17.	170	ug/kg	99		75-115		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	98		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	99		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	101		78-111		
Batch number: 11304SLC026	Sample number(s): 6453097									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	88		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	88		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	94		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	91		74-120		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	81		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	98		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	95		73-114		
Diethylphthalate	6.0	U	6.0	18	ug/kg	99		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	99		79-121		
Bis(2-Ethylhexyl)phthalate	8.6	J	6.0	18	ug/kg	95		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	100		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	96		71-120		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	83		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	84		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	80		55-118		
Di-n-octylphthalate	22		6.0	18	ug/kg	84		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	92		75-120		
Batch number: 11305WAA026	Sample number(s): 6453096									
N-Nitrosodimethylamine	0.500	U	0.500	1.00	ng/l	93	95	70-130	2	30
Batch number: 11299A16B	Sample number(s): 6453097									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	74	75	67-119	2	30
Batch number: 11304A20A	Sample number(s): 6453096,6453098									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 113040017A	Sample number(s): 6453096									
4-Amino-2,6-Dinitrotoluene	0.30	U	0.30	0.60	ug/l	110	110	80-120	0	30
2-Amino-4,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	80-120	0	30
2,6-Diamino-4-nitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	50-122	0	30
2,4-Diamino-6-nitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	50-122	0	30
1,3-Dinitrobenzene	0.20	U	0.20	0.60	ug/l	110	110	72-117	0	30
2,4-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	98	98	80-120	0	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,6-Dinitrotoluene	0.20	U	0.20	0.60	ug/l	110	110	80-120	0	30
HMX	0.65	U	0.65	2.0	ug/l	99	100	65-125	1	30
Nitrobenzene	0.20	U	0.20	0.60	ug/l	89	93	75-121	4	30
Nitroglycerin	5.2	U	5.2	15	ug/l	100	100	80-120	0	30
2-Nitrotoluene	0.20	U	0.20	0.60	ug/l	97	96	74-120	1	30
3-Nitrotoluene	0.40	U	0.40	1.2	ug/l	100	100	69-107	0	30
4-Nitrotoluene	0.60	U	0.60	1.2	ug/l	95	94	80-120	1	30
PETN	6.0	U	6.0	18	ug/l	104	104	80-120	0	30
RDX	0.20	U	0.20	0.60	ug/l	97	96	70-125	1	30
Tetryl	0.40	U	0.40	0.60	ug/l	89	78	31-148	13	30
1,3,5-Trinitrobenzene	0.20	U	0.20	0.60	ug/l	100	91	53-129	9	30
2,4,6-Trinitrotoluene	0.20	U	0.20	0.60	ug/l	100	100	76-109	0	30
Batch number: 113000025A	Sample number(s): 6453096									
20b Formaldehyde 8315A	10	U	10.	50	ug/l	98	100	69-130	2	30
Batch number: 113060035A	Sample number(s): 6453097									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	101	115*	36-106	12	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	149*		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	184*		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 113040032A	Sample number(s): 6453096									
Diethylene glycol	20	U	20.	200	mg/l	105	115	67-126	9	20
Ethylene glycol	20	U	20.	200	mg/l	85	110	78-136	26*	20
Propylene glycol	20	U	20.	200	mg/l	80	110	65-132	32*	20
Batch number: 113040033A	Sample number(s): 6453097									
Ethanol	100 U		100.	500	ug/kg	93		71-129		
Isopropanol	100 U		100.	500	ug/kg	90		75-125		
Methanol	100 U		100.	500	ug/kg	106		68-129		
Batch number: 113070034A	Sample number(s): 6453096									
Ethanol	200 U		200.	1,000	ug/l	100		78-116		
Isopropanol	200 U		200.	1,000	ug/l	100		75-125		
Methanol	200 U		200.	1,000	ug/l	116		76-122		
Batch number: 113080023A	Sample number(s): 6453097									
Diethylene glycol	5.0	U	5.0	10	mg/kg	99		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	103		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	96		67-131		
Batch number: 113040007A	Sample number(s): 6453096									
EFH (C12-C14)	0.10	U	0.10	0.60	mg/l	106	108	63-121	2	30

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
EFH (C15-C20)	0.10	U	0.10	0.60	mg/l	105	105	72-124	0	30
EFH (C21-C30)	0.10	U	0.10	0.60	mg/l	100	100	64-123	0	30
EFH (C30 - C40)	0.10	U	0.10	0.60	mg/l	93	93	73-124	0	30
EFH (C8-C11)	0.10	U	0.10	0.60	mg/l	140*	142*	43-107	1	30
Batch number: 113040009A	Sample number(s): 6453096									
m-Terphenyl	0.080	U	0.080	0.25	mg/l	90	98	61-108	9	20
o-Terphenyl	0.080	U	0.080	0.25	mg/l	90	98	75-125	9	20
p-Terphenyl	0.080	U	0.080	0.25	mg/l	90	98	63-110	8	20
Batch number: 113060014A	Sample number(s): 6453097									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	105		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	107		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	107		69-109		
Batch number: 113070014A	Sample number(s): 6453097									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	123		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	112		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	117		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	91		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	142*		49-107		
Batch number: 113011026002A	Sample number(s): 6453097									
Antimony	0.0718	U	0.0718	0.194	mg/kg	76		40-227		
Arsenic	0.0777	U	0.0777	0.388	mg/kg	95		83-111		
Beryllium	0.0155	U	0.0155	0.0971	mg/kg	97		84-112		
Cadmium	0.0427	U	0.0427	0.0971	mg/kg	94		83-111		
Chromium	0.386	J	0.117	0.388	mg/kg	106		77-123		
Cobalt	0.0194	U	0.0194	0.0971	mg/kg	95		85-114		
Lead	0.0102	J	0.0099	0.194	mg/kg	94		84-112		
Nickel	0.277	J	0.0971	0.388	mg/kg	94		81-110		
Silver	0.0138	U	0.0138	0.0971	mg/kg	97		83-112		
Thallium	0.0291	U	0.0291	0.0971	mg/kg	93		82-112		
Vanadium	0.0491	J	0.0214	0.0971	mg/kg	99		76-110		
Zinc	0.605	J	0.544	2.91	mg/kg	95		82-110		
Batch number: 113011026002B	Sample number(s): 6453097									
Selenium	0.0563	U	0.0563	0.388	mg/kg	95		79-110		
Batch number: 113011026002C	Sample number(s): 6453097									
Molybdenum	0.0485	U	0.0485	0.0971	mg/kg	100		80-110		
Batch number: 113011026002D	Sample number(s): 6453097									
Barium	0.103	U	0.103	0.388	mg/kg	101		83-110		
Batch number: 113015708002	Sample number(s): 6453097									
Aluminum	5.99	U	5.99	19.8	mg/kg	90		40-127		
Boron	0.356	U	0.356	4.95	mg/kg	102		83-110		
Calcium	4.94	J	2.48	19.8	mg/kg	102		81-110		
Iron	2.58	U	2.58	19.8	mg/kg	83		47-129		
Lithium	0.61	U	0.61	2.0	mg/kg	99		80-120		
Magnesium	0.996	J	0.436	9.90	mg/kg	91		63-116		
Manganese	0.102	J	0.0356	0.495	mg/kg	99		85-116		
Phosphorus	1.17	J	0.347	9.90	mg/kg	104		80-120		
Potassium	11.2	U	11.2	49.5	mg/kg	101		71-110		
Sodium	5.89	U	5.89	99.0	mg/kg	101		76-110		
Strontium	0.0248	U	0.0248	0.495	mg/kg	102		84-110		
Tin	1.27	J	0.317	9.90	mg/kg	96		86-120		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
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Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Titanium	0.0703	U	0.0703	0.990	mg/kg	97		80-120		
Zirconium	0.455	U	0.455	4.95	mg/kg	101		80-120		
Batch number: 113015711001	Sample number(s): 6453097									
Mercury	0.0069	U	0.0069	0.0984	mg/kg	115		83-119		
Batch number: 113111026003A	Sample number(s): 6453097									
Copper	0.0784	U	0.0784	0.392	mg/kg	103		81-110		
Batch number: 11301196601C	Sample number(s): 6453096									
11b Anions by 300.0 - Nitrate	0.050	U	0.050	0.10	mg/l	103	103	90-110	0	20
Batch number: 11308621201A	Sample number(s): 6453097									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	104		85-115		
Batch number: 11311117101A	Sample number(s): 6453096									
16b Cyanide by 9012B	0.0050	U	0.0050	0.010	mg/l	99	99	90-110	0	20
Batch number: 11312102202A	Sample number(s): 6453097									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	105		80-120		
Batch number: 11312243201A	Sample number(s): 6453097									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11312621202A	Sample number(s): 6453097									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11311039401A	Sample number(s): 6453097									
17a pH by 9045C						100		95-105		
Batch number: 11311162401A	Sample number(s): 6453097									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11304SLB026	Sample number(s): 6453097 UNSPK: P451564								
Aniline	52	61	18-116	17	30				
Benzidine	0*	0*	35-141	0	30				
Benzo(a)pyrene	104	103	57-126	1	30				
Benzo(b)fluoranthene	104	104	59-125	0	30				
Benzo(g,h,i)perylene	99	99	59-127	1	30				
Benzo(k)fluoranthene	111	107	56-132	2	30				
Benzoic acid	60	58	10-173	2	30				
Benzyl alcohol	80	82	67-115	3	30				
4-Bromophenyl-phenylether	108	106	67-129	1	30				
Carbazole	103	101	64-120	1	30				
4-Chloro-3-methylphenol	85	84	62-122	0	30				
4-Chloroaniline	42	61	13-107	37*	30				
bis(2-Chloroethoxy)methane	90	90	75-104	1	30				

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Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
bis(2-Chloroethyl)ether	83	81	60-116	1	30				
bis(2-Chloroisopropyl)ether	80	80	55-142	1	30				
2-Chloronaphthalene	94	84	50-141	10	30				
2-Chlorophenol	90	92	73-121	3	30				
4-Chlorophenyl-phenylether	100	100	80-109	1	30				
Dibenz(a,h)anthracene	100	99	65-125	0	30				
Dibenzofuran	98	99	71-112	1	30				
1,2-Dichlorobenzene	85	83	66-108	2	30				
1,3-Dichlorobenzene	82	81	63-109	1	30				
1,4-Dichlorobenzene	81	80	58-108	1	30				
3,3'-Dichlorobenzidine	44	55	28-109	24	30				
2,4-Dichlorophenol	98	101	66-123	4	30				
2,4-Dimethylphenol	86	87	68-118	2	30				
3,5-Dimethylphenol	98	101	71-127	4	30				
4,6-Dinitro-2-methylphenol	83	85	11-126	3	30				
2,4-Dinitrophenol	57	58	20-143	2	30				
2,4-Dinitrotoluene	94	96	56-129	2	30				
2,6-Dinitrotoluene	99	100	69-123	1	30				
1,2-Diphenylhydrazine	91	89	71-129	1	30				
Hexachlorobenzene	114	111	77-114	2	30				
Hexachlorobutadiene	95	94	62-120	1	30				
Hexachlorocyclopentadiene	104	101	10-153	2	30				
Hexachloroethane	76	74	57-109	2	30				
Indeno(1,2,3-cd)pyrene	100	100	61-126	0	30				
Isophorone	80	81	73-102	2	30				
2-Methylphenol	87	90	75-111	3	30				
4-Methylphenol	81	83	59-123	3	30				
2-Nitroaniline	95	95	67-125	1	30				
3-Nitroaniline	89	91	59-122	3	30				
4-Nitroaniline	75	76	41-109	1	30				
Nitrobenzene	82	83	57-125	1	30				
2-Nitrophenol	85	90	56-127	6	30				
4-Nitrophenol	69	70	37-129	2	30				
N-Nitroso-di-n-propylamine	70	70	60-116	0	30				
N-Nitrosodiphenylamine	104	102	71-122	2	30				
Pentachlorophenol	114	112	28-127	1	30				
Phenol	83	85	58-126	2	30				
Pyrene	100	99	74-126	0	30				
1,2,4-Trichlorobenzene	97	95	72-115	1	30				
2,4,5-Trichlorophenol	101	102	58-129	2	30				
2,4,6-Trichlorophenol	103	103	56-134	1	30				
Batch number: 11304SLC026	Sample number(s): 6453097 UNSPK: P451564								
Acenaphthene	92	90	63-105	3	30				
Acenaphthylene	90	91	67-114	1	30				
Anthracene	94	96	73-115	1	30				
Benzo(a)anthracene	97	96	59-128	1	30				
Butylbenzylphthalate	87	87	57-173	0	30				
Di-n-butylphthalate	98	102	65-148	4	30				
Chrysene	95	95	67-123	0	30				
Diethylphthalate	94	123	70-136	26	30				
Dimethylphthalate	100	100	74-118	1	30				
Bis(2-Ethylhexyl)phthalate	98	144	39-167	33*	30				

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Fluoranthene	105	109	51-149	3	30				
Fluorene	95	95	66-122	0	30				
1-Methylnaphthalene	83	86	72-123	3	30				
2-Methylnaphthalene	83	86	64-103	4	30				
Naphthalene	86	92	61-102	6	30				
N-Nitrosodimethylamine	85	90	48-113	4	30				
Di-n-octylphthalate	90	92	40-192	2	30				
Phenanthrene	92	92	62-122	0	30				
Batch number: 113060035A	Sample number(s): 6453097 UNSPK: 6453097								
PCB-1016	120	92	29-146	26	50				
PCB-1260	119	96	39-149	19	50				
Batch number: 113040033A	Sample number(s): 6453097 UNSPK: P451568								
Ethanol	88	87	48-130	0	20				
Isopropanol	86	87	12-149	1	20				
Methanol	107	103	43-138	5	20				
Batch number: 113070034A	Sample number(s): 6453096 UNSPK: 6453096								
Ethanol	104	104	62-145	0	20				
Isopropanol	100	100	73-131	0	20				
Methanol	116	116	52-159	0	20				
Batch number: 113080023A	Sample number(s): 6453097 UNSPK: P454453								
Diethylene glycol	3*	4*	59-109	4	20				
Ethylene glycol	39*	39*	63-107	0	20				
Propylene glycol	56*	56*	63-107	1	20				
Batch number: 113060014A	Sample number(s): 6453097 UNSPK: P451568								
m-Terphenyl	107	105	75-125	2	20				
o-Terphenyl	109	106	75-125	2	20				
p-Terphenyl	109	106	75-125	2	20				
Batch number: 113070014A	Sample number(s): 6453097 UNSPK: P451568								
EFH (C12-C14)	89	88	49-123	1	20				
EFH (C15-C20)	104	101	49-123	2	20				
EFH (C21-C30)	133*	112	49-123	8	20				
EFH (C30 - C40)	-54*	-67*	49-123	5	20				
EFH (C8-C11)	74	71	49-123	3	20				
Batch number: 113011026002A	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Antimony	36*	43*	75-125	17	20	0.0744 J	0.684	161* (1)	20
Arsenic	96	61*	75-125	10	20	4.97	4.19	17	20
Beryllium	93	91	75-125	1	20	0.634	0.410	43* (1)	20
Cadmium	114	107	75-125	5	20	0.127	0.100	24* (1)	20
Chromium	95	83	75-125	4	20	16.5	11.3	37*	20
Cobalt	114	104	75-125	8	20	5.22	3.80	31*	20
Lead	70 (2)	112 (2)	75-125	7	20	14.6	103	150*	20
Nickel	102	92	75-125	4	20	9.98	6.95	36*	20
Silver	119	109	75-125	7	20	0.0618 J	0.0159 J	118* (1)	20
Thallium	97	83	75-125	7	20	0.362	0.235	42* (1)	20
Vanadium	86	67*	75-125	5	20	29.5	22.5	27*	20
Zinc	-42 (2)	-49 (2)	75-125	1	20	92.0	70.1	27*	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 113011026002B	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Selenium	111	100	75-125	9	20	0.0811 J	0.0693 J	16 (1)	20
Batch number: 113011026002C	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Molybdenum	119	109	75-125	8	20	0.405	0.261	43* (1)	20
Batch number: 113011026002D	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Barium	-26 (2)	16 (2)	75-125	4	20	99.8	76.5	26*	20
Batch number: 113015708002	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Aluminum	815 (2)	1050 (2)	75-125	4	20	10,100	10,100	1	20
Boron	99	97	84-115	0	20	3.11 J	2.71 J	14 (1)	20
Calcium	44 (2)	45 (2)	75-125	0	20	2,670	2,430	9	20
Iron	-2936 (2)	-2307 (2)	75-125	4	20	19,000	16,200	16	20
Lithium	101	99	82-114	0	20	22.6	23.3	3	20
Magnesium	153 (2)	226 (2)	75-125	4	20	3,310	3,370	2	20
Manganese	88 (2)	126 (2)	75-125	6	20	247	236	5	20
Phosphorus	69*	84	75-125	4	20	337	311	8	20
Potassium	128*	131*	75-125	1	20	2,930	3,050	4	20
Sodium	98	97	75-125	0	20	69.7 J	70.2 J	1 (1)	20
Strontium	100	98	75-115	0	20	9.77	9.54	2	20
Tin	93	91	80-110	1	20	2.43 J	2.43 J	0 (1)	20
Titanium	184 (2)	261 (2)	75-125	7	20	935	984	5	20
Zirconium	100	98	81-110	1	20	0.580 J	1.47 J	87* (1)	20
Batch number: 113015711001	Sample number(s): 6453097 UNSPK: 6453097 BKG: 6453097								
Mercury	100	100	65-135	5	20	0.0069 U	0.0069 U	0 (1)	20
Batch number: 113111026003A	Sample number(s): 6453097 UNSPK: P461455 BKG: P461455								
Copper	113	137*	75-125	11	20	7.51	6.37	16	20
Batch number: 11308621201A	Sample number(s): 6453097 UNSPK: P451564 BKG: P451564								
7a Perchlorate EPA 314.0	113		80-120			9.0 U	9.0 U	0 (1)	15
Batch number: 11312102202A	Sample number(s): 6453097 UNSPK: P451568 BKG: P451568								
16a Cyanide by 9012B	106		75-125			0.18 U	0.18 U	0 (1)	20
Batch number: 11312243201A	Sample number(s): 6453097 UNSPK: P451564 BKG: P451564								
3a Cr VI by EPA 7199	98		75-125			0.43 J	0.47 J	10 (1)	20
Batch number: 11312621202A	Sample number(s): 6453097 UNSPK: P451564 BKG: P451564								
11a Anions by 300.0 - Fluoride	73*		80-120			0.80 U	0.80 U	0 (1)	20
Batch number: 11311039401A	Sample number(s): 6453097 BKG: P451564								
17a pH by 9045C						6.66	6.67	0	3
Batch number: 11311162401A	Sample number(s): 6453097 BKG: P451565								
Moisture Content by 160.3						8.7	9.3	7	20

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11304SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6453097	90	99	107	76	97	113
Blank	81	92	104	77	99	117
LCS	92	100	111	80	101	115
MS	85	95	112	78	101	116
MSD	87	95	112	78	102	117
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11304SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6453097	90	84	67
Blank	87	83	88
LCS	87	83	78
MS	89	87	73
MSD	91	86	67
Limits:	40-130	45-130	45-135

Analysis Name: 21b. NDMA in Water
Batch number: 11305WAA026

	N-Nitrosodimethylamine-d6
6453096	131
Blank	119
LCS	120
LCSD	118
Limits:	50-150

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11299A16B

	Trifluorotoluene-F
6453097	84
Blank	96
LCS	89
LCSD	93
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11304A20A

	Trifluorotoluene-F
6453096	89
6453098	89

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Surrogate Quality Control

Blank	88
LCS	114
LCSD	112
Limits:	63-135

Analysis Name: 20b Formaldehyde 8315A
Batch number: 113000025A

	Butyraldehyde
6453096	89
Blank	90
LCS	90
LCSD	87
Limits:	45-145

Analysis Name: 15b Energetics by 8330A
Batch number: 113040017A

	2-Nitro-m-xylene
6453096	89
Blank	93
LCS	92
LCSD	92
Limits:	50-134

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113060035A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6453097	112	120
Blank	120	117
LCS	179*	186*
LCSD	164*	163*
MS	143*	133*
MSD	116	108
Limits:	53-139	45-120

Analysis Name: 9b TPH by EPA 8015B Oil/Diesel
Batch number: 113040007A

	Chlorobenzene	Orthoterphenyl
6453096	107	85
Blank	89	80
LCS	89	95
LCSD	94	96
Limits:	28-152	52-131

Analysis Name: 22b Terphenyls by 8015B
Batch number: 113040009A

	n-Triacontane-d62
6453096	70

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Surrogate Quality Control

Blank 59
LCS 67
LCSD 72

Limits: 17-138

Analysis Name: 19b Glycols by 8015B
Batch number: 113040032A

	Tetramethylene glycol
6453096	104
Blank	107
LCS	105
LCSD	112

Limits: 29-157

Analysis Name: 18a Alcohols by 8015B
Batch number: 113040033A

	Acetone
6453097	90
Blank	93
LCS	92
MS	89
MSD	89

Limits: 42-138

Analysis Name: 22a Terphenyls by 8015B
Batch number: 113060014A

	n-Triacontane-d62
6453097	80
Blank	78
LCS	93
MS	84
MSD	80

Limits: 19-152

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113070014A

	Chlorobenzene	Orthoterphenyl
6453097	104	94
Blank	93	81
LCS	90	98
MS	91	93
MSD	90	90

Limits: 37-125 47-145

Analysis Name: 18b Alcohols by 8015B
Batch number: 113070034A

	Acetone

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273654
Reported: 11/21/11 at 11:18 AM

Surrogate Quality Control

6453096	93
Blank	94
LCS	100
MS	102
MSD	104
Limits:	54-147

Analysis Name: 19a Glycols by 8015B
Batch number: 113080023A
Tetramethylene glycol

6453097	89
Blank	99
LCS	99
MS	88
MSD	87
Limits:	29-137

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct#13013 Cp#12736054 sample#6453096-98

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/6/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	Other Instructions and Notes
EB-SA7-SB-102711	10/27/11	1400	WATER	NONE	5-1 liter ambers										X			X	X		X			
EB-SA7-SB-102711	10/27/11	1400	WATER	NaOH	1-500 mL poly															X				
EB-SA7-SB-102711	10/27/11	1400	WATER	None	4-40 mL vials											X						X		
EB-SA7-SB-102711	10/27/11	1400	WATER	HCl	5-40 mL vials									X									X	
EB-SA7-SB-102711	10/27/11	1400	WATER	None	2-120 mL ambers												X							
SL-008-SA7-SB-3.0	10/27/11	1200	SOIL	NONE	2 Encores									X										
SL-008-SA7-SB-2.5-3.0	10/27/11	1155	SOIL	NONE	3-16 oz Jar	X	X	X	X	X	X	X	X		X					X	X	X	X	Was not able to collect sleeve
TB-102711	10/27/11	1430	WATER	HCl	2-40 mL vials									X										

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	10/27/2011 / 1630	10/28/11 ~~10/29/11~~ 0910 (3) GL 10/28/11	Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8754 3341 0807	

Tamara J. Heisel

From: Bloisa, Peggy [BloisaMJ@cdm.com]
Sent: Thursday, October 27, 2011 7:43 PM
To: Nicole Maljovec; SA Env Entry
Subject: COC for 10/27/11
Attachments: COC_10_27_11.xlsx

Nicole – Please disregard the COC that is in the cooler you will receive tomorrow. Use the attached one in its place.

Also, for the rinsate blank bottles, use whatever time is on the bottle labels, I'm not sure I remembered the sample time correctly.

Thanks! Peggy

Peggy Bloisa, P.G.
CDM
|100 Pringle Avenue Suite 300| Walnut Creek, CA 94596|
|Phone and Fax: (925) 296-8053|

Please consider the environment before printing this email.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 08, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/28/2011
Group Number: 1273655
SDG: DX152
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-008-SA7-SB-2.5-3.0 Soil	6453099

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453099
LLI Group # 1273655
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/08/2011 08:33

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5218 SDG#: DX152-18*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	2.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453099
LLI Group # 1273655
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/08/2011 08:33

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5218 SDG#: DX152-18*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0517	J	0.0348	1.01	1
11031	12378-PeCDD	40321-76-4	0.159	JB	0.0402	5.03	1
11031	123478-HxCDD	39227-28-6	0.199	J	0.0380	5.03	1
11031	123678-HxCDD	57653-85-7	0.583	J	0.0382	5.03	1
11031	123789-HxCDD	19408-74-3	0.515	J	0.0373	5.03	1
11031	1234678-HpCDD	35822-46-9	13.5	B	0.0605	5.03	1
11031	OCDD	3268-87-9	130	B	0.0609	10.1	1
11031	2378-TCDF	51207-31-9	0.0788	JB	0.0538	1.01	1
11031	12378-PeCDF	57117-41-6	0.644	JB	0.0297	5.03	1
11031	23478-PeCDF	57117-31-4	0.375	JB	0.0308	5.03	1
11031	123478-HxCDF	70648-26-9	0.550	JB	0.0308	5.03	1
11031	123678-HxCDF	57117-44-9	0.254	JB	0.0271	5.03	1
11031	123789-HxCDF	72918-21-9	0.102	JBQ	0.0328	5.03	1
11031	234678-HxCDF	60851-34-5	0.268	JB	0.0272	5.03	1
11031	1234678-HpCDF	67562-39-4	2.76	JB	0.0173	5.03	1
11031	1234789-HpCDF	55673-89-7	0.180	JBQ	0.0308	5.03	1
11031	OCDF	39001-02-0	4.39	JB	0.0450	10.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	70	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	75	32 - 141
13C12-123678-HxCDD	77	28 - 130
13C12-123789-HxCDD	76	28 - 130
13C12-1234678-HpCDD	76	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	79	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	66	26 - 152
13C12-123678-HxCDF	74	26 - 123
13C12-234678-HxCDF	71	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	88	28 - 143
13C12-1234789-HpCDF	61	26 - 138
13C12-OCDF	59	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453099
LLI Group # 1273655
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/08/2011 08:33

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5218 SDG#: DX152-18*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-008-SA7-SB-2.5-3.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-008-SA7-SB

LLI Sample # SW 6453099
LLI Group # 1273655
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 11:55

Submitted: 10/28/2011 09:10
Reported: 11/08/2011 08:33

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5218 SDG#: DX152-18*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11304002	11/02/2011 01:34	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11304002	10/31/2011 13:40	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273655
Reported: 11/08/11 at 08:33 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11311162401A	Sample number(s): 6453099								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11304002	Sample number(s): 6453099								
2378-TCDD	0.0455 U	0.0455	1.00	ng/kg	112		67-158		
12378-PeCDD	0.0516 J	0.0421	5.00	ng/kg	111		70-142		
123478-HxCDD	0.0278 U	0.0278	5.00	ng/kg	103		70-164		
123678-HxCDD	0.0273 U	0.0273	5.00	ng/kg	99		76-134		
123789-HxCDD	0.0276 U	0.0276	5.00	ng/kg	108		64-162		
1234678-HpCDD	0.271 J	0.0288	5.00	ng/kg	104		70-140		
OCDD	0.375 J	0.0359	10.0	ng/kg	101		78-144		
2378-TCDF	0.0447 J	0.0380	1.00	ng/kg	104		75-158		
12378-PeCDF	0.0384 J	0.0198	5.00	ng/kg	107		80-134		
23478-PeCDF	0.0625 J	0.0202	5.00	ng/kg	100		68-160		
123478-HxCDF	0.0789 J	0.0220	5.00	ng/kg	104		72-134		
123678-HxCDF	0.0382 J	0.0176	5.00	ng/kg	102		84-130		
123789-HxCDF	0.0432 J	0.0235	5.00	ng/kg	104		78-130		
234678-HxCDF	0.0442 J	0.0194	5.00	ng/kg	101		70-156		
1234678-HpCDF	0.160 J	0.0113	5.00	ng/kg	95		82-122		
1234789-HpCDF	0.0480 J	0.0232	5.00	ng/kg	99		78-138		
OCDF	0.208 J	0.0566	10.0	ng/kg	102		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11311162401A	Sample number(s): 6453099			BKG: P451565					
Moisture Content by 160.3						8.7	9.3	7	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273655
Reported: 11/08/11 at 08:33 AM

Surrogate Quality Control

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11304002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6453099	70	70	66	74	71	67
Blank	72	75	69	82	74	72
OPR	69	72	68	78	73	72
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6453099	88	61	59	72	75	77
Blank	107	66	63	80	82	86
OPR	101	67	64	75	82	82
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6453099	76	76	76	72	79
Blank	84	88	86	70	83
OPR	83	87	84	68	79
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Cap#1273655 sample# 6453099

CHAIN OF CUSTODY RECORD

CDM	SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subares 6 (SA6) & Subares 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	Other Instructions and Notes
EB-SA7-SB-102711	10/27/11	1400	WATER	NONE	5-1 liter ambers										X			X	X		X			
EB-SA7-SB-102711	10/27/11	1400	WATER	NaOH	1-500 mL poly															X				
EB-SA7-SB-102711	10/27/11	1400	WATER	None	4-40 mL vials											X						X		
EB-SA7-SB-102711	10/27/11	1400	WATER	HCl	5-40 mL vials									X									X	
EB-SA7-SB-102711	10/27/11	1400	WATER	None	2-120 mL ambers												X							
SL-008-SA7-SB-3.0	10/27/11	1200	SOIL	NONE	2 Encores									X										
SL-008-SA7-SB-2.5-3.0	10/27/11	1155	SOIL	NONE	3-16 oz Jar	X	X	X	X	X	X	X	X		X					X	X	X	X	Was not able to collect sleeve
TB-102711	10/27/11	1430	WATER	HCl	2-40 mL vials									X										

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/27/2011 / 1630	10/28/11 10/29/11 0910	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	AirBill No.(s)	
		8754 3341 0807	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 29, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/29/2011
Group Number: 1273859
SDG: DE276
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-091-SA7-SB-2.5-3.5 Soil	6454453
SL-116-SA7-SB-0.0-0.5 Soil	6454454
SL-117-SA7-SB-2.5-3.5 Soil	6454455
SL-118-SA7-SB-4.0-5.0 Soil	6454456
SL-119-SA7-SB-4.0-5.0 Soil	6454457
TB-102811 Water	6454458

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	510	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,400	1
04688	Benzoic acid	65-85-0	170	U	170	510	1
04688	Benzyl alcohol	100-51-6	170	U	170	510	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	34	U	34	170	1
04688	4-Chloroaniline	106-47-8	68	U	68	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	34	U	34	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	340	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	34	U	34	170	1
04688	3,5-Dimethylphenol	108-68-9	34	U	34	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	510	1
04688	2,4-Dinitrophenol	51-28-5	340	U	340	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	34	U	34	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	68	U	68	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	510	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	34	U	34	170	1
04688	4-Methylphenol	106-44-5	34	U	34	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	34	U	34	170	1
04688	4-Nitroaniline	100-01-6	68	U	68	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	510	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	510	1
04688	Phenol	108-95-2	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	34	U	34	170	1
04688	2,4,6-Trichlorophenol	88-06-2	34	U	34	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.68	U	0.68	1.7	1
10138	Acenaphthylene	208-96-8	0.34	U	0.34	1.7	1
10138	Anthracene	120-12-7	1.6	J	0.34	1.7	1
10138	Benzo(a)anthracene	56-55-3	7.2		0.68	1.7	1
10138	Benzo(a)pyrene	50-32-8	9.2		0.68	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	25		0.68	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	4.5		0.68	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.68	U	0.68	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.2	U	6.2	18	1
10138	Di-n-butylphthalate	84-74-2	11	J	6.2	18	1
10138	Chrysene	218-01-9	12		0.34	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	2.0		0.68	1.7	1
10138	Diethylphthalate	84-66-2	6.2	U	6.2	18	1
10138	Dimethylphthalate	131-11-3	6.2	U	6.2	18	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	47		6.2	18	1
10138	Fluoranthene	206-44-0	24		0.68	1.7	1
10138	Fluorene	86-73-7	0.68	U	0.68	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	4.1		0.68	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.68	U	0.68	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.68	U	0.68	1.7	1
10138	Naphthalene	91-20-3	0.73	J	0.68	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.68	U	0.68	1.7	1
10138	Di-n-octylphthalate	117-84-0	10	J	6.2	18	1
10138	Phenanthrene	85-01-8	7.5		0.68	1.7	1
10138	Pyrene	129-00-0	19		0.68	1.7	1

The GC/MS semivolatile internal standard peak areas are outside of QC limits. The matrix spike sample was analyzed and internal standard peak areas are again outside of QC limits, indicating a matrix effect.

Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of 61 ug/kg. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and bis(2-ethylhexyl)phthalate was not detected in the sample. Comparable data was not observed between the two extractions. The data reported here is from the initial extraction of the sample.

GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	25.2

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.7	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.7	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.7	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.7	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.7	1
10225	PCB-1254	11097-69-1	0.66	J	0.34	1.7	1
10225	PCB-1260	11096-82-5	15		0.40	1.7	1
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.7	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.7	1
	The sample was injected numerous times. Each time the responses for various analytes in the calibration check standard injected after the sample were outside the acceptance criteria. Therefore, this effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	510	1
10501	Isopropanol	67-63-0	100	U	100	510	1
10501	Methanol	67-56-1	100	U	100	510	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.1	U	5.1	10	1
08283	Ethylene glycol	107-21-1	5.1	U	5.1	10	1
08283	Propylene glycol	57-55-6	5.1	U	5.1	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.5	U	1.5	3.6	1
10318	o-Terphenyl	84-15-1	1.5	U	1.5	3.6	1
10318	p-Terphenyl	92-94-4	1.5	U	1.5	3.6	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.41	U	0.41	1.2	1
10199	EFH (C15-C20)	n.a.	1.2	J	0.41	1.2	1
10199	EFH (C21-C30)	n.a.	15		0.41	1.2	1
10199	EFH (C30 - C40)	n.a.	38		0.41	1.2	1
10199	EFH (C8-C11)	n.a.	0.41	U	0.41	1.2	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	10,800		5.91	19.5	1
07914	Boron	7440-42-8	6.67		0.352	4.88	1
01650	Calcium	7440-70-2	2,840		2.44	19.5	1
01654	Iron	7439-89-6	17,700		2.55	19.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01656	Lithium	7439-93-2	24.6		0.61	2.0	1
01657	Magnesium	7439-95-4	3,810		0.430	9.77	1
06958	Manganese	7439-96-5	271		0.0352	0.488	1
10145	Phosphorus	7723-14-0	342		0.342	9.77	1
01662	Potassium	7440-09-7	2,970		11.0	48.8	1
01667	Sodium	7440-23-5	98.8		5.81	97.7	1
07968	Strontium	7440-24-6	11.9		0.0244	0.488	1
06969	Tin	7440-31-5	2.49	J	0.313	9.77	1
06970	Titanium	7440-32-6	952		0.0694	0.977	1
10146	Zirconium	7440-67-7	2.47	J	0.449	4.88	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0730	U	0.0730	0.197	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.48		0.0789	0.394	2
06126	Barium	7440-39-3	99.6		0.105	0.394	2
06127	Beryllium	7440-41-7	0.436		0.0158	0.0986	2
06128	Cadmium	7440-43-9	0.123		0.0434	0.0986	2
06131	Chromium	7440-47-3	15.2		0.118	0.394	2
06132	Cobalt	7440-48-4	5.85		0.0197	0.0986	2
06133	Copper	7440-50-8	6.85		0.0789	0.394	2
06135	Lead	7439-92-1	8.10		0.0101	0.197	2
06138	Molybdenum	7439-98-7	0.357		0.0493	0.0986	2
06139	Nickel	7440-02-0	9.84		0.0986	0.394	2
06141	Selenium	7782-49-2	0.0722	J	0.0572	0.394	2
06142	Silver	7440-22-4	0.0286	J	0.0140	0.0986	2
06145	Thallium	7440-28-0	0.303		0.0296	0.0986	2
06148	Vanadium	7440-62-2	29.2		0.0217	0.0986	2
06149	Zinc	7440-66-6	84.6		0.552	2.96	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0072	U	0.0072	0.102	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	0.83	U	0.83	1.0	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.2	U	9.2	30.8	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.26	J	0.20	1.0	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18	U	0.18	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.17	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	2.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-091-SA7-SB-3.0.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 13:19	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11305SLD026	11/17/2011 00:20	Dale R Stoneroad	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11305SLD026	11/01/2011 19:00	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16B	11/01/2011 21:19	Laura M Krieger	25.2
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130226015	10/29/2011 14:08	Stephanie A Sanchez	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130226015	10/29/2011 14:08	Stephanie A Sanchez	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113060035A	11/09/2011 16:42	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113060035A	11/03/2011 11:00	Olivia Arosemena	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011 20:16	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/04/2011 22:57	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113120010A	11/10/2011 03:14	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011 08:01	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113120010A	11/08/2011 18:45	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01643	Aluminum	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113045708008	11/02/2011 07:19	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113041026004D	11/03/2011 00:13	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113041026004A	11/06/2011 12:47	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113041026004C	11/03/2011 00:13	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113041026004B	11/03/2011 00:13	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113041026004A	11/03/2011 00:13	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113045711007	11/02/2011 09:40	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113045708008	11/01/2011 11:48	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113041026004	11/01/2011 10:56	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113045711007	11/01/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 13:22	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 21:20	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 15:36	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11312102202A	11/08/2011 19:51	Venia B McFadden	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11312102202A	11/08/2011 16:25	Carolyn M Mastropietro	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-091-SA7-SB-2.5-3.5 Soil**
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454453
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7601 SDG#: DE276-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Butylbenzylphthalate	85-68-7	17	U	17	170	1
04688	Di-n-butylphthalate	84-74-2	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170	1
04688	4-Chloroaniline	106-47-8	70	U	70	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	Diethylphthalate	84-66-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170	1
04688	Dimethylphthalate	131-11-3	17	U	17	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	18	J	17	350	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	70	U	70	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	35	U	35	170	1
04688	4-Methylphenol	106-44-5	35	U	35	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	35	U	35	170	1
04688	4-Nitroaniline	100-01-6	70	U	70	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Di-n-octylphthalate	117-84-0	17	U	17	170	1
04688	Pentachlorophenol	87-86-5	170	U	170	520	1
04688	Phenol	108-95-2	17	U	17	170	1
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	3.5	U	3.5	8.7	5
10138	Acenaphthylene	208-96-8	1.7	U	1.7	8.7	5
10138	Anthracene	120-12-7	1.7	U	1.7	8.7	5
10138	Benzo(a)anthracene	56-55-3	3.5	U	3.5	8.7	5
10138	Benzo(a)pyrene	50-32-8	3.5	U	3.5	8.7	5
10138	Benzo(b)fluoranthene	205-99-2	6.4	J	3.5	8.7	5
10138	Benzo(g,h,i)perylene	191-24-2	6.2	J	3.5	8.7	5
10138	Benzo(k)fluoranthene	207-08-9	3.5	U	3.5	8.7	5
10138	Chrysene	218-01-9	9.7		1.7	8.7	5
10138	Dibenz(a,h)anthracene	53-70-3	3.5	U	3.5	8.7	5
10138	Fluoranthene	206-44-0	3.5	U	3.5	8.7	5
10138	Fluorene	86-73-7	3.5	U	3.5	8.7	5
10138	Indeno(1,2,3-cd)pyrene	193-39-5	3.5	U	3.5	8.7	5
10138	1-Methylnaphthalene	90-12-0	3.5	U	3.5	8.7	5
10138	2-Methylnaphthalene	91-57-6	3.5	U	3.5	8.7	5
10138	Naphthalene	91-20-3	3.5	U	3.5	8.7	5
10138	N-Nitrosodimethylamine	62-75-9	3.5	U	3.5	8.7	5
10138	Phenanthrene	85-01-8	3.5	U	3.5	8.7	5
10138	Pyrene	129-00-0	3.5	U	3.5	8.7	5
	Reporting limits were raised due to interference from the sample matrix.						
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.5	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.5	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	2.6		0.35	1.8	1
10225	PCB-1260	11096-82-5	1.2	J	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520	1
10501	Isopropanol	67-63-0	100	U	100	520	1
10501	Methanol	67-56-1	100	U	100	520	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10	1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10	1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	8.4	U	8.4	25	20
10199	EFH (C15-C20)	n.a.	13	J	8.4	25	20
10199	EFH (C21-C30)	n.a.	180		8.4	25	20
10199	EFH (C30 - C40)	n.a.	410		8.4	25	20
10199	EFH (C8-C11)	n.a.	8.4	U	8.4	25	20
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	16,000		6.10	20.2	1
07914	Boron	7440-42-8	10.1		0.363	5.04	1
01650	Calcium	7440-70-2	3,170		2.52	20.2	1
01654	Iron	7439-89-6	21,600		2.63	20.2	1
01656	Lithium	7439-93-2	23.0		0.62	2.0	1
01657	Magnesium	7439-95-4	4,240		0.443	10.1	1
06958	Manganese	7439-96-5	287		0.0363	0.504	1
10145	Phosphorus	7723-14-0	326		0.353	10.1	1
01662	Potassium	7440-09-7	3,090		11.4	50.4	1
01667	Sodium	7440-23-5	974		6.00	101	1
07968	Strontium	7440-24-6	15.8		0.0252	0.504	1
06969	Tin	7440-31-5	2.52	J	0.323	10.1	1
06970	Titanium	7440-32-6	1,080		0.0716	1.01	1
10146	Zirconium	7440-67-7	3.66	J	0.464	5.04	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0861	J	0.0753	0.204	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.30		0.0814	0.407	2
06126	Barium	7440-39-3	111		0.108	0.407	2

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**mg/kg**	**mg/kg**	**mg/kg**	
06127	Beryllium	7440-41-7	0.525	0.0163	0.102	2
06128	Cadmium	7440-43-9	0.145	0.0448	0.102	2
06131	Chromium	7440-47-3	19.6	0.122	0.407	2
06132	Cobalt	7440-48-4	7.71	0.0204	0.102	2
06133	Copper	7440-50-8	9.73	0.0814	0.407	2
06135	Lead	7439-92-1	7.33	0.0104	0.204	2
06138	Molybdenum	7439-98-7	0.456	0.0509	0.102	2
06139	Nickel	7440-02-0	13.1	0.102	0.407	2
06141	Selenium	7782-49-2	0.0945 J	0.0590	0.407	2
06142	Silver	7440-22-4	0.0338 J	0.0145	0.102	2
06145	Thallium	7440-28-0	0.321	0.0305	0.102	2
06148	Vanadium	7440-62-2	38.4	0.0224	0.102	2
06149	Zinc	7440-66-6	69.5	0.570	3.05	2
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0070 U	0.0070	0.0996	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.9	0.84	1.1	1
	EPA 314.0		**ug/kg**	**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4 U	9.4	31.4	1
	SW-846 7199		**mg/kg**	**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.41 J	0.21	1.0	1
	SW-846 9012B		**mg/kg**	**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19 U	0.19	0.52	1
	SW-846 9045C modified		**Std. Units**	**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.49	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.6	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 13:44	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11305SLD026	11/20/2011 21:51	Linda M Hartenstine	5
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11305SLD026	11/01/2011 19:00	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113150020A	11/18/2011 17:22	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	2	113150020A	11/11/2011 16:00	JoElla L Rice	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011 20:32	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/04/2011 23:36	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113120010A	11/10/2011 03:59	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/08/2011 02:22	Heather E Williams	20
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113120010A	11/08/2011 18:45	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113045708008	11/02/2011 07:42	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113041026004D	11/03/2011 00:16	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113041026004A	11/06/2011 12:50	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113041026004C	11/03/2011 00:16	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113041026004B	11/03/2011 00:16	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454454
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7602 SDG#: DE276-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020	1	113041026004A	11/03/2011 00:16	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113045711007	11/02/2011 09:41	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113045708008	11/01/2011 11:48	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113041026004	11/01/2011 10:56	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113045711007	11/01/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 13:37	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 21:41	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	2	11312243201A	11/09/2011 15:57	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11314102202A	11/10/2011 19:22	Joseph E McKenzie	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11314102202A	11/10/2011 09:55	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401A	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454455
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7603 SDG#: DE276-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg		ug/kg	ug/kg	
04688	Aniline	62-53-3	1,700	U	1,700	5,200	1
04688	Benzidine	92-87-5	12,000	U	12,000	34,000	1
04688	Benzoic acid	65-85-0	1,700	U	1,700	5,200	1
04688	Benzyl alcohol	100-51-6	1,700	U	1,700	5,200	1
04688	4-Bromophenyl-phenylether	101-55-3	170	U	170	1,700	1
04688	Butylbenzylphthalate	85-68-7	170	U	170	1,700	1
04688	Di-n-butylphthalate	84-74-2	170	U	170	1,700	1
04688	Carbazole	86-74-8	170	U	170	1,700	1
04688	4-Chloro-3-methylphenol	59-50-7	340	U	340	1,700	1
04688	4-Chloroaniline	106-47-8	690	U	690	1,700	1
04688	bis(2-Chloroethoxy)methane	111-91-1	170	U	170	1,700	1
04688	bis(2-Chloroethyl)ether	111-44-4	170	U	170	1,700	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	170	U	170	1,700	1
04688	2-Chloronaphthalene	91-58-7	170	U	170	1,700	1
04688	2-Chlorophenol	95-57-8	170	U	170	1,700	1
04688	4-Chlorophenyl-phenylether	7005-72-3	340	U	340	1,700	1
04688	Dibenzofuran	132-64-9	170	U	170	1,700	1
04688	1,2-Dichlorobenzene	95-50-1	170	U	170	1,700	1
04688	1,3-Dichlorobenzene	541-73-1	170	U	170	1,700	1
04688	1,4-Dichlorobenzene	106-46-7	170	U	170	1,700	1
04688	3,3'-Dichlorobenzidine	91-94-1	1,000	U	1,000	3,400	1
04688	2,4-Dichlorophenol	120-83-2	170	U	170	1,700	1
04688	Diethylphthalate	84-66-2	170	U	170	1,700	1
04688	2,4-Dimethylphenol	105-67-9	340	U	340	1,700	1
04688	3,5-Dimethylphenol	108-68-9	340	U	340	1,700	1
04688	Dimethylphthalate	131-11-3	170	U	170	1,700	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	1,700	U	1,700	5,200	1
04688	2,4-Dinitrophenol	51-28-5	3,400	U	3,400	10,000	1
04688	2,4-Dinitrotoluene	121-14-2	340	U	340	1,700	1
04688	2,6-Dinitrotoluene	606-20-2	170	U	170	1,700	1
04688	1,2-Diphenylhydrazine	122-66-7	170	U	170	1,700	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	170	U	170	3,400	1
04688	Hexachlorobenzene	118-74-1	170	U	170	1,700	1
04688	Hexachlorobutadiene	87-68-3	690	U	690	1,700	1
04688	Hexachlorocyclopentadiene	77-47-4	1,700	U	1,700	5,200	1
04688	Hexachloroethane	67-72-1	170	U	170	1,700	1
04688	Isophorone	78-59-1	170	U	170	1,700	1
04688	2-Methylphenol	95-48-7	340	U	340	1,700	1
04688	4-Methylphenol	106-44-5	340	U	340	1,700	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	Naphthalene	91-20-3	170	U	170	1,700	1
04688	2-Nitroaniline	88-74-4	170	U	170	1,700	1
04688	3-Nitroaniline	99-09-2	340	U	340	1,700	1
04688	4-Nitroaniline	100-01-6	690	U	690	1,700	1
04688	Nitrobenzene	98-95-3	170	U	170	1,700	1
04688	2-Nitrophenol	88-75-5	170	U	170	1,700	1
04688	4-Nitrophenol	100-02-7	1,700	U	1,700	5,200	1
04688	N-Nitroso-di-n-propylamine	621-64-7	170	U	170	1,700	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454455
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7603 SDG#: DE276-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	N-Nitrosodiphenylamine	86-30-6	170	U	170	1,700	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Di-n-octylphthalate	117-84-0	170	U	170	1,700	1
04688	Pentachlorophenol	87-86-5	1,700	U	1,700	5,200	1
04688	Phenol	108-95-2	170	U	170	1,700	1
04688	Tetralin	119-64-2	1,700	U	1,700	1,700	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	170	U	170	1,700	1
04688	2,4,5-Trichlorophenol	95-95-4	340	U	340	1,700	1
04688	2,4,6-Trichlorophenol	88-06-2	340	U	340	1,700	1
	Reporting limits were raised due to interference from the sample matrix.						
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	3.5	U	3.5	8.7	5
10138	Acenaphthylene	208-96-8	1.7	U	1.7	8.7	5
10138	Anthracene	120-12-7	1.7	U	1.7	8.7	5
10138	Benzo(a)anthracene	56-55-3	3.5	U	3.5	8.7	5
10138	Benzo(a)pyrene	50-32-8	3.5	U	3.5	8.7	5
10138	Benzo(b)fluoranthene	205-99-2	3.5	U	3.5	8.7	5
10138	Benzo(g,h,i)perylene	191-24-2	5.0	J	3.5	8.7	5
10138	Benzo(k)fluoranthene	207-08-9	3.5	U	3.5	8.7	5
10138	Chrysene	218-01-9	2.8	J	1.7	8.7	5
10138	Dibenz(a,h)anthracene	53-70-3	3.5	U	3.5	8.7	5
10138	Fluoranthene	206-44-0	3.5	U	3.5	8.7	5
10138	Fluorene	86-73-7	3.5	U	3.5	8.7	5
10138	Indeno(1,2,3-cd)pyrene	193-39-5	3.5	U	3.5	8.7	5
10138	1-Methylnaphthalene	90-12-0	3.5	U	3.5	8.7	5
10138	2-Methylnaphthalene	91-57-6	3.5	U	3.5	8.7	5
10138	Naphthalene	91-20-3	3.5	U	3.5	8.7	5
10138	N-Nitrosodimethylamine	62-75-9	3.5	U	3.5	8.7	5
10138	Phenanthrene	85-01-8	3.5	U	3.5	8.7	5
10138	Pyrene	129-00-0	3.5	U	3.5	8.7	5
	Reporting limits were raised due to interference from the sample matrix.						
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.4	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.4	1
10225	Aroclor 5460	11126-42-4	4.9		1.0	3.4	1
10225	PCB-1016	12674-11-2	0.34	U	0.34	1.8	1
10225	PCB-1221	11104-28-2	0.34	U	0.34	1.8	1
10225	PCB-1232	11141-16-5	0.34	U	0.34	1.8	1
10225	PCB-1242	53469-21-9	0.34	U	0.34	1.8	1
10225	PCB-1248	12672-29-6	0.34	U	0.34	1.8	1
10225	PCB-1254	11097-69-1	8.8		0.34	1.8	1
10225	PCB-1260	11096-82-5	4.0		0.41	1.8	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454455
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7603 SDG#: DE276-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1262	37324-23-5	0.34	U	0.34	1.8	1
10225	PCB-1268	11100-14-4	0.34	U	0.34	1.8	1
	The sample was injected numerous times. Each time the responses for various analytes in the calibration check standard injected after the sample were outside the acceptance criteria. Therefore, this effect is attributed to the sample matrix and the data is reported.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,900		6.07	20.1	1
07914	Boron	7440-42-8	7.77		0.361	5.02	1
01650	Calcium	7440-70-2	2,970		2.51	20.1	1
01654	Iron	7439-89-6	19,500		2.62	20.1	1
01656	Lithium	7439-93-2	23.9		0.62	2.0	1
01657	Magnesium	7439-95-4	4,190		0.442	10.0	1
06958	Manganese	7439-96-5	274		0.0361	0.502	1
10145	Phosphorus	7723-14-0	312		0.351	10.0	1
01662	Potassium	7440-09-7	2,800		11.3	50.2	1
01667	Sodium	7440-23-5	75.8	J	5.97	100	1
07968	Strontium	7440-24-6	14.0		0.0251	0.502	1
06969	Tin	7440-31-5	2.65	J	0.321	10.0	1
06970	Titanium	7440-32-6	1,000		0.0713	1.00	1
10146	Zirconium	7440-67-7	3.19	J	0.462	5.02	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0797	J	0.0736	0.199	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.58		0.0795	0.398	2
06126	Barium	7440-39-3	112		0.105	0.398	2
06127	Beryllium	7440-41-7	0.532		0.0159	0.0994	2
06128	Cadmium	7440-43-9	0.148		0.0437	0.0994	2
06131	Chromium	7440-47-3	21.1		0.119	0.398	2
06132	Cobalt	7440-48-4	7.77		0.0199	0.0994	2
06133	Copper	7440-50-8	9.08		0.0795	0.398	2
06135	Lead	7439-92-1	7.65		0.0101	0.199	2
06138	Molybdenum	7439-98-7	0.430		0.0497	0.0994	2
06139	Nickel	7440-02-0	13.5		0.0994	0.398	2
06141	Selenium	7782-49-2	0.111	J	0.0577	0.398	2
06142	Silver	7440-22-4	0.0309	J	0.0141	0.0994	2
06145	Thallium	7440-28-0	0.325		0.0298	0.0994	2
06148	Vanadium	7440-62-2	39.2		0.0219	0.0994	2
06149	Zinc	7440-66-6	63.5		0.557	2.98	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0071	U	0.0071	0.101	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.7		0.84	1.1	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454455
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
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E7603 SDG#: DE276-03

CAT No.	Analysis Name		CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry		**EPA 314.0**		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0		14797-73-0	9.4	U	9.4	31.3	1
		SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199		18540-29-9	1.4		0.21	1.0	1
		SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C		n.a.	7.54		0.0100	0.0100	1
Wet Chemistry		**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3		n.a.	4.2		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 14:10	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11305SLD026	11/20/2011 22:24	Linda M Hartenstine	5
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11305SLD026	11/01/2011 19:00	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113060035A	11/09/2011 17:19	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113060035A	11/03/2011 11:00	Olivia Arosemena	1
01643	Aluminum	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01654	Iron	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1

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Analysis Report

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SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454455
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E7603 SDG#: DE276-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06969	Tin	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113045708008	11/02/2011 07:54	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113041026004D	11/02/2011 23:48	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113041026004A	11/06/2011 12:27	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113041026004C	11/02/2011 23:48	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113041026004B	11/02/2011 23:48	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113041026004A	11/02/2011 23:48	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113045711007	11/02/2011 09:42	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113045708008	11/01/2011 11:48	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113041026004	11/01/2011 10:56	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113045711007	11/01/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202A	11/08/2011 13:52	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201A	11/04/2011 22:02	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 16:03	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202A	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201A	11/04/2011 06:50	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401B	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7604 SDG#: DE276-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,600	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	36	U	36	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	36	U	36	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	360	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	36	U	36	180	1
04688	3,5-Dimethylphenol	108-68-9	36	U	36	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	360	U	360	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	36	U	36	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	36	U	36	180	1
04688	4-Methylphenol	106-44-5	36	U	36	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1
04688	3-Nitroaniline	99-09-2	36	U	36	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7604 SDG#: DE276-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Tetralin	119-64-2	180	U	180	180	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	36	U	36	180	1
04688	2,4,6-Trichlorophenol	88-06-2	36	U	36	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.36	U	0.36	1.8	1
10138	Anthracene	120-12-7	0.40	J	0.36	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.78	J	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	1.7	J	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	1.2	J	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	7.6	J	6.4	19	1
10138	Chrysene	218-01-9	1.9		0.36	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	17	J	6.4	19	1
10138	Fluoranthene	206-44-0	0.86	J	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.72	J	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.72	J	0.71	1.8	1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8	1
	Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of 61 ug/kg. The blank value was not subtracted from the analytical result. This sample was re-extracted outside of the method required holding time, and bis(2-ethylhexyl)phthalate was again detected in the re-analysis of the sample at 6 ug/kg. Comparable data was not observed between the two extractions. The data reported here is from the initial extraction of the sample.						
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	24.18
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7604 SDG#: DE276-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.45	J	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.78	J	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1
	The sample was injected numerous times. Each time the responses for various analytes in the calibration check standard injected after the sample were outside the acceptance criteria. Therefore, this effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.43	U	0.43	1.3	1
10199	EFH (C15-C20)	n.a.	1.3		0.43	1.3	1
10199	EFH (C21-C30)	n.a.	12		0.43	1.3	1
10199	EFH (C30 - C40)	n.a.	52		0.43	1.3	1
10199	EFH (C8-C11)	n.a.	0.43	U	0.43	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,400		6.28	20.8	1
07914	Boron	7440-42-8	10.5		0.374	5.19	1
01650	Calcium	7440-70-2	5,180		2.60	20.8	1
01654	Iron	7439-89-6	23,200		2.71	20.8	1
01656	Lithium	7439-93-2	23.1		0.64	2.1	1
01657	Magnesium	7439-95-4	4,790		0.457	10.4	1
06958	Manganese	7439-96-5	292		0.0374	0.519	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7604 SDG#: DE276-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
10145	Phosphorus	7723-14-0	310		0.363	10.4	1
01662	Potassium	7440-09-7	3,100		11.7	51.9	1
01667	Sodium	7440-23-5	291		6.18	104	1
07968	Strontium	7440-24-6	22.0		0.0260	0.519	1
06969	Tin	7440-31-5	2.63	J	0.332	10.4	1
06970	Titanium	7440-32-6	1,070		0.0737	1.04	1
10146	Zirconium	7440-67-7	4.26	J	0.478	5.19	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0768	U	0.0768	0.208	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.87		0.0831	0.415	2
06126	Barium	7440-39-3	96.4		0.110	0.415	2
06127	Beryllium	7440-41-7	0.818		0.0166	0.104	2
06128	Cadmium	7440-43-9	0.133		0.0457	0.104	2
06131	Chromium	7440-47-3	19.0		0.125	0.415	2
06132	Cobalt	7440-48-4	6.76		0.0208	0.104	2
06133	Copper	7440-50-8	8.84		0.0831	0.415	2
06135	Lead	7439-92-1	6.88		0.0106	0.208	2
06138	Molybdenum	7439-98-7	0.357		0.0519	0.104	2
06139	Nickel	7440-02-0	11.9		0.104	0.415	2
06141	Selenium	7782-49-2	0.0840	J	0.0602	0.415	2
06142	Silver	7440-22-4	0.0261	J	0.0147	0.104	2
06145	Thallium	7440-28-0	0.285		0.0312	0.104	2
06148	Vanadium	7440-62-2	34.2		0.0228	0.104	2
06149	Zinc	7440-66-6	51.0		0.581	3.12	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0074	U	0.0074	0.105	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	5.5		0.86	1.1	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.6	U	9.6	32.1	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.34	J	0.21	1.1	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.19	U	0.19	0.53	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.56		0.0100	0.0100	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

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CDM Federal Programs Corp.
14420 Albemarle Point Place
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E7604 SDG#: DE276-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	6.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-118-SA7-SB-4.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 14:36	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11305SLD026	11/20/2011 22:59	Linda M Hartenstine	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11305SLD026	11/01/2011 19:00	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16B	11/01/2011 21:57	Laura M Krieger	24.18
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130226015	10/29/2011 14:06	Stephanie A Sanchez	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130226015	10/29/2011 14:07	Stephanie A Sanchez	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113060035A	11/09/2011 17:38	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113060035A	11/03/2011 11:00	Olivia Arosemena	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011 20:49	Elizabeth J Marin	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/02/2011 17:45	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/04/2011 23:49	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113120010A	11/10/2011 01:24	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011 08:48	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113120010A	11/08/2011 18:45	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454456
LLI Group # 1273859
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Project Name: SSFL Area IV Collocated Soil Sampling

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CDM Federal Programs Corp.
14420 Albemarle Point Place
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E7604 SDG#: DE276-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01654	Iron	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113045708008	11/02/2011 07:58	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113041026004D	11/03/2011 00:19	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113041026004A	11/06/2011 12:53	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113041026004C	11/03/2011 00:19	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113041026004B	11/03/2011 00:19	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113041026004A	11/03/2011 00:19	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113045711007	11/02/2011 09:46	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113045708008	11/01/2011 11:48	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113041026004	11/01/2011 10:56	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113045711007	11/01/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202B	11/08/2011 14:07	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201B	11/04/2011 22:23	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 16:17	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11314102202A	11/10/2011 19:26	Joseph E McKenzie	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202B	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201B	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11314102202A	11/10/2011 09:55	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401B	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	170	U	170	520	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	170	U	170	520	1
04688	Benzyl alcohol	100-51-6	170	U	170	520	1
04688	4-Bromophenyl-phenylether	101-55-3	17	U	17	170	1
04688	Carbazole	86-74-8	17	U	17	170	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	170	1
04688	4-Chloroaniline	106-47-8	69	U	69	170	1
04688	bis(2-Chloroethoxy)methane	111-91-1	17	U	17	170	1
04688	bis(2-Chloroethyl)ether	111-44-4	17	U	17	170	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	17	U	17	170	1
04688	2-Chloronaphthalene	91-58-7	17	U	17	170	1
04688	2-Chlorophenol	95-57-8	17	U	17	170	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	170	1
04688	Dibenzofuran	132-64-9	17	U	17	170	1
04688	1,2-Dichlorobenzene	95-50-1	17	U	17	170	1
04688	1,3-Dichlorobenzene	541-73-1	17	U	17	170	1
04688	1,4-Dichlorobenzene	106-46-7	17	U	17	170	1
04688	3,3'-Dichlorobenzidine	91-94-1	100	U	100	350	1
04688	2,4-Dichlorophenol	120-83-2	17	U	17	170	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	170	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	170	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	170	U	170	520	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,000	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	170	1
04688	2,6-Dinitrotoluene	606-20-2	17	U	17	170	1
04688	1,2-Diphenylhydrazine	122-66-7	17	U	17	170	1
04688	bis(2-Ethylhexyl)phthalate	117-81-7	34	J	17	350	1
04688	Hexachlorobenzene	118-74-1	17	U	17	170	1
04688	Hexachlorobutadiene	87-68-3	69	U	69	170	1
04688	Hexachlorocyclopentadiene	77-47-4	170	U	170	520	1
04688	Hexachloroethane	67-72-1	17	U	17	170	1
04688	Isophorone	78-59-1	17	U	17	170	1
04688	2-Methylphenol	95-48-7	35	U	35	170	1
04688	4-Methylphenol	106-44-5	35	U	35	170	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	17	U	17	170	1
04688	3-Nitroaniline	99-09-2	35	U	35	170	1
04688	4-Nitroaniline	100-01-6	69	U	69	170	1
04688	Nitrobenzene	98-95-3	17	U	17	170	1
04688	2-Nitrophenol	88-75-5	17	U	17	170	1
04688	4-Nitrophenol	100-02-7	170	U	170	520	1
04688	N-Nitroso-di-n-propylamine	621-64-7	17	U	17	170	1
04688	N-Nitrosodiphenylamine	86-30-6	17	U	17	170	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	170	U	170	520	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	Phenol	108-95-2	17	U	17	170	1
04688	Tetralin	119-64-2	170	U	170	170	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	17	U	17	170	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	170	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	170	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.70	U	0.70	1.7	1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.7	1
10138	Anthracene	120-12-7	0.35	U	0.35	1.7	1
10138	Benzo(a)anthracene	56-55-3	0.70	U	0.70	1.7	1
10138	Benzo(a)pyrene	50-32-8	0.70	U	0.70	1.7	1
10138	Benzo(b)fluoranthene	205-99-2	1.1	J	0.70	1.7	1
10138	Benzo(g,h,i)perylene	191-24-2	0.70	U	0.70	1.7	1
10138	Benzo(k)fluoranthene	207-08-9	0.70	U	0.70	1.7	1
10138	Butylbenzylphthalate	85-68-7	6.3	U	6.3	19	1
10138	Di-n-butylphthalate	84-74-2	6.3	U	6.3	19	1
10138	Chrysene	218-01-9	1.5	J	0.35	1.7	1
10138	Dibenz(a,h)anthracene	53-70-3	0.70	U	0.70	1.7	1
10138	Diethylphthalate	84-66-2	6.3	U	6.3	19	1
10138	Dimethylphthalate	131-11-3	6.3	U	6.3	19	1
10138	Fluoranthene	206-44-0	0.70	U	0.70	1.7	1
10138	Fluorene	86-73-7	0.70	U	0.70	1.7	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.70	U	0.70	1.7	1
10138	1-Methylnaphthalene	90-12-0	0.70	U	0.70	1.7	1
10138	2-Methylnaphthalene	91-57-6	0.70	U	0.70	1.7	1
10138	Naphthalene	91-20-3	0.70	U	0.70	1.7	1
10138	N-Nitrosodimethylamine	62-75-9	0.70	U	0.70	1.7	1
10138	Di-n-octylphthalate	117-84-0	6.3	U	6.3	19	1
10138	Phenanthrene	85-01-8	0.70	U	0.70	1.7	1
10138	Pyrene	129-00-0	0.70	U	0.70	1.7	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.1	25.46
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.0	U	1.0	3.5	1
10225	Aroclor 5442	12642-23-8	1.0	U	1.0	3.5	1
10225	Aroclor 5460	11126-42-4	1.0	U	1.0	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.47	J	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1
	The sample was injected numerous times. Each time the responses for various analytes in the calibration check standard injected after the sample were outside the acceptance criteria. Therefore, this effect is attributed to the sample matrix and the data is reported. The surrogate recovery was outside the client specified QC limits. However, the recovery is within our in house statistical limits of 53-142%. The data is reported.						
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	100	U	100	520	1
10501	Isopropanol	67-63-0	100	U	100	520	1
10501	Methanol	67-56-1	100	U	100	520	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.2	U	5.2	10	1
08283	Ethylene glycol	107-21-1	5.2	U	5.2	10	1
08283	Propylene glycol	57-55-6	5.2	U	5.2	10	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.99	J	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	12		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	25		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,800		6.22	20.6	1
07914	Boron	7440-42-8	8.78		0.370	5.14	1
01650	Calcium	7440-70-2	2,930		2.57	20.6	1
01654	Iron	7439-89-6	20,800		2.68	20.6	1
01656	Lithium	7439-93-2	23.2		0.64	2.1	1
01657	Magnesium	7439-95-4	4,220		0.452	10.3	1
06958	Manganese	7439-96-5	268		0.0370	0.514	1
10145	Phosphorus	7723-14-0	326		0.360	10.3	1
01662	Potassium	7440-09-7	3,230		11.6	51.4	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01667	Sodium	7440-23-5	113		6.11	103	1
07968	Strontium	7440-24-6	17.5		0.0257	0.514	1
06969	Tin	7440-31-5	2.72	J	0.329	10.3	1
06970	Titanium	7440-32-6	1,070		0.0730	1.03	1
10146	Zirconium	7440-67-7	3.52	J	0.473	5.14	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0746	U	0.0746	0.202	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.34		0.0806	0.403	2
06126	Barium	7440-39-3	85.2		0.107	0.403	2
06127	Beryllium	7440-41-7	0.840		0.0161	0.101	2
06128	Cadmium	7440-43-9	0.0893	J	0.0443	0.101	2
06131	Chromium	7440-47-3	16.2		0.121	0.403	2
06132	Cobalt	7440-48-4	5.39		0.0202	0.101	2
06133	Copper	7440-50-8	9.07		0.0806	0.403	2
06135	Lead	7439-92-1	5.49		0.0103	0.202	2
06138	Molybdenum	7439-98-7	0.359		0.0504	0.101	2
06139	Nickel	7440-02-0	9.81		0.101	0.403	2
06141	Selenium	7782-49-2	0.0707	J	0.0585	0.403	2
06142	Silver	7440-22-4	0.0188	J	0.0143	0.101	2
06145	Thallium	7440-28-0	0.249		0.0302	0.101	2
06148	Vanadium	7440-62-2	29.0		0.0222	0.101	2
06149	Zinc	7440-66-6	49.4		0.564	3.02	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0070	U	0.0070	0.0994	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	4.5		0.83	1.0	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.4	U	9.4	31.4	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.31	J	0.21	1.0	1
	SW-846 9012B		**mg/kg**		**mg/kg**	**mg/kg**	
05895	16a Cyanide by 9012B	57-12-5	0.18	U	0.18	0.51	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.28		0.0100	0.0100	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	4.6	0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-119-SA7-SB-4.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04688	5a SVOCs with Tetralin 8270C	SW-846 8270C	1	11304SLB026	11/14/2011 15:01	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11305SLD026	11/20/2011 23:33	Linda M Hartenstine	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11305SLD026	11/01/2011 19:00	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11304SLB026	11/01/2011 10:10	Denise L Trimby	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11299A16B	11/01/2011 22:34	Laura M Krieger	25.46
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130226015	10/29/2011 14:09	Stephanie A Sanchez	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130226015	10/29/2011 14:09	Stephanie A Sanchez	n.a.
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113060035A	11/09/2011 17:57	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113060035A	11/03/2011 11:00	Olivia Arosemena	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/01/2011 21:05	Elizabeth J Marin	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113040033A	11/02/2011 18:01	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113080023A	11/05/2011 00:01	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113120010A	11/10/2011 02:08	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113070014A	11/05/2011 07:37	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113070014A	11/03/2011 19:00	Sally L Appleyard	1
10303	Terphenyls soil prep	SW-846 3550B	1	113120010A	11/08/2011 18:45	Sally L Appleyard	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113040033A	11/01/2011 18:00	Elizabeth J Marin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113080023A	11/04/2011 19:35	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
07914	Boron	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
01650	Calcium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454457
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7605 SDG#: DE276-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01654	Iron	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
01656	Lithium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
01657	Magnesium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
06958	Manganese	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
10145	Phosphorus	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
01662	Potassium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
01667	Sodium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
07968	Strontium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
06969	Tin	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
06970	Titanium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
10146	Zirconium	SW-846 6010B	1	113045708008	11/02/2011 08:02	Tara L Snyder	1
06124	Antimony	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113041026004D	11/03/2011 00:22	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113041026004A	11/06/2011 12:55	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113041026004C	11/03/2011 00:22	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113041026004B	11/03/2011 00:22	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113041026004A	11/03/2011 00:22	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113045711007	11/02/2011 09:48	Damary Valentin	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113045708008	11/01/2011 11:48	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113041026004	11/01/2011 10:56	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113045711007	11/01/2011 13:30	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202B	11/08/2011 14:52	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11308621201B	11/04/2011 23:47	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 16:30	Elyse P Brunstetter	1
05895	16a Cyanide by 9012B	SW-846 9012B	1	11314102202A	11/10/2011 19:27	Joseph E McKenzie	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202B	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11308621201B	11/04/2011 06:50	William L Hamaker Jr	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	11314102202A	11/10/2011 09:55	Nancy J Shoop	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11311039401B	11/07/2011 11:00	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-102811 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6454458
LLI Group # 1273859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:30

Submitted: 10/29/2011 09:15
Reported: 11/29/2011 12:20

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7606 SDG#: DE276-06TB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11304A20A	11/01/2011 16:33	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11304A20A	11/01/2011 16:33	Marie D John	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11304SLB026	Sample number(s): 6454453-6454457									
Aniline	170 U		170.	500	ug/kg	65		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	53		15-121		
Benzoic acid	170 U		170.	500	ug/kg	72		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	86		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	107		73-114		
Butylbenzylphthalate	17	U	17.	170	ug/kg	89		75-115		
Di-n-butylphthalate	17	U	17.	170	ug/kg	99		79-112		
Carbazole	17	U	17.	170	ug/kg	99		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	89		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	45		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	95		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	85		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	85		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	92		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	95		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	100		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	99		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	88		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	86		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	86		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	55		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	103		75-111		
Diethylphthalate	17	U	17.	170	ug/kg	95		76-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	93		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	104		83-120		
Dimethylphthalate	17	U	17.	170	ug/kg	98		77-109		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	90		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	77		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	96		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	99		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	90		71-125		
bis(2-Ethylhexyl)phthalate	17	U	17.	330	ug/kg	87		75-117		
Hexachlorobenzene	17	U	17.	170	ug/kg	112		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	99		65-117		
Hexachlorocyclopentadiene	170 U		170.	500	ug/kg	63		46-115		
Hexachloroethane	17	U	17.	170	ug/kg	79		61-109		
Isophorone	17	U	17.	170	ug/kg	85		69-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Methylphenol	33	U	33.	170	ug/kg	96		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	89		66-117		
Naphthalene	17	U	17.	170	ug/kg	97		73-106		
2-Nitroaniline	17	U	17.	170	ug/kg	94		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	88		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	66		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	86		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	90		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	66		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	76		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	106		67-141		
Di-n-octylphthalate	17	U	17.	170	ug/kg	100		62-137		
Pentachlorophenol	170	U	170.	500	ug/kg	111		51-117		
Phenol	17	U	17.	170	ug/kg	90		58-112		
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	98		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	99		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	101		78-111		
Batch number: 11305SLD026	Sample number(s): 6454453-6454457									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	99		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	97		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	102		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	103		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	102		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	112		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	108		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	99		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	108		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	124		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	103		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	109		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	123		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	113		79-121		
Bis(2-Ethylhexyl)phthalate	61		6.0	18	ug/kg	137		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	105		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	107		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	107		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	95		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	94		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	95		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	93		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	112		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	99		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	98		72-119		
Batch number: 11299A16B	Sample number(s): 6454453,6454456-6454457									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	74	75	67-119	2	30
Batch number: 11304A20A	Sample number(s): 6454458									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	109	75-135	0	30
Batch number: 113060035A	Sample number(s): 6454453,6454455-6454457									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	101	115*	36-106	12	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	149*		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	184*		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 113150020A	Sample number(s): 6454454									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	71	71	36-106	0	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	79		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	86		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 113040033A	Sample number(s): 6454453-6454454,6454456-6454457									
Ethanol	100 U		100.	500	ug/kg	93		71-129		
Isopropanol	100 U		100.	500	ug/kg	90		75-125		
Methanol	100 U		100.	500	ug/kg	106		68-129		
Batch number: 113080023A	Sample number(s): 6454453-6454454,6454456-6454457									
Diethylene glycol	5.0	U	5.0	10	mg/kg	99		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	103		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	96		67-131		
Batch number: 113070014A	Sample number(s): 6454453-6454454,6454456-6454457									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	123		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	112		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	117		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	91		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	142*		49-107		
Batch number: 113120010A	Sample number(s): 6454453-6454454,6454456-6454457									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	107		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	109		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	109		69-109		
Batch number: 113041026004A	Sample number(s): 6454453-6454457									
Antimony	0.0725	U	0.0725	0.196	mg/kg	67		40-227		
Arsenic	0.0784	U	0.0784	0.392	mg/kg	99		83-111		
Beryllium	0.0157	U	0.0157	0.0980	mg/kg	100		84-112		
Cadmium	0.0431	U	0.0431	0.0980	mg/kg	103		83-111		
Chromium	0.118	U	0.118	0.392	mg/kg	104		77-123		
Cobalt	0.0196	U	0.0196	0.0980	mg/kg	108		85-114		
Copper	0.0784	U	0.0784	0.392	mg/kg	104		81-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Lead	0.0100	U	0.0100	0.196	mg/kg	97		84-112		
Nickel	0.0980	U	0.0980	0.392	mg/kg	99		81-110		
Silver	0.0139	U	0.0139	0.0980	mg/kg	100		83-112		
Thallium	0.0294	U	0.0294	0.0980	mg/kg	100		82-112		
Vanadium	0.0216	U	0.0216	0.0980	mg/kg	93		76-110		
Zinc	0.549	U	0.549	2.94	mg/kg	98		82-110		
Batch number: 113041026004B	Sample number(s): 6454453-6454457									
Selenium	0.0569	U	0.0569	0.392	mg/kg	99		79-110		
Batch number: 113041026004C	Sample number(s): 6454453-6454457									
Molybdenum	0.0490	U	0.0490	0.0980	mg/kg	97		80-110		
Batch number: 113041026004D	Sample number(s): 6454453-6454457									
Barium	0.104	U	0.104	0.392	mg/kg	103		83-110		
Batch number: 113045708008	Sample number(s): 6454453-6454457									
Aluminum	5.93	U	5.93	19.6	mg/kg	78		40-127		
Boron	0.353	U	0.353	4.90	mg/kg	97		83-110		
Calcium	3.41	J	2.45	19.6	mg/kg	93		81-110		
Iron	5.08	J	2.56	19.6	mg/kg	82		47-129		
Lithium	0.61	U	0.61	2.0	mg/kg	99		80-120		
Magnesium	0.431	U	0.431	9.80	mg/kg	84		63-116		
Manganese	0.0422	J	0.0353	0.490	mg/kg	97		85-116		
Phosphorus	1.66	J	0.343	9.80	mg/kg	104		80-120		
Potassium	11.1	U	11.1	49.0	mg/kg	96		71-110		
Sodium	5.83	U	5.83	98.0	mg/kg	96		76-110		
Strontium	0.0245	U	0.0245	0.490	mg/kg	98		84-110		
Tin	1.38	J	0.314	9.80	mg/kg	89		86-120		
Titanium	0.0941	J	0.0696	0.980	mg/kg	83		80-120		
Zirconium	0.451	U	0.451	4.90	mg/kg	101		80-120		
Batch number: 113045711007	Sample number(s): 6454453-6454457									
Mercury	0.0066	U	0.0066	0.0940	mg/kg	111		83-119		
Batch number: 11308621201A	Sample number(s): 6454453-6454455									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	104		85-115		
Batch number: 11308621201B	Sample number(s): 6454456-6454457									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	104		85-115		
Batch number: 11312102202A	Sample number(s): 6454453									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	105		80-120		
Batch number: 11312243201A	Sample number(s): 6454453-6454457									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11312621202A	Sample number(s): 6454453-6454455									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11312621202B	Sample number(s): 6454456-6454457									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
Batch number: 11314102202A	Sample number(s): 6454454,6454456-6454457									
16a Cyanide by 9012B	0.18	U	0.18	0.50	mg/kg	95		80-120		
Batch number: 11311039401A	Sample number(s): 6454453-6454454									
17a pH by 9045C						100		95-105		

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11311039401B	Sample number(s): 6454455-6454457								
17a pH by 9045C					100		95-105		
Batch number: 11311162401A	Sample number(s): 6454453-6454457								
Moisture Content by 160.3					100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11304SLB026	Sample number(s): 6454453-6454457 UNSPK: P451564								
Aniline	52	61	18-116	17	30				
Benzidine	0*	0*	35-141	0	30				
Benzoic acid	60	58	10-173	2	30				
Benzyl alcohol	80	82	67-115	3	30				
4-Bromophenyl-phenylether	108	106	67-129	1	30				
Butylbenzylphthalate	92	92	73-134	1	30				
Di-n-butylphthalate	100	98	67-123	1	30				
Carbazole	103	101	64-120	1	30				
4-Chloro-3-methylphenol	85	84	62-122	0	30				
4-Chloroaniline	42	61	13-107	37*	30				
bis(2-Chloroethoxy)methane	90	90	75-104	1	30				
bis(2-Chloroethyl)ether	83	81	60-116	1	30				
bis(2-Chloroisopropyl)ether	80	80	55-142	1	30				
2-Chloronaphthalene	94	84	50-141	10	30				
2-Chlorophenol	90	92	73-121	3	30				
4-Chlorophenyl-phenylether	100	100	80-109	1	30				
Dibenzofuran	98	99	71-112	1	30				
1,2-Dichlorobenzene	85	83	66-108	2	30				
1,3-Dichlorobenzene	82	81	63-109	1	30				
1,4-Dichlorobenzene	81	80	58-108	1	30				
3,3'-Dichlorobenzidine	44	55	28-109	24	30				
2,4-Dichlorophenol	98	101	66-123	4	30				
Diethylphthalate	93	92	66-118	0	30				
2,4-Dimethylphenol	86	87	68-118	2	30				
3,5-Dimethylphenol	98	101	71-127	4	30				
Dimethylphthalate	97	96	64-118	0	30				
4,6-Dinitro-2-methylphenol	83	85	11-126	3	30				
2,4-Dinitrophenol	57	58	20-143	2	30				
2,4-Dinitrotoluene	94	96	56-129	2	30				
2,6-Dinitrotoluene	99	100	69-123	1	30				
1,2-Diphenylhydrazine	91	89	71-129	1	30				
bis(2-Ethylhexyl)phthalate	92	92	63-122	1	30				
Hexachlorobenzene	114	111	77-114	2	30				
Hexachlorobutadiene	95	94	62-120	1	30				
Hexachlorocyclopentadiene	104	101	10-153	2	30				
Hexachloroethane	76	74	57-109	2	30				
Isophorone	80	81	73-102	2	30				
2-Methylphenol	87	90	75-111	3	30				
4-Methylphenol	81	83	59-123	3	30				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Naphthalene	94	94	72-116	1	30				
2-Nitroaniline	95	95	67-125	1	30				
3-Nitroaniline	89	91	59-122	3	30				
4-Nitroaniline	75	76	41-109	1	30				
Nitrobenzene	82	83	57-125	1	30				
2-Nitrophenol	85	90	56-127	6	30				
4-Nitrophenol	69	70	37-129	2	30				
N-Nitroso-di-n-propylamine	70	70	60-116	0	30				
N-Nitrosodiphenylamine	104	102	71-122	2	30				
Di-n-octylphthalate	100	102	56-126	2	30				
Pentachlorophenol	114	112	28-127	1	30				
Phenol	83	85	58-126	2	30				
1,2,4-Trichlorobenzene	97	95	72-115	1	30				
2,4,5-Trichlorophenol	101	102	58-129	2	30				
2,4,6-Trichlorophenol	103	103	56-134	1	30				
Batch number: 11305SLD026	Sample number(s): 6454453-6454457 UNSPK: 6454453								
Acenaphthene	102	102	63-105	0	30				
Acenaphthylene	97	101	67-114	4	30				
Anthracene	109	107	73-115	2	30				
Benzo(a)anthracene	93	115	59-128	17	30				
Benzo(a)pyrene	104	113	58-142	7	30				
Benzo(b)fluoranthene	256*	264*	54-163	2	30				
Benzo(g,h,i)perylene	47	51	33-141	6	30				
Benzo(k)fluoranthene	0*	0*	57-153	0	30				
Butylbenzylphthalate	115	123	57-173	7	30				
Di-n-butylphthalate	111	109	65-148	1	30				
Chrysene	102	106	67-123	2	30				
Dibenz(a,h)anthracene	53	63	22-133	17	30				
Diethylphthalate	119	124	70-136	4	30				
Dimethylphthalate	109	112	74-118	3	30				
Bis(2-Ethylhexyl)phthalate	64	102	39-167	17	30				
Fluoranthene	124	122	51-149	1	30				
Fluorene	106	109	66-122	3	30				
Indeno(1,2,3-cd)pyrene	51	70	21-143	27	30				
1-Methylnaphthalene	95	98	72-123	3	30				
2-Methylnaphthalene	94	97	64-103	3	30				
Naphthalene	96	97	61-102	2	30				
N-Nitrosodimethylamine	98	100	48-113	2	30				
Di-n-octylphthalate	186	175	40-192	5	30				
Phenanthrene	125*	113	62-122	8	30				
Pyrene	108	111	51-131	2	30				
Batch number: 113060035A	Sample number(s): 6454453,6454455-6454457 UNSPK: P453097								
PCB-1016	120	92	29-146	26	50				
PCB-1260	119	96	39-149	19	50				
Batch number: 113150020A	Sample number(s): 6454454 UNSPK: P465418								
PCB-1016	74	79	29-146	7	50				
PCB-1260	85	94	39-149	10	50				
Batch number: 113040033A	Sample number(s): 6454453-6454454,6454456-6454457 UNSPK: P451568								
Ethanol	88	87	48-130	0	20				

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Isopropanol	86	87	12-149	1	20				
Methanol	107	103	43-138	5	20				
Batch number: 113080023A	Sample number(s): 6454453-6454454,6454456-6454457 UNSPK: 6454453								
Diethylene glycol	3*	4*	59-109	4	20				
Ethylene glycol	39*	39*	63-107	0	20				
Propylene glycol	56*	56*	63-107	1	20				
Batch number: 113070014A	Sample number(s): 6454453-6454454,6454456-6454457 UNSPK: P451568								
EFH (C12-C14)	89	88	49-123	1	20				
EFH (C15-C20)	104	101	49-123	2	20				
EFH (C21-C30)	133*	112	49-123	8	20				
EFH (C30 - C40)	-54*	-67*	49-123	5	20				
EFH (C8-C11)	74	71	49-123	3	20				
Batch number: 113120010A	Sample number(s): 6454453-6454454,6454456-6454457 UNSPK: P457188								
m-Terphenyl	88	100	75-125	12	20				
o-Terphenyl	89	101	75-125	13	20				
p-Terphenyl	91	101	75-125	11	20				
Batch number: 113041026004A	Sample number(s): 6454453-6454457 UNSPK: 6454455 BKG: 6454455								
Antimony	28*	15*	75-125	49*	20	0.0764 J	0.0718 U	200* (1)	20
Arsenic	91	127*	75-125	9	20	5.34	4.29	22*	20
Beryllium	86	141*	75-125	30*	20	0.510	0.445	14 (1)	20
Cadmium	106	122	75-125	10	20	0.141	0.0839 J	51* (1)	20
Chromium	84	112	75-125	9	20	20.2	15.1	29*	20
Cobalt	135*	148*	75-125	6	20	7.44	5.54	29*	20
Copper	109	128*	75-125	8	20	8.70	63.7	152*	20
Lead	110	143*	75-125	8	20	7.33	6.79	8	20
Nickel	103	121	75-125	7	20	12.9	9.93	26*	20
Silver	117	123	75-125	3	20	0.0296 J	0.0214 J	32* (1)	20
Thallium	117	123	75-125	2	20	0.312	0.229	31* (1)	20
Vanadium	88	125	75-125	7	20	37.5	29.9	23*	20
Zinc	27 (2)	64 (2)	75-125	5	20	60.9	56.6	7	20
Batch number: 113041026004B	Sample number(s): 6454453-6454457 UNSPK: 6454455 BKG: 6454455								
Selenium	102	108	75-125	3	20	0.106 J	0.0823 J	25* (1)	20
Batch number: 113041026004C	Sample number(s): 6454453-6454457 UNSPK: 6454455 BKG: 6454455								
Molybdenum	120	132*	75-125	8	20	0.412	0.429	4 (1)	20
Batch number: 113041026004D	Sample number(s): 6454453-6454457 UNSPK: 6454455 BKG: 6454455								
Barium	-30 (2)	134 (2)	75-125	14	20	108	82.1	27*	20
Batch number: 113045708008	Sample number(s): 6454453-6454457 UNSPK: 6454453 BKG: 6454453								
Aluminum	1233 (2)	1042 (2)	75-125	3	20	10,600	11,400	8	20
Boron	93	93	84-115	1	20	6.50	7.04	8 (1)	20
Calcium	191 (2)	125 (2)	75-125	8	20	2,770	2,850	3	20
Iron	1004 (2)	368 (2)	75-125	4	20	17,300	19,400	12	20
Lithium	98	95	82-114	2	20	24.0	25.1	4	20
Magnesium	271 (2)	151 (2)	75-125	6	20	3,720	3,920	5	20

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc		DUP Conc		DUP RPD	Dup RPD Max
Manganese	112 (2)	80 (2)	75-125	5	20	264		260		2	20
Phosphorus	106	94	75-125	3	20	334		363		8	20
Potassium	122	112	75-125	2	20	2,900		3,100		7	20
Sodium	98	97	75-125	1	20	96.3		102		6 (1)	20
Strontium	100	99	75-115	1	20	11.6		12.3		6	20
Tin	85	84	80-110	1	20	2.43	J	2.41	J	1 (1)	20
Titanium	233 (2)	198 (2)	75-125	3	20	929		976		5	20
Zirconium	94	92	81-110	2	20	2.41	J	3.10	J	25* (1)	20
Batch number: 113045711007	Sample number(s): 6454453-6454457 UNSPK: 6454457 BKG: 6454457										
Mercury	103	100	65-135	2	20	0.0067	U	0.0066	U	0 (1)	20
Batch number: 11308621201A	Sample number(s): 6454453-6454455 UNSPK: P451564 BKG: P451564										
7a Perchlorate EPA 314.0	113		80-120			9.0	U	9.0	U	0 (1)	15
Batch number: 11308621201B	Sample number(s): 6454456-6454457 UNSPK: 6454456 BKG: 6454456										
7a Perchlorate EPA 314.0	104		80-120			9.0	U	9.0	U	0 (1)	15
Batch number: 11312102202A	Sample number(s): 6454453 UNSPK: P451568 BKG: P451568										
16a Cyanide by 9012B	106		75-125			0.18	U	0.18	U	0 (1)	20
Batch number: 11312243201A	Sample number(s): 6454453-6454457 UNSPK: P451564 BKG: P451564										
3a Cr VI by EPA 7199	98		75-125			0.43	J	0.47	J	10 (1)	20
Batch number: 11312621202A	Sample number(s): 6454453-6454455 UNSPK: P451564 BKG: P451564										
11a Anions by 300.0 - Fluoride	73*		80-120			0.80	U	0.80	U	0 (1)	20
Batch number: 11312621202B	Sample number(s): 6454456-6454457 UNSPK: 6454456 BKG: 6454456										
11a Anions by 300.0 - Fluoride	77*		80-120			5.1		4.7		9 (1)	20
Batch number: 11314102202A	Sample number(s): 6454454,6454456-6454457 UNSPK: 6454454 BKG: 6454454										
16a Cyanide by 9012B	91		75-125			0.18	U	0.17	U	0 (1)	20
Batch number: 11311039401A	Sample number(s): 6454453-6454454 BKG: P451564										
17a pH by 9045C						6.66		6.67		0	3
Batch number: 11311039401B	Sample number(s): 6454455-6454457 BKG: 6454455										
17a pH by 9045C						7.54		7.55		0	3
Batch number: 11311162401A	Sample number(s): 6454453-6454457 BKG: P451565										
Moisture Content by 160.3						8.7		9.3		7	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11304SLB026

Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Surrogate Quality Control

6454453	91	102	105	81	101	116
6454454	83	91	102	73	93	110
6454455	87	98	104	80	105	115
6454456	84	94	106	77	101	113
6454457	84	95	108	78	102	118
Blank	81	92	104	77	99	117
LCS	92	100	111	80	101	115
MS	85	95	112	78	101	116
MSD	87	95	112	78	102	117
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11305SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6454453	109	97	121
6454454	89	79	81
6454455	85	78	83
6454456	96	87	91
6454457	97	109	92
Blank	107	96	110
LCS	100	92	100
MS	103	90	101
MSD	103	92	107
Limits:	40-130	45-130	45-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11299A16B

	Trifluorotoluene-F
6454453	86
6454456	90
6454457	86
Blank	96
LCS	89
LCSD	93
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11304A20A

	Trifluorotoluene-F
6454458	88
Blank	88
LCS	114
LCSD	112
Limits:	63-135

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113060035A

	Tetrachloro-m-xylene	Decachlorobiphenyl

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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273859
Reported: 11/29/11 at 12:20 PM

Surrogate Quality Control

6454453	105	90
6454455	64	49
6454456	88	70
6454457	139	121*
Blank	120	117
LCS	179*	186*
LCSD	164*	163*
MS	143*	133*
MSD	116	108
Limits:	53-139	45-120

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113150020A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6454454	70	62
Blank	90	97
LCS	89	96
LCSD	96	102
MS	85	88
MSD	93	99
Limits:	53-139	45-120

Analysis Name: 18a Alcohols by 8015B
Batch number: 113040033A

	Acetone
6454453	90
6454454	58
6454456	86
6454457	88
Blank	93
LCS	92
MS	89
MSD	89
Limits:	42-138

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113070014A

	Chlorobenzene	Orthoterphenyl
6454453	86	78
6454454	98	86
6454456	85	75
6454457	80	77
Blank	93	81
LCS	90	98
MS	91	93
MSD	90	90
Limits:	37-125	47-145

Analysis Name: 19a Glycols by 8015B
Batch number: 113080023A

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Quality Control Summary

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Reported: 11/29/11 at 12:20 PM

Surrogate Quality Control

	Tetramethylene glycol
6454453	87
6454454	88
6454456	85
6454457	88
Blank	99
LCS	99
MS	88
MSD	87
Limits:	29-137

Analysis Name: 22a Terphenyls by 8015B
Batch number: 113120010A

	n-Triacontane-d62
6454453	87
6454454	124
6454456	83
6454457	83
Blank	76
LCS	80
MS	73
MSD	77
Limits:	19-152

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acct# 13013 QP# 1273859 samp6# 6454453-58

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	Other Instructions and Notes
SL-091-SA7-SB-3.0	10/27/11	1605	SOIL	NONE	2 Encores									X										
SL-091-SA7-SB-2.5-3.5	10/27/11	1600	SOIL	NONE	1 SS sleeve			X	X															
SL-091-SA7-SB-2.5-3.5	10/27/11	1600	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-116-SA7-SB-0.0-0.5	10/28/11	1020	SOIL	NONE	1 SS sleeve			X	X															
SL-116-SA7-SB-0.0-0.5	10/28/11	1020	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-117-SA7-SB-2.5-3.5	10/28/11	0915	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X											Was not able to collect sleeve
SL-118-SA7-SB-4.5	10/28/11	1125	SOIL	NONE	2 Encores									X										
SL-118-SA7-SB-4.0-5.0	10/28/11	1120	SOIL	NONE	1 SS sleeve			X	X															
SL-118-SA7-SB-4.0-5.0	10/28/11	1120	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-119-SA7-SB-4.5	10/28/11	1445	SOIL	NONE	2 Encores									X										
SL-119-SA7-SB-4.0-5.0	10/28/11	1440	SOIL	NONE	1 SS sleeve			X	X															
SL-119-SA7-SB-4.0-5.0	10/28/11	1440	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
TB-102811	10/28/11	1430	WATER	HCl	2-40 mL vials									X										

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/28/2011 / 1630	10/29/11 0915	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s)	
		8754 3341 0818	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 09, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 10/29/2011
Group Number: 1273860
SDG: DX153
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-091-SA7-SB-2.5-3.5 Soil	6454459
SL-116-SA7-SB-0.0-0.5 Soil	6454460
SL-117-SA7-SB-2.5-3.5 Soil	6454461
SL-118-SA7-SB-4.0-5.0 Soil	6454462
SL-119-SA7-SB-4.0-5.0 Soil	6454463

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454459
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5301 SDG#: DX153-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	2.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454459
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5301 SDG#: DX153-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.116	J	0.0243	1.02	1
11031	12378-PeCDD	40321-76-4	0.327	J	0.0400	5.10	1
11031	123478-HxCDD	39227-28-6	0.254	JB	0.0358	5.10	1
11031	123678-HxCDD	57653-85-7	0.872	JB	0.0356	5.10	1
11031	123789-HxCDD	19408-74-3	0.761	JB	0.0371	5.10	1
11031	1234678-HpCDD	35822-46-9	16.6	B	0.0593	5.10	1
11031	OCDD	3268-87-9	189	B	0.0677	10.2	1
11031	2378-TCDF	51207-31-9	0.123	JQ	0.0536	1.02	1
11031	12378-PeCDF	57117-41-6	1.63	JB	0.0347	5.10	1
11031	23478-PeCDF	57117-31-4	0.750	JB	0.0351	5.10	1
11031	123478-HxCDF	70648-26-9	2.11	JB	0.0323	5.10	1
11031	123678-HxCDF	57117-44-9	0.703	JB	0.0269	5.10	1
11031	123789-HxCDF	72918-21-9	0.252	JB	0.0365	5.10	1
11031	234678-HxCDF	60851-34-5	0.296	JB	0.0313	5.10	1
11031	1234678-HpCDF	67562-39-4	2.50	JB	0.0165	5.10	1
11031	1234789-HpCDF	55673-89-7	0.297	J	0.0279	5.10	1
11031	OCDF	39001-02-0	4.83	JB	0.0377	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	83	25 - 164
13C12-12378-PeCDD	79	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	93	28 - 130
13C12-123789-HxCDD	89	28 - 130
13C12-1234678-HpCDD	86	23 - 140
13C12-OCDD	80	17 - 157
13C12-2378-TCDF	84	24 - 169
13C12-12378-PeCDF	88	24 - 185
13C12-23478-PeCDF	79	21 - 178
13C12-123478-HxCDF	78	26 - 152
13C12-123678-HxCDF	86	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	79	29 - 147
13C12-1234678-HpCDF	99	28 - 143
13C12-1234789-HpCDF	69	26 - 138
13C12-OCDF	62	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454459
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5301 SDG#: DX153-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-091-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-091-SA7-SB

LLI Sample # SW 6454459
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/27/2011 16:00

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5301 SDG#: DX153-01

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/06/2011 00:01	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454460
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5302 SDG#: DX153-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454460
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5302 SDG#: DX153-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0775	J	0.0249	1.02	1
11031	12378-PeCDD	40321-76-4	0.507	J	0.0407	5.12	1
11031	123478-HxCDD	39227-28-6	0.678	JB	0.0387	5.12	1
11031	123678-HxCDD	57653-85-7	1.43	JB	0.0389	5.12	1
11031	123789-HxCDD	19408-74-3	1.60	JB	0.0373	5.12	1
11031	1234678-HpCDD	35822-46-9	33.4	B	0.0723	5.12	1
11031	OCDD	3268-87-9	520	B	0.0938	10.2	1
11031	2378-TCDF	51207-31-9	0.0746	J	0.0365	1.02	1
11031	12378-PeCDF	57117-41-6	0.354	JB	0.0222	5.12	1
11031	23478-PeCDF	57117-31-4	0.337	JB	0.0206	5.12	1
11031	123478-HxCDF	70648-26-9	0.275	JBQ	0.0225	5.12	1
11031	123678-HxCDF	57117-44-9	0.240	JB	0.0209	5.12	1
11031	123789-HxCDF	72918-21-9	0.300	JB	0.0223	5.12	1
11031	234678-HxCDF	60851-34-5	0.215	JB	0.0196	5.12	1
11031	1234678-HpCDF	67562-39-4	2.60	JB	0.0182	5.12	1
11031	1234789-HpCDF	55673-89-7	0.179	JQ	0.0224	5.12	1
11031	OCDF	39001-02-0	7.08	JB	0.0350	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	81	25 - 164
13C12-12378-PeCDD	80	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	83	23 - 140
13C12-OCDD	79	17 - 157
13C12-2378-TCDF	86	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	83	21 - 178
13C12-123478-HxCDF	77	26 - 152
13C12-123678-HxCDF	80	26 - 123
13C12-234678-HxCDF	83	28 - 136
13C12-123789-HxCDF	83	29 - 147
13C12-1234678-HpCDF	82	28 - 143
13C12-1234789-HpCDF	80	26 - 138
13C12-OCDF	74	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454460
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5302 SDG#: DX153-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-116-SA7-SB-0.0-0.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-116-SA7-SB

LLI Sample # SW 6454460
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 10:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5302 SDG#: DX153-02

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/06/2011 00:58	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454461
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5303 SDG#: DX153-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454461
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5303 SDG#: DX153-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0257	U	0.0257	1.03	1
11031	12378-PeCDD	40321-76-4	0.0917	JQ	0.0380	5.13	1
11031	123478-HxCDD	39227-28-6	0.160	JB	0.0314	5.13	1
11031	123678-HxCDD	57653-85-7	0.423	JB	0.0313	5.13	1
11031	123789-HxCDD	19408-74-3	0.455	JB	0.0307	5.13	1
11031	1234678-HpCDD	35822-46-9	10.0	B	0.0578	5.13	1
11031	OCDD	3268-87-9	144	B	0.0715	10.3	1
11031	2378-TCDF	51207-31-9	0.270	J	0.0760	1.03	1
11031	12378-PeCDF	57117-41-6	0.566	JB	0.0359	5.13	1
11031	23478-PeCDF	57117-31-4	0.890	JB	0.0333	5.13	1
11031	123478-HxCDF	70648-26-9	0.538	JB	0.0310	5.13	1
11031	123678-HxCDF	57117-44-9	0.189	JBQ	0.0286	5.13	1
11031	123789-HxCDF	72918-21-9	0.153	JB	0.0297	5.13	1
11031	234678-HxCDF	60851-34-5	0.152	JBQ	0.0252	5.13	1
11031	1234678-HpCDF	67562-39-4	1.27	JB	0.0177	5.13	1
11031	1234789-HpCDF	55673-89-7	0.186	J	0.0243	5.13	1
11031	OCDF	39001-02-0	3.05	JB	0.0409	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	79	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	81	23 - 140
13C12-OCDD	76	17 - 157
13C12-2378-TCDF	83	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	80	21 - 178
13C12-123478-HxCDF	74	26 - 152
13C12-123678-HxCDF	75	26 - 123
13C12-234678-HxCDF	83	28 - 136
13C12-123789-HxCDF	82	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	74	26 - 138
13C12-OCDF	68	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-117-SA7-SB-2.5-3.5 Soil
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454461
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5303 SDG#: DX153-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **SL-117-SA7-SB-2.5-3.5 Soil**
SSFL Area IV Collocated Soil Sampling
SL-117-SA7-SB

LLI Sample # SW 6454461
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 09:15

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5303 SDG#: DX153-03

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/06/2011 01:54	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

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Analysis Report

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454462
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5304 SDG#: DX153-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454462
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5304 SDG#: DX153-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0225	U	0.0225	1.05	1
11031	12378-PeCDD	40321-76-4	0.0786	JQ	0.0307	5.27	1
11031	123478-HxCDD	39227-28-6	0.0943	JBQ	0.0318	5.27	1
11031	123678-HxCDD	57653-85-7	0.462	JB	0.0319	5.27	1
11031	123789-HxCDD	19408-74-3	0.357	JBQ	0.0325	5.27	1
11031	1234678-HpCDD	35822-46-9	12.5	B	0.0595	5.27	1
11031	OCDD	3268-87-9	193	B	0.0590	10.5	1
11031	2378-TCDF	51207-31-9	0.0875	JQ	0.0320	1.05	1
11031	12378-PeCDF	57117-41-6	0.130	JBQ	0.0165	5.27	1
11031	23478-PeCDF	57117-31-4	0.150	JBQ	0.0164	5.27	1
11031	123478-HxCDF	70648-26-9	0.282	JB	0.0236	5.27	1
11031	123678-HxCDF	57117-44-9	0.169	JB	0.0201	5.27	1
11031	123789-HxCDF	72918-21-9	0.215	JB	0.0274	5.27	1
11031	234678-HxCDF	60851-34-5	0.236	JBQ	0.0205	5.27	1
11031	1234678-HpCDF	67562-39-4	2.14	JB	0.0136	5.27	1
11031	1234789-HpCDF	55673-89-7	0.354	J	0.0280	5.27	1
11031	OCDF	39001-02-0	4.81	JB	0.0496	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	79	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	81	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	80	24 - 169
13C12-12378-PeCDF	88	24 - 185
13C12-23478-PeCDF	76	21 - 178
13C12-123478-HxCDF	73	26 - 152
13C12-123678-HxCDF	83	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	105	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	52	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454462
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5304 SDG#: DX153-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-118-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-118-SA7-SB

LLI Sample # SW 6454462
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 11:20

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5304 SDG#: DX153-04

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/06/2011 01:51	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454463
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5305 SDG#: DX153-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454463
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
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Suite 210
Chantilly VA 20151

X5305 SDG#: DX153-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0257	U	0.0257	1.05	1
11031	12378-PeCDD	40321-76-4	0.0304	U	0.0304	5.24	1
11031	123478-HxCDD	39227-28-6	0.0470	JB	0.0242	5.24	1
11031	123678-HxCDD	57653-85-7	0.228	JB	0.0253	5.24	1
11031	123789-HxCDD	19408-74-3	0.259	JB	0.0237	5.24	1
11031	1234678-HpCDD	35822-46-9	3.12	JB	0.0353	5.24	1
11031	OCDD	3268-87-9	36.8	B	0.0431	10.5	1
11031	2378-TCDF	51207-31-9	0.0238	U	0.0238	1.05	1
11031	12378-PeCDF	57117-41-6	0.0913	JB	0.0136	5.24	1
11031	23478-PeCDF	57117-31-4	0.0840	JB	0.0147	5.24	1
11031	123478-HxCDF	70648-26-9	0.0997	JBQ	0.0174	5.24	1
11031	123678-HxCDF	57117-44-9	0.0729	JB	0.0135	5.24	1
11031	123789-HxCDF	72918-21-9	0.181	JB	0.0211	5.24	1
11031	234678-HxCDF	60851-34-5	0.0810	JB	0.0149	5.24	1
11031	1234678-HpCDF	67562-39-4	0.460	JB	0.0117	5.24	1
11031	1234789-HpCDF	55673-89-7	0.0890	J	0.0302	5.24	1
11031	OCDF	39001-02-0	0.844	JB	0.0549	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	82	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	79	23 - 140
13C12-OCDD	74	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	86	24 - 185
13C12-23478-PeCDF	73	21 - 178
13C12-123478-HxCDF	66	26 - 152
13C12-123678-HxCDF	82	26 - 123
13C12-234678-HxCDF	77	28 - 136
13C12-123789-HxCDF	62	29 - 147
13C12-1234678-HpCDF	109	28 - 143
13C12-1234789-HpCDF	51	26 - 138
13C12-OCDF	41	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454463
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5305 SDG#: DX153-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-119-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-119-SA7-SB

LLI Sample # SW 6454463
LLI Group # 1273860
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/28/2011 14:40

Submitted: 10/29/2011 09:15
Reported: 11/09/2011 23:01

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5305 SDG#: DX153-05

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11307002	11/06/2011 02:47	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11307002	11/03/2011 09:30	Deborah M Zimmerman	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401A	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273860
Reported: 11/09/11 at 11:01 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11311162401A	Sample number(s): 6454459-6454463								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11307002	Sample number(s): 6454459-6454463								
2378-TCDD	0.0250 U	0.0250	1.00	ng/kg	110		67-158		
12378-PeCDD	0.0263 U	0.0263	5.00	ng/kg	108		70-142		
123478-HxCDD	0.0229 J	0.0182	5.00	ng/kg	103		70-164		
123678-HxCDD	0.0323 J	0.0182	5.00	ng/kg	99		76-134		
123789-HxCDD	0.0212 J	0.0186	5.00	ng/kg	105		64-162		
1234678-HpCDD	0.268 J	0.0221	5.00	ng/kg	102		70-140		
OCDD	0.412 J	0.0259	10.0	ng/kg	98		78-144		
2378-TCDF	0.0197 U	0.0197	1.00	ng/kg	108		75-158		
12378-PeCDF	0.0304 J	0.0104	5.00	ng/kg	105		80-134		
23478-PeCDF	0.0732 J	0.0110	5.00	ng/kg	99		68-160		
123478-HxCDF	0.0245 J	0.0131	5.00	ng/kg	100		72-134		
123678-HxCDF	0.0169 J	0.0110	5.00	ng/kg	99		84-130		
123789-HxCDF	0.0396 J	0.0154	5.00	ng/kg	101		78-130		
234678-HxCDF	0.0200 J	0.0127	5.00	ng/kg	100		70-156		
1234678-HpCDF	0.0783 J	0.00700	5.00	ng/kg	93		82-122		
1234789-HpCDF	0.0162 U	0.0162	5.00	ng/kg	101		78-138		
OCDF	0.185 J	0.0413	10.0	ng/kg	101		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11311162401A	Sample number(s): 6454459-6454463					BKG: P451565			
Moisture Content by 160.3						8.7	9.3	7	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1273860
Reported: 11/09/11 at 11:01 PM

Surrogate Quality Control

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11307002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6454459	83	79	78	86	80	79
6454460	81	83	77	80	83	83
6454461	79	80	74	75	83	82
6454462	79	76	73	83	80	68
6454463	74	73	66	82	77	62
Blank	65	65	64	76	67	64
OPR	71	66	63	79	67	58
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6454459	99	69	62	79	88	93
6454460	82	80	74	80	83	85
6454461	84	74	68	78	80	83
6454462	105	60	52	78	83	85
6454463	109	51	41	74	82	83
Blank	102	55	46	69	74	78
OPR	107	50	42	73	79	80
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6454459	89	86	80	84	88
6454460	84	83	79	86	83
6454461	82	81	76	83	83
6454462	83	81	77	80	88
6454463	80	79	74	74	86
Blank	75	78	75	64	75
OPR	81	81	78	68	80
Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Gp# 1273860 samp6# 6454459-63

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 5 (SA5) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020B&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTe EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Tetphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	Other Instructions and Notes
SL-091-SA7-SB-3.0	10/27/11	1605	SOIL	NONE	2 Encores									X										
SL-091-SA7-SB-2.5-3.5	10/27/11	1600	SOIL	NONE	1 SS sleeve			X	X															
SL-091-SA7-SB-2.5-3.5	10/27/11	1600	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-116-SA7-SB-0.0-0.5	10/28/11	1020	SOIL	NONE	1 SS sleeve			X	X															
SL-116-SA7-SB-0.0-0.5	10/28/11	1020	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-117-SA7-SB-2.5-3.5	10/28/11	0915	SOIL	NONE	2-16 oz Jars	X	X	X	X	X	X	X	X											Was not able to collect sleeve
SL-118-SA7-SB-4.5	10/28/11	1125	SOIL	NONE	2 Encores									X										
SL-118-SA7-SB-4.0-5.0	10/28/11	1120	SOIL	NONE	1 SS sleeve			X	X															
SL-118-SA7-SB-4.0-5.0	10/28/11	1120	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
SL-119-SA7-SB-4.5	10/28/11	1445	SOIL	NONE	2 Encores									X										
SL-119-SA7-SB-4.0-5.0	10/28/11	1440	SOIL	NONE	1 SS sleeve			X	X															
SL-119-SA7-SB-4.0-5.0	10/28/11	1440	SOIL	NONE	2-16 oz Jars	X	X			X	X	X	X		X					X	X	X	X	
TB-102811	10/28/11	1430	WATER	HCl	2-40 mL vials									X										

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	10/28/2011 / 1630	10/29/11 0915	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s)	
		8754 3341 0818	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 22, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 11/02/2011
Group Number: 1274353
SDG: DX153
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-001-SA7-SB-4.0-5.0 Soil	6457203
SL-120-SA7-SB-4.0-5.0 Soil	6457204
SL-120-SA7-SB-9.0-10.0 Soil	6457205
SL-121-SA7-SB-4.0-5.0 Soil	6457206
SL-121-SA7-SB-9.0-10.0 Soil	6457207
SL-123-SA7-SB-4.0-5.0 Soil	6457208
SL-123-SA7-SB-9.0-10.0 Soil	6457209
SL-160-SA7-SB-0.0-1.0 Soil	6457210
SL-175-SA7-SB-4.0-5.0 Soil	6457211
SL-175-SA7-SB-9.0-10.0 Soil	6457212
SL-185-SA7-SB-3.0-4.0 Soil	6457213

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-001-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-001-SA7-SB

LLI Sample # SW 6457203
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 15:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-001 SDG#: DX153-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	6.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: SL-001-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-001-SA7-SB

LLI Sample # SW 6457203
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 15:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-001 SDG#: DX153-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0623 J	0.0325	1.05	1
11031	12378-PeCDD	40321-76-4	0.0882 JBQ	0.0245	5.26	1
11031	123478-HxCDD	39227-28-6	0.0365 J	0.0211	5.26	1
11031	123678-HxCDD	57653-85-7	0.0711 JBQ	0.0212	5.26	1
11031	123789-HxCDD	19408-74-3	0.0665 JB	0.0196	5.26	1
11031	1234678-HpCDD	35822-46-9	0.790 JB	0.0242	5.26	1
11031	OCDD	3268-87-9	3.77 JB	0.0200	10.5	1
11031	2378-TCDF	51207-31-9	0.0267 U	0.0267	1.05	1
11031	12378-PeCDF	57117-41-6	0.0739 JBQ	0.0134	5.26	1
11031	23478-PeCDF	57117-31-4	0.106 JB	0.0127	5.26	1
11031	123478-HxCDF	70648-26-9	0.0520 JB	0.0155	5.26	1
11031	123678-HxCDF	57117-44-9	0.0652 JB	0.0152	5.26	1
11031	123789-HxCDF	72918-21-9	0.0728 JBQ	0.0155	5.26	1
11031	234678-HxCDF	60851-34-5	0.0882 JBQ	0.0150	5.26	1
11031	1234678-HpCDF	67562-39-4	0.271 JB	0.00991	5.26	1
11031	1234789-HpCDF	55673-89-7	0.0304 JB	0.0141	5.26	1
11031	OCDF	39001-02-0	0.412 JBQ	0.0273	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	71	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	82	32 - 141
13C12-123678-HxCDD	83	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	93	23 - 140
13C12-OCDD	102	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	77	21 - 178
13C12-123478-HxCDF	76	26 - 152
13C12-123678-HxCDF	82	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	88	29 - 147
13C12-1234678-HpCDF	99	28 - 143
13C12-1234789-HpCDF	85	26 - 138
13C12-OCDF	91	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-001-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-001-SA7-SB

LLI Sample # SW 6457203
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 15:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-001 SDG#: DX153-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-001-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-001-SA7-SB

LLI Sample # SW 6457203
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 15:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-001 SDG#: DX153-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/09/2011 20:22	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11325162402A	11/21/2011 19:17	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-120-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457204
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1204 SDG#: DX153-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-120-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457204
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1204 SDG#: DX153-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0285	U	0.0285	1.05	1
11031	12378-PeCDD	40321-76-4	0.0576	JBQ	0.0258	5.25	1
11031	123478-HxCDD	39227-28-6	0.0208	U	0.0208	5.25	1
11031	123678-HxCDD	57653-85-7	0.240	JB	0.0223	5.25	1
11031	123789-HxCDD	19408-74-3	0.439	JB	0.0208	5.25	1
11031	1234678-HpCDD	35822-46-9	0.924	JB	0.0251	5.25	1
11031	OCDD	3268-87-9	7.69	JB	0.0208	10.5	1
11031	2378-TCDF	51207-31-9	0.0278	JQ	0.0232	1.05	1
11031	12378-PeCDF	57117-41-6	0.0647	JB	0.0137	5.25	1
11031	23478-PeCDF	57117-31-4	0.0752	JB	0.0129	5.25	1
11031	123478-HxCDF	70648-26-9	0.0785	JBQ	0.0152	5.25	1
11031	123678-HxCDF	57117-44-9	0.0390	JB	0.0141	5.25	1
11031	123789-HxCDF	72918-21-9	0.183	JBQ	0.0152	5.25	1
11031	234678-HxCDF	60851-34-5	0.0759	JB	0.0137	5.25	1
11031	1234678-HpCDF	67562-39-4	0.335	JB	0.0109	5.25	1
11031	1234789-HpCDF	55673-89-7	0.0636	JB	0.0154	5.25	1
11031	OCDF	39001-02-0	0.431	JB	0.0243	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	73	25 - 164
13C12-12378-PeCDD	78	25 - 181
13C12-123478-HxCDD	87	32 - 141
13C12-123678-HxCDD	86	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	90	23 - 140
13C12-OCDD	96	17 - 157
13C12-2378-TCDF	75	24 - 169
13C12-12378-PeCDF	84	24 - 185
13C12-23478-PeCDF	79	21 - 178
13C12-123478-HxCDF	73	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	83	29 - 147
13C12-1234678-HpCDF	95	28 - 143
13C12-1234789-HpCDF	79	26 - 138
13C12-OCDF	83	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-120-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457204
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1204 SDG#: DX153-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-120-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457204
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1204 SDG#: DX153-07

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/09/2011 21:19	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-120-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457205
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 10:40

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1209 SDG#: DX153-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-120-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457205
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 10:40

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1209 SDG#: DX153-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0322 U	0.0322	1.11	1
11031	12378-PeCDD	40321-76-4	0.0288 JBQ	0.0288	5.57	1
11031	123478-HxCDD	39227-28-6	0.0257 J	0.0223	5.57	1
11031	123678-HxCDD	57653-85-7	0.108 JB	0.0233	5.57	1
11031	123789-HxCDD	19408-74-3	0.136 JB	0.0222	5.57	1
11031	1234678-HpCDD	35822-46-9	1.21 JB	0.0268	5.57	1
11031	OCDD	3268-87-9	8.89 JB	0.0205	11.1	1
11031	2378-TCDF	51207-31-9	0.0513 J	0.0277	1.11	1
11031	12378-PeCDF	57117-41-6	0.0595 JB	0.0142	5.57	1
11031	23478-PeCDF	57117-31-4	0.0508 JB	0.0135	5.57	1
11031	123478-HxCDF	70648-26-9	0.0657 JBQ	0.0159	5.57	1
11031	123678-HxCDF	57117-44-9	0.0507 JBQ	0.0138	5.57	1
11031	123789-HxCDF	72918-21-9	0.111 JB	0.0170	5.57	1
11031	234678-HxCDF	60851-34-5	0.0913 JBQ	0.0141	5.57	1
11031	1234678-HpCDF	67562-39-4	0.343 JB	0.0116	5.57	1
11031	1234789-HpCDF	55673-89-7	0.0705 JBQ	0.0209	5.57	1
11031	OCDF	39001-02-0	0.567 JB	0.0316	11.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	87	28 - 130
13C12-123789-HxCDD	85	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	73	24 - 169
13C12-12378-PeCDF	82	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	81	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	76	29 - 147
13C12-1234678-HpCDF	104	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	73	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-120-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457205
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 10:40

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1209 SDG#: DX153-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-120-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-120-SA7-SB

LLI Sample # SW 6457205
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 10:40

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1209 SDG#: DX153-08

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/09/2011 22:15	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-121-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457206
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 11:50

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1214 SDG#: DX153-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	9.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-121-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457206
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 11:50

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1214 SDG#: DX153-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0305	U	0.0305	1.08	1
11031	12378-PeCDD	40321-76-4	0.0368	JB	0.0279	5.39	1
11031	123478-HxCDD	39227-28-6	0.0688	JQ	0.0248	5.39	1
11031	123678-HxCDD	57653-85-7	0.733	JB	0.0262	5.39	1
11031	123789-HxCDD	19408-74-3	0.908	JB	0.0245	5.39	1
11031	1234678-HpCDD	35822-46-9	6.26	B	0.0370	5.39	1
11031	OCDD	3268-87-9	53.8	B	0.0329	10.8	1
11031	2378-TCDF	51207-31-9	0.0462	J	0.0327	1.08	1
11031	12378-PeCDF	57117-41-6	0.279	JB	0.0182	5.39	1
11031	23478-PeCDF	57117-31-4	0.142	JB	0.0165	5.39	1
11031	123478-HxCDF	70648-26-9	0.121	JB	0.0192	5.39	1
11031	123678-HxCDF	57117-44-9	0.299	JB	0.0185	5.39	1
11031	123789-HxCDF	72918-21-9	0.211	JB	0.0185	5.39	1
11031	234678-HxCDF	60851-34-5	0.106	JBQ	0.0176	5.39	1
11031	1234678-HpCDF	67562-39-4	1.14	JB	0.0144	5.39	1
11031	1234789-HpCDF	55673-89-7	0.131	JB	0.0185	5.39	1
11031	OCDF	39001-02-0	2.80	JB	0.0228	10.8	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	79	25 - 164
13C12-12378-PeCDD	79	25 - 181
13C12-123478-HxCDD	89	32 - 141
13C12-123678-HxCDD	87	28 - 130
13C12-123789-HxCDD	85	28 - 130
13C12-1234678-HpCDD	91	23 - 140
13C12-OCDD	99	17 - 157
13C12-2378-TCDF	81	24 - 169
13C12-12378-PeCDF	85	24 - 185
13C12-23478-PeCDF	80	21 - 178
13C12-123478-HxCDF	77	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	82	28 - 136
13C12-123789-HxCDF	87	29 - 147
13C12-1234678-HpCDF	91	28 - 143
13C12-1234789-HpCDF	85	26 - 138
13C12-OCDF	92	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-121-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457206
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 11:50

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1214 SDG#: DX153-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-121-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457206
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 11:50

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1214 SDG#: DX153-09

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/09/2011 23:12	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-121-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457207
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 12:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1219 SDG#: DX153-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	11.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-121-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457207
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 12:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1219 SDG#: DX153-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0280 U	0.0280	1.11	1
11031	12378-PeCDD	40321-76-4	0.0941 JBQ	0.0301	5.54	1
11031	123478-HxCDD	39227-28-6	0.0597 JQ	0.0233	5.54	1
11031	123678-HxCDD	57653-85-7	0.346 JB	0.0235	5.54	1
11031	123789-HxCDD	19408-74-3	0.454 JB	0.0227	5.54	1
11031	1234678-HpCDD	35822-46-9	4.96 JB	0.0337	5.54	1
11031	OCDD	3268-87-9	56.2 B	0.0330	11.1	1
11031	2378-TCDF	51207-31-9	0.0270 J	0.0249	1.11	1
11031	12378-PeCDF	57117-41-6	0.160 JB	0.0135	5.54	1
11031	23478-PeCDF	57117-31-4	0.0874 JBQ	0.0137	5.54	1
11031	123478-HxCDF	70648-26-9	0.0984 JB	0.0172	5.54	1
11031	123678-HxCDF	57117-44-9	0.0948 JB	0.0151	5.54	1
11031	123789-HxCDF	72918-21-9	0.742 JBQ	0.0177	5.54	1
11031	234678-HxCDF	60851-34-5	0.108 JB	0.0143	5.54	1
11031	1234678-HpCDF	67562-39-4	0.844 JB	0.0114	5.54	1
11031	1234789-HpCDF	55673-89-7	0.0963 JB	0.0210	5.54	1
11031	OCDF	39001-02-0	1.92 JB	0.0299	11.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	79	25 - 164
13C12-12378-PeCDD	81	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	87	28 - 130
13C12-123789-HxCDD	87	28 - 130
13C12-1234678-HpCDD	90	23 - 140
13C12-OCDD	98	17 - 157
13C12-2378-TCDF	79	24 - 169
13C12-12378-PeCDF	88	24 - 185
13C12-23478-PeCDF	80	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	80	26 - 123
13C12-234678-HxCDF	82	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	107	28 - 143
13C12-1234789-HpCDF	71	26 - 138
13C12-OCDF	69	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-121-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457207
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 12:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1219 SDG#: DX153-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-121-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-121-SA7-SB

LLI Sample # SW 6457207
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 10/31/2011 12:15

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1219 SDG#: DX153-10

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 00:08	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-123-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457208
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 10:56

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1234 SDG#: DX153-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-123-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457208
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 10:56

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1234 SDG#: DX153-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0311 U	0.0311	1.06	1
11031	12378-PeCDD	40321-76-4	0.0757 JBQ	0.0302	5.30	1
11031	123478-HxCDD	39227-28-6	0.0727 J	0.0239	5.30	1
11031	123678-HxCDD	57653-85-7	0.270 JBQ	0.0235	5.30	1
11031	123789-HxCDD	19408-74-3	0.275 JB	0.0239	5.30	1
11031	1234678-HpCDD	35822-46-9	3.67 JB	0.0334	5.30	1
11031	OCDD	3268-87-9	37.2 B	0.0271	10.6	1
11031	2378-TCDF	51207-31-9	0.0291 JQ	0.0237	1.06	1
11031	12378-PeCDF	57117-41-6	0.0631 JB	0.0133	5.30	1
11031	23478-PeCDF	57117-31-4	0.120 JBQ	0.0133	5.30	1
11031	123478-HxCDF	70648-26-9	0.114 JB	0.0208	5.30	1
11031	123678-HxCDF	57117-44-9	0.0991 JB	0.0177	5.30	1
11031	123789-HxCDF	72918-21-9	0.155 JBQ	0.0215	5.30	1
11031	234678-HxCDF	60851-34-5	0.133 JBQ	0.0180	5.30	1
11031	1234678-HpCDF	67562-39-4	0.692 JB	0.0104	5.30	1
11031	1234789-HpCDF	55673-89-7	0.110 JB	0.0221	5.30	1
11031	OCDF	39001-02-0	1.39 JB	0.0362	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	89	28 - 130
13C12-123789-HxCDD	85	28 - 130
13C12-1234678-HpCDD	88	23 - 140
13C12-OCDD	97	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	73	21 - 178
13C12-123478-HxCDF	71	26 - 152
13C12-123678-HxCDF	82	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	73	29 - 147
13C12-1234678-HpCDF	114	28 - 143
13C12-1234789-HpCDF	67	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-123-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457208
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 10:56

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1234 SDG#: DX153-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-123-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457208
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 10:56

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1234 SDG#: DX153-11

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 01:05	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-123-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457209
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 11:25

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1239 SDG#: DX153-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	10.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-123-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457209
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 11:25

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1239 SDG#: DX153-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0339 U	0.0339	1.11	1
11031	12378-PeCDD	40321-76-4	0.0685 JBQ	0.0361	5.53	1
11031	123478-HxCDD	39227-28-6	0.0442 J	0.0257	5.53	1
11031	123678-HxCDD	57653-85-7	0.131 JB	0.0271	5.53	1
11031	123789-HxCDD	19408-74-3	0.125 JBQ	0.0264	5.53	1
11031	1234678-HpCDD	35822-46-9	1.91 JB	0.0304	5.53	1
11031	OCDD	3268-87-9	16.6 B	0.0284	11.1	1
11031	2378-TCDF	51207-31-9	0.0340 JQ	0.0283	1.11	1
11031	12378-PeCDF	57117-41-6	0.0474 JBQ	0.0145	5.53	1
11031	23478-PeCDF	57117-31-4	0.0690 JB	0.0151	5.53	1
11031	123478-HxCDF	70648-26-9	0.0716 JB	0.0204	5.53	1
11031	123678-HxCDF	57117-44-9	0.0768 JB	0.0170	5.53	1
11031	123789-HxCDF	72918-21-9	0.122 JB	0.0238	5.53	1
11031	234678-HxCDF	60851-34-5	0.110 JBQ	0.0200	5.53	1
11031	1234678-HpCDF	67562-39-4	0.369 JB	0.0111	5.53	1
11031	1234789-HpCDF	55673-89-7	0.0676 JB	0.0232	5.53	1
11031	OCDF	39001-02-0	0.761 JB	0.0489	11.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	70	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	96	17 - 157
13C12-2378-TCDF	69	24 - 169
13C12-12378-PeCDF	82	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	68	26 - 152
13C12-123678-HxCDF	80	26 - 123
13C12-234678-HxCDF	73	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	112	28 - 143
13C12-1234789-HpCDF	65	26 - 138
13C12-OCDF	61	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-123-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457209
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 11:25

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1239 SDG#: DX153-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-123-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-123-SA7-SB

LLI Sample # SW 6457209
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 11:25

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1239 SDG#: DX153-12

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 02:02	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-160-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-160-SA7-SB

LLI Sample # SW 6457210
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:03

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-160 SDG#: DX153-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	3.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-160-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-160-SA7-SB

LLI Sample # SW 6457210
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:03

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-160 SDG#: DX153-13

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0917	J	0.0302	1.01	1
11031	12378-PeCDD	40321-76-4	0.352	JB	0.0369	5.04	1
11031	123478-HxCDD	39227-28-6	0.418	J	0.0311	5.04	1
11031	123678-HxCDD	57653-85-7	1.42	JB	0.0315	5.04	1
11031	123789-HxCDD	19408-74-3	0.822	JB	0.0313	5.04	1
11031	1234678-HpCDD	35822-46-9	29.2	B	0.0619	5.04	1
11031	OCDD	3268-87-9	404	B	0.0640	10.1	1
11031	2378-TCDF	51207-31-9	0.209	J	0.0462	1.01	1
11031	12378-PeCDF	57117-41-6	0.369	JB	0.0247	5.04	1
11031	23478-PeCDF	57117-31-4	0.482	JB	0.0227	5.04	1
11031	123478-HxCDF	70648-26-9	0.493	JB	0.0231	5.04	1
11031	123678-HxCDF	57117-44-9	0.362	JB	0.0232	5.04	1
11031	123789-HxCDF	72918-21-9	0.339	JB	0.0226	5.04	1
11031	234678-HxCDF	60851-34-5	0.405	JB	0.0212	5.04	1
11031	1234678-HpCDF	67562-39-4	5.10	B	0.0221	5.04	1
11031	1234789-HpCDF	55673-89-7	0.438	JB	0.0278	5.04	1
11031	OCDF	39001-02-0	12.4	B	0.0256	10.1	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	90	25 - 164
13C12-12378-PeCDD	91	25 - 181
13C12-123478-HxCDD	99	32 - 141
13C12-123678-HxCDD	100	28 - 130
13C12-123789-HxCDD	96	28 - 130
13C12-1234678-HpCDD	104	23 - 140
13C12-OCDD	114	17 - 157
13C12-2378-TCDF	94	24 - 169
13C12-12378-PeCDF	96	24 - 185
13C12-23478-PeCDF	93	21 - 178
13C12-123478-HxCDF	88	26 - 152
13C12-123678-HxCDF	91	26 - 123
13C12-234678-HxCDF	98	28 - 136
13C12-123789-HxCDF	103	29 - 147
13C12-1234678-HpCDF	104	28 - 143
13C12-1234789-HpCDF	99	26 - 138
13C12-OCDF	105	17 - 157

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*
Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-160-SA7-SB-0.0-1.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-160-SA7-SB

LLI Sample # SW 6457210
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:03

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-160 SDG#: DX153-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-160-SA7-SB-0.0-1.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-160-SA7-SB

LLI Sample # SW 6457210
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:03

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-160 SDG#: DX153-13

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 02:58	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11325162402A	11/21/2011 19:17	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-175-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457211
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 08:45

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1754 SDG#: DX153-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-175-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457211
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 08:45

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1754 SDG#: DX153-14

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0899	JQ	0.0324	1.04	1
11031	12378-PeCDD	40321-76-4	0.319	JBQ	0.0322	5.19	1
11031	123478-HxCDD	39227-28-6	0.156	JQ	0.0277	5.19	1
11031	123678-HxCDD	57653-85-7	0.475	JB	0.0281	5.19	1
11031	123789-HxCDD	19408-74-3	0.454	JB	0.0266	5.19	1
11031	1234678-HpCDD	35822-46-9	9.35	B	0.0394	5.19	1
11031	OCDD	3268-87-9	98.4	B	0.0403	10.4	1
11031	2378-TCDF	51207-31-9	0.0745	JQ	0.0250	1.04	1
11031	12378-PeCDF	57117-41-6	0.272	JB	0.0125	5.19	1
11031	23478-PeCDF	57117-31-4	0.259	JBQ	0.0133	5.19	1
11031	123478-HxCDF	70648-26-9	0.197	JB	0.0212	5.19	1
11031	123678-HxCDF	57117-44-9	0.184	JB	0.0183	5.19	1
11031	123789-HxCDF	72918-21-9	0.166	JBQ	0.0237	5.19	1
11031	234678-HxCDF	60851-34-5	0.198	JBQ	0.0193	5.19	1
11031	1234678-HpCDF	67562-39-4	0.901	JB	0.00978	5.19	1
11031	1234789-HpCDF	55673-89-7	0.136	JB	0.0225	5.19	1
11031	OCDF	39001-02-0	1.92	JB	0.0408	10.4	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	74	25 - 164
13C12-12378-PeCDD	79	25 - 181
13C12-123478-HxCDD	84	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	96	23 - 140
13C12-OCDD	107	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	90	24 - 185
13C12-23478-PeCDF	78	21 - 178
13C12-123478-HxCDF	76	26 - 152
13C12-123678-HxCDF	88	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	76	29 - 147
13C12-1234678-HpCDF	131	28 - 143
13C12-1234789-HpCDF	69	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-175-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457211
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 08:45

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1754 SDG#: DX153-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-175-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457211
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 08:45

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1754 SDG#: DX153-14

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 06:58	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-175-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457212
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1759 SDG#: DX153-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	15.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-175-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457212
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1759 SDG#: DX153-15

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0511	J	0.0307	1.15	1
11031	12378-PeCDD	40321-76-4	0.0666	JB	0.0271	5.76	1
11031	123478-HxCDD	39227-28-6	0.0615	JQ	0.0227	5.76	1
11031	123678-HxCDD	57653-85-7	0.140	JB	0.0226	5.76	1
11031	123789-HxCDD	19408-74-3	0.134	JBQ	0.0228	5.76	1
11031	1234678-HpCDD	35822-46-9	2.68	JB	0.0301	5.76	1
11031	OCDD	3268-87-9	26.3	B	0.0293	11.5	1
11031	2378-TCDF	51207-31-9	0.0298	U	0.0298	1.15	1
11031	12378-PeCDF	57117-41-6	0.0646	JB	0.0132	5.76	1
11031	23478-PeCDF	57117-31-4	0.0865	JB	0.0139	5.76	1
11031	123478-HxCDF	70648-26-9	0.0572	JBQ	0.0189	5.76	1
11031	123678-HxCDF	57117-44-9	0.0255	JBQ	0.0160	5.76	1
11031	123789-HxCDF	72918-21-9	0.0448	JBQ	0.0226	5.76	1
11031	234678-HxCDF	60851-34-5	0.0794	JB	0.0167	5.76	1
11031	1234678-HpCDF	67562-39-4	0.359	JB	0.0104	5.76	1
11031	1234789-HpCDF	55673-89-7	0.105	JBQ	0.0266	5.76	1
11031	OCDF	39001-02-0	0.716	JB	0.0424	11.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	73	25 - 164
13C12-12378-PeCDD	77	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	89	28 - 130
13C12-123789-HxCDD	86	28 - 130
13C12-1234678-HpCDD	92	23 - 140
13C12-OCDD	100	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	85	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	86	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	67	29 - 147
13C12-1234678-HpCDF	124	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	54	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-175-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457212
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1759 SDG#: DX153-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-175-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-175-SA7-SB

LLI Sample # SW 6457212
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 09:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D1759 SDG#: DX153-15

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 07:54	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	2	11315162401A	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-185-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-185-SA7-SB

LLI Sample # SW 6457213
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-185 SDG#: DX153-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	3.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: SL-185-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-185-SA7-SB

LLI Sample # SW 6457213
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-185 SDG#: DX153-16

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0292	U	0.0292	1.02	1
11031	12378-PeCDD	40321-76-4	0.0250	U	0.0250	5.12	1
11031	123478-HxCDD	39227-28-6	0.0419	JQ	0.0184	5.12	1
11031	123678-HxCDD	57653-85-7	0.120	JB	0.0191	5.12	1
11031	123789-HxCDD	19408-74-3	0.0869	JB	0.0201	5.12	1
11031	1234678-HpCDD	35822-46-9	2.21	JB	0.0237	5.12	1
11031	OCDD	3268-87-9	16.0	B	0.0219	10.2	1
11031	2378-TCDF	51207-31-9	0.0278	J	0.0193	1.02	1
11031	12378-PeCDF	57117-41-6	0.0144	JBQ	0.0114	5.12	1
11031	23478-PeCDF	57117-31-4	0.0608	JB	0.0120	5.12	1
11031	123478-HxCDF	70648-26-9	0.0801	JBQ	0.0155	5.12	1
11031	123678-HxCDF	57117-44-9	0.0418	JBQ	0.0129	5.12	1
11031	123789-HxCDF	72918-21-9	0.0648	JBQ	0.0164	5.12	1
11031	234678-HxCDF	60851-34-5	0.0693	JB	0.0134	5.12	1
11031	1234678-HpCDF	67562-39-4	0.443	JB	0.00826	5.12	1
11031	1234789-HpCDF	55673-89-7	0.0726	JB	0.0181	5.12	1
11031	OCDF	39001-02-0	1.01	JB	0.0305	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	84	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	85	23 - 140
13C12-OCDD	92	17 - 157
13C12-2378-TCDF	68	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	65	26 - 152
13C12-123678-HxCDF	78	26 - 123
13C12-234678-HxCDF	71	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	111	28 - 143
13C12-1234789-HpCDF	62	26 - 138
13C12-OCDF	58	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-185-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-185-SA7-SB

LLI Sample # SW 6457213
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-185 SDG#: DX153-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-185-SA7-SB-3.0-4.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-185-SA7-SB

LLI Sample # SW 6457213
LLI Group # 1274353
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/01/2011 14:30

Submitted: 11/02/2011 09:00
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

D-185 SDG#: DX153-16

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 08:51	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11325162402A	11/21/2011 19:17	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274353
Reported: 11/22/11 at 09:13 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11315162401A	Sample number(s): 6457204-6457209,6457211-6457212								
Moisture Content by 160.3					100		80-120		
Batch number: 11325162402A	Sample number(s): 6457203,6457210,6457213								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11312001	Sample number(s): 6457203-6457213								
2378-TCDD	0.0363 U	0.0363	1.00	ng/kg	111		67-158		
12378-PeCDD	0.0798 J	0.0298	5.00	ng/kg	108		70-142		
123478-HxCDD	0.0215 U	0.0215	5.00	ng/kg	105		70-164		
123678-HxCDD	0.0367 J	0.0206	5.00	ng/kg	103		76-134		
123789-HxCDD	0.0394 J	0.0210	5.00	ng/kg	107		64-162		
1234678-HpCDD	0.346 J	0.0222	5.00	ng/kg	104		70-140		
OCDD	0.581 J	0.0163	10.0	ng/kg	102		78-144		
2378-TCDF	0.0291 U	0.0291	1.00	ng/kg	106		75-158		
12378-PeCDF	0.0252 J	0.0149	5.00	ng/kg	108		80-134		
23478-PeCDF	0.0569 J	0.0150	5.00	ng/kg	99		68-160		
123478-HxCDF	0.0719 J	0.0162	5.00	ng/kg	104		72-134		
123678-HxCDF	0.0445 J	0.0151	5.00	ng/kg	107		84-130		
123789-HxCDF	0.0751 J	0.0163	5.00	ng/kg	105		78-130		
234678-HxCDF	0.0744 J	0.0148	5.00	ng/kg	103		70-156		
1234678-HpCDF	0.203 J	0.00860	5.00	ng/kg	95		82-122		
1234789-HpCDF	0.105 J	0.0145	5.00	ng/kg	103		78-138		
OCDF	0.318 J	0.0314	10.0	ng/kg	101		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11315162401A	Sample number(s): 6457204-6457209,6457211-6457212					BKG: P457197			
Moisture Content by 160.3						0.50 U	0.50 U	0 (1)	20
Batch number: 11325162402A	Sample number(s): 6457203,6457210,6457213					BKG: P465418			
Moisture Content by 160.3						10.3	10.3	1	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274353
Reported: 11/22/11 at 09:13 AM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11312001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6457203	71	77	76	82	79	88
6457204	73	79	73	79	81	83
6457205	72	74	72	81	78	76
6457206	79	80	77	79	82	87
6457207	79	80	70	80	82	77
6457208	72	73	71	82	76	73
6457209	70	71	68	80	73	69
6457210	90	93	88	91	98	103
6457211	74	78	76	88	78	76
6457212	73	72	69	86	78	67
6457213	67	71	65	78	71	68
Blank	77	82	80	90	84	91
OPR	65	73	69	78	75	79
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6457203	99	85	91	76	82	83
6457204	95	79	83	78	87	86
6457205	104	71	73	76	88	87
6457206	91	85	92	79	89	87
6457207	107	71	69	81	88	87
6457208	114	67	64	74	88	89
6457209	112	65	61	72	86	85
6457210	104	99	105	91	99	100
6457211	131	69	64	79	84	85
6457212	124	60	54	77	86	89
6457213	111	62	58	72	83	84
Blank	122	89	96	85	93	96
OPR	112	77	83	76	82	84
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6457203	83	93	102	73	81
6457204	83	90	96	75	84
6457205	85	87	95	73	82
6457206	85	91	99	81	85
6457207	87	90	98	79	88
6457208	85	88	97	72	83
6457209	83	87	96	69	82
6457210	96	104	114	94	96
6457211	86	96	107	76	90
6457212	86	92	100	70	85
6457213	79	85	92	68	81
Blank	95	108	122	76	92
OPR	87	97	109	62	79

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274353
Reported: 11/22/11 at 09:13 AM

Surrogate Quality Control

Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1274353 6457203-13

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Dioxin/Furan EPA 1613B	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Terphenyls EPA 8015B	Other Instructions and Notes
SL-001-SA7-SB-4.0-5.0	10/31/11	1515	SOIL	NONE	1-16 oz jar	X				
SL-120-SA7-SB-4.0-5.0	10/31/11	0930	SOIL	NONE	1-16 oz jar	X	X	X	X	
SL-120-SA7-SB-9.0-10.0	10/31/11	1040	SOIL	NONE	1-16 oz jar	X	X	X	X	
SL-121-SA7-SB-4.0-5.0	10/31/11	1150	SOIL	NONE	1-16 oz jar	X			X	
SL-121-SA7-SB-9.0-10.0	10/31/11	1215	SOIL	NONE	1-16 oz jar	X			X	
EB-SA7-SB-103111	10/31/11	1440	WATER	NONE	1-1 L amber			X		
SL-123-SA7-SB-4.0-5.0	11/1/11	1056	SOIL	NONE	1-16 oz jar	X			X	
SL-123-SA7-SB-9.0-10.0	11/1/11	1125	SOIL	NONE	1-16 oz jar	X			X	
SL-160-SA7-SB-0.0-1.0	11/1/11	1403	SOIL	NONE	1-8 oz jar	X				
SL-175-SA7-SB-4.0-5.0	11/1/11	0845	SOIL	NONE	1-16 oz jar	X			X	
SL-175-SA7-SB-9.0-10.0	11/1/11	0930	SOIL	NONE	1-16 oz jar	X			X	
SL-185-SA7-SB-3.0-4.0	11/1/11	1430	SOIL	NONE	1-8 oz jar	X				
TB-110111	11/1/11	1430	SOIL	NONE	1-4 oz jar			X		
TB-110111	11/1/11	1430	WATER	NONE	1-1 L amber			X		

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	11/1/2011 / 1630		Lancaster Laboratories, Inc.
Received by: (*Signature*)	**Date/Time**	**Airbill No.(s)**	
		8754 3341 0829	11/2/11 0906

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

December 05, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 11/04/2011
Group Number: 1274858
SDG: DE279
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-048-SA7-SB-4.0-5.0 Soil	6460110
SL-048-SA7-SB-9.0-10.0 Soil	6460111
SL-108-SA7-SB-2.9-3.9 Soil	6460112
SL-128-SA7-SB-4.0-5.0 Soil	6460113
SL-128-SA7-SB-9.0-10.0 Soil	6460114
SL-171-SA7-SB-4.0-5.0 Soil	6460115
SL-171-SA7-SB-9.0-10.0 Soil	6460116
EB-SA7-SB-110311 Water	6460117
EB-SA7-SB-110311 Water	6460118
TB-110311 Sand	6460119
TB-110311 Water	6460120

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-048-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460110
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7901 SDG#: DE279-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	17.6	U	17.6	35.2	1
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	630	U	630	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.3		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 01:15	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 19:48	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 18:21	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-048-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460111
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 10:00

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7902 SDG#: DE279-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	176	U	176	352	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	620	U	620	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.2		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 01:34	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 19:58	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 17:59	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-108-SA7-SB-2.9-3.9 Soil
SSFL Area IV Collocated Soil Sampling
SL-108-SA7-SB

LLI Sample # SW 6460112
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7903 SDG#: DE279-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	173	U	173	345	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	620	U	620	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.6	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.6	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.6	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	3.4		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 01:53	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 20:07	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 19:50	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-128-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460113
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:05

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7904 SDG#: DE279-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	178	U	178	357	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	6.6		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 02:12	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 20:17	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 20:57	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-128-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460114
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:35

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7905 SDG#: DE279-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	179	U	179	358	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.8	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.8	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.8	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	6.9		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 02:32	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 20:36	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 21:41	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460115
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 13:25

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7906 SDG#: DE279-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	174	U	174	349	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	630	U	630	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	4.4		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 03:10	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 20:45	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 22:26	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460116
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:05

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7907 SDG#: DE279-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	175	U	175	350	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	620	U	620	1,600	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.3		0.50	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 03:29	Matthew S Woods	10
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 20:55	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113140011A	11/14/2011 23:33	Robert Brown	1
10303	Terphenyls soil prep	SW-846 3550B	1	113140011A	11/10/2011 18:00	David S Schrum	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-110311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6460117
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 15:00

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7908 SDG#: DE279-08EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/l**		**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	1.59		0.500	0.999	1
	The surrogate recovery of n-nitrosodimethylamine-d6 was above the advisory QC limits in this sample. No further action was taken.						
HPLC Organics	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
04144	20b Formaldehyde 8315A	50-00-0	10	U	10	50	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/l**		**mg/l**	**mg/l**	
10319	m-Terphenyl	92-06-8	0.080	U	0.080	0.25	1
10319	o-Terphenyl	84-15-1	0.080	U	0.080	0.25	1
10319	p-Terphenyl	92-94-4	0.080	U	0.080	0.25	1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.						

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11309WAD026	11/16/2011 21:44	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11309WAD026	11/07/2011 05:00	David V Hershey Jr	1
04144	20b Formaldehyde 8315A	SW-846 8315A	1	113080018A	11/07/2011 22:07	James H Place	1
01013	Formaldehyde Extraction	SW-846 8315A	1	113080018A	11/05/2011 08:15	Kelli M Barto	1
10319	22b Terphenyls by 8015B	SW-846 8015B	1	113120003A	11/09/2011 16:29	Robert Brown	1
10304	Terphenyls water prep	SW-846 3510C	1	113120003A	11/08/2011 17:55	Bronson L Cole	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **EB-SA7-SB-110311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6460118
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:00

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7909 SDG#: DE279-09EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	1.53	0.502	1.00	1

The surrogate recovery of n-nitrosodimethylamine-d6 was above the advisory QC limits in this sample. No further action was taken.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11309WAD026	11/16/2011 22:03	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11309WAD026	11/07/2011 05:00	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-110311 Sand
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # SW 6460119
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 08:00

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7910 SDG#: DE279-10TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	16.7	U	16.7	33.3	1

The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.

Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 03:48	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-110311 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6460120
LLI Group # 1274858
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 08:00

Submitted: 11/04/2011 09:10
Reported: 12/05/2011 13:06

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E7911 SDG#: DE279-11TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	0.478 U	0.478	0.955	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11309WAD026	11/16/2011 22:23	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11309WAD026	11/07/2011 05:00	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274858
Reported: 12/05/11 at 01:06 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11309WAD026	Sample number(s): 6460117-6460118,6460120								
N-Nitrosodimethylamine	0.500 U	0.500	1.00	ng/l	88	88	70-130	0	30
Batch number: 11313SLF026	Sample number(s): 6460110-6460116,6460119								
N-Nitrosodimethylamine	16.7 U	16.7	33.3	ng/kg	89		70-130		
Batch number: 113080018A	Sample number(s): 6460117								
20b Formaldehyde 8315A	10 U	10.	50	ug/l	100	102	69-130	2	30
Batch number: 113110002A	Sample number(s): 6460110-6460116								
20a Formaldehyde 8315A	600 U	600.	1,500	ug/kg	106		80-126		
Batch number: 113120003A	Sample number(s): 6460117								
m-Terphenyl	0.080 U	0.080	0.25	mg/l	96	65	61-108	38*	20
o-Terphenyl	0.080 U	0.080	0.25	mg/l	96	64*	75-125	40*	20
p-Terphenyl	0.080 U	0.080	0.25	mg/l	96	65	63-110	39*	20
Batch number: 113140011A	Sample number(s): 6460110-6460116								
m-Terphenyl	1.5 U	1.5	3.5	mg/kg	105		64-111		
o-Terphenyl	1.5 U	1.5	3.5	mg/kg	107		75-125		
p-Terphenyl	1.5 U	1.5	3.5	mg/kg	106		69-109		
Batch number: 11311162401B	Sample number(s): 6460110-6460116,6460119								
Moisture Content by 160.3					100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11313SLF026	Sample number(s): 6460110-6460116,6460119 UNSPK: P457188								
N-Nitrosodimethylamine	84	83	70-130	1	30				
Batch number: 113110002A	Sample number(s): 6460110-6460116 UNSPK: P457188								
20a Formaldehyde 8315A	113	116	80-120	3	50				
Batch number: 113140011A	Sample number(s): 6460110-6460116 UNSPK: 6460110								
m-Terphenyl	108	105	75-125	2	20				
o-Terphenyl	109	107	75-125	2	20				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274858
Reported: 12/05/11 at 01:06 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
p-Terphenyl	109	106	75-125	2	20				
Batch number: 11311162401B	Sample number(s): 6460110-6460116,6460119 BKG: 6460111								
Moisture Content by 160.3						5.2	5.1	1	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 21b. NDMA in Water
Batch number: 11309WAD026

	N-Nitrosodimethylamine-d6
6460117	181*
6460118	185*
6460120	309*
Blank	113
LCS	120
LCSD	117
Limits:	50-150

Analysis Name: 21a NDMA by 1625C
Batch number: 11313SLF026

	N-Nitrosodimethylamine-d6
6460110	143
6460111	136
6460112	129
6460113	131
6460114	132
6460115	128
6460116	127
6460119	129
Blank	136
LCS	148
MS	133
MSD	138
Limits:	50-150

Analysis Name: 20b Formaldehyde 8315A
Batch number: 113080018A

	Butyraldehyde
6460117	96
Blank	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274858
Reported: 12/05/11 at 01:06 PM

Surrogate Quality Control

LCS	94
LCSD	95
Limits:	45-145

Analysis Name: 20a Formaldehyde 8315A
Batch number: 113110002A

	Butyraldehyde
6460110	84
6460111	79
6460112	96
6460113	90
6460114	84
6460115	93
6460116	94
Blank	96
LCS	84
MS	97
MSD	84
Limits:	64-126

Analysis Name: 22b Terphenyls by 8015B
Batch number: 113120003A

	n-Triacontane-d62
6460117	21
Blank	67
LCS	70
LCSD	46
Limits:	17-138

Analysis Name: 22a Terphenyls by 8015B
Batch number: 113140011A

	n-Triacontane-d62
6460110	76
6460111	85
6460112	74
6460113	76
6460114	75
6460115	73
6460116	75
Blank	95
LCS	75
MS	78
MSD	75
Limits:	19-152

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Ap# 1374858 Sample# 6460110 20

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Dioxin/Furan EPA 1613B	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Terphenyls EPA 8015B	Other Instructions and Notes
SL-048-SA7-SB-4.0-5.0	11.02.11	0915	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-048-SA7-SB-9.0-10.0	11.02.11	1000	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-161-SA7-SB-4.0-5.0	11.02.11	1320	SOIL	NONE	1 8 oz Jar	X				
SL-108-SA7-SB-2.9-3.9	11.03.11	0915	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-128-SA7-SB-4.0-5.0	11.03.11	1005	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-128-SA7-SB-9.0-10.0	11.03.11	1035	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-171-SA7-SB-4.0-5.0	11.03.11	1325	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-171-SA7-SB-9.0-10.0	11.03.11	1405	SOIL	NONE	1 16 oz Jar	X	X	X	X	
EB-SA7-SB-110311	11.03.11	1500	WATER	NONE	3-1 L Amber	X		X	X	ASTM II WATER
EB-SA7-SB-110311	11.03.11	1500	WATER	NONE	2-250 mL Amber		X			ASTM II WATER
EB-SA7-SB-110311	11.03.11	1400	WATER	NONE	1-1 L amber			X		HGL WATER
TB-110311	11.03.11	0800	SOIL	NONE	1-4 oz jar			X		
TB-110311	11.03.11	0800	WATER	NONE	1-1 L amber			X		

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	11/03/2011 / 1630	11/4/11 0910	Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8767 9857 4880	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 22, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 11/04/2011
Group Number: 1274859
SDG: DX154
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-048-SA7-SB-4.0-5.0 Soil	6460121
SL-048-SA7-SB-9.0-10.0 Soil	6460122
SL-161-SA7-SB-4.0-5.0 Soil	6460123
SL-108-SA7-SB-2.9-3.9 Soil	6460124
SL-128-SA7-SB-4.0-5.0 Soil	6460125
SL-128-SA7-SB-9.0-10.0 Soil	6460126
SL-171-SA7-SB-4.0-5.0 Soil	6460127
SL-171-SA7-SB-9.0-10.0 Soil	6460128
EB-SA7-SB-110311 Water	6460129

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-048-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460121
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5401 SDG#: DX154-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-048-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460121
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5401 SDG#: DX154-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0313	U	0.0313	1.02	1
11031	12378-PeCDD	40321-76-4	0.105	JQ	0.0262	5.08	1
11031	123478-HxCDD	39227-28-6	0.0238	U	0.0238	5.08	1
11031	123678-HxCDD	57653-85-7	0.140	JB	0.0238	5.08	1
11031	123789-HxCDD	19408-74-3	0.134	J	0.0231	5.08	1
11031	1234678-HpCDD	35822-46-9	2.50	JB	0.0345	5.08	1
11031	OCDD	3268-87-9	24.6	B	0.0277	10.2	1
11031	2378-TCDF	51207-31-9	0.0250	U	0.0250	1.02	1
11031	12378-PeCDF	57117-41-6	0.139	JB	0.0140	5.08	1
11031	23478-PeCDF	57117-31-4	0.102	JB	0.0138	5.08	1
11031	123478-HxCDF	70648-26-9	0.0554	JB	0.0152	5.08	1
11031	123678-HxCDF	57117-44-9	0.0544	JBQ	0.0138	5.08	1
11031	123789-HxCDF	72918-21-9	0.0647	JBQ	0.0159	5.08	1
11031	234678-HxCDF	60851-34-5	0.0682	JB	0.0135	5.08	1
11031	1234678-HpCDF	67562-39-4	0.298	JB	0.0113	5.08	1
11031	1234789-HpCDF	55673-89-7	0.0802	JB	0.0170	5.08	1
11031	OCDF	39001-02-0	0.623	JB	0.0343	10.2	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	70	25 - 181
13C12-123478-HxCDD	76	32 - 141
13C12-123678-HxCDD	77	28 - 130
13C12-123789-HxCDD	77	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	90	17 - 157
13C12-2378-TCDF	66	24 - 169
13C12-12378-PeCDF	75	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	67	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	71	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	86	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	76	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-048-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460121
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5401 SDG#: DX154-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-048-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460121
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5401 SDG#: DX154-01

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/11/2011 20:03	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-048-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460122
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 10:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5402 SDG#: DX154-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-048-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460122
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 10:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5402 SDG#: DX154-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0307 U	0.0307	1.03	1
11031	12378-PeCDD	40321-76-4	0.0414 J	0.0271	5.13	1
11031	123478-HxCDD	39227-28-6	0.0366 J	0.0241	5.13	1
11031	123678-HxCDD	57653-85-7	0.118 JBQ	0.0256	5.13	1
11031	123789-HxCDD	19408-74-3	0.140 J	0.0238	5.13	1
11031	1234678-HpCDD	35822-46-9	2.79 JB	0.0331	5.13	1
11031	OCDD	3268-87-9	33.4 B	0.0280	10.3	1
11031	2378-TCDF	51207-31-9	0.0278 J	0.0256	1.03	1
11031	12378-PeCDF	57117-41-6	0.0987 JBQ	0.0142	5.13	1
11031	23478-PeCDF	57117-31-4	0.0686 JBQ	0.0139	5.13	1
11031	123478-HxCDF	70648-26-9	0.0365 JB	0.0174	5.13	1
11031	123678-HxCDF	57117-44-9	0.0367 JB	0.0152	5.13	1
11031	123789-HxCDF	72918-21-9	0.167 JB	0.0196	5.13	1
11031	234678-HxCDF	60851-34-5	0.0292 JBQ	0.0154	5.13	1
11031	1234678-HpCDF	67562-39-4	0.370 JB	0.0121	5.13	1
11031	1234789-HpCDF	55673-89-7	0.0613 JBQ	0.0191	5.13	1
11031	OCDF	39001-02-0	0.735 JB	0.0281	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	85	32 - 141
13C12-123678-HxCDD	84	28 - 130
13C12-123789-HxCDD	82	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	96	17 - 157
13C12-2378-TCDF	72	24 - 169
13C12-12378-PeCDF	80	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	70	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	71	29 - 147
13C12-1234678-HpCDF	94	28 - 143
13C12-1234789-HpCDF	72	26 - 138
13C12-OCDF	79	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-048-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460122
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 10:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5402 SDG#: DX154-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-048-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-048-SA7-SB

LLI Sample # SW 6460122
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 10:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5402 SDG#: DX154-02

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/11/2011 21:00	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-161-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-161-SA7-SB

LLI Sample # SW 6460123
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 13:20

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5403 SDG#: DX154-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	5.1	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: SL-161-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-161-SA7-SB

LLI Sample # SW 6460123
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 13:20

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5403 SDG#: DX154-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0293 U	0.0293	1.05	1
11031	12378-PeCDD	40321-76-4	0.0217 U	0.0217	5.24	1
11031	123478-HxCDD	39227-28-6	0.0175 U	0.0175	5.24	1
11031	123678-HxCDD	57653-85-7	0.0448 JBQ	0.0183	5.24	1
11031	123789-HxCDD	19408-74-3	0.0317 J	0.0182	5.24	1
11031	1234678-HpCDD	35822-46-9	0.408 JB	0.0213	5.24	1
11031	OCDD	3268-87-9	2.87 JB	0.0192	10.5	1
11031	2378-TCDF	51207-31-9	0.0247 U	0.0247	1.05	1
11031	12378-PeCDF	57117-41-6	0.0180 JBQ	0.0105	5.24	1
11031	23478-PeCDF	57117-31-4	0.0386 JBQ	0.0102	5.24	1
11031	123478-HxCDF	70648-26-9	0.0105 U	0.0105	5.24	1
11031	123678-HxCDF	57117-44-9	0.0222 JBQ	0.00938	5.24	1
11031	123789-HxCDF	72918-21-9	0.0479 JBQ	0.0125	5.24	1
11031	234678-HxCDF	60851-34-5	0.0209 JBQ	0.00906	5.24	1
11031	1234678-HpCDF	67562-39-4	0.0788 JBQ	0.00843	5.24	1
11031	1234789-HpCDF	55673-89-7	0.0225 JB	0.0140	5.24	1
11031	OCDF	39001-02-0	0.140 JB	0.0301	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	73	25 - 181
13C12-123478-HxCDD	88	32 - 141
13C12-123678-HxCDD	86	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	88	23 - 140
13C12-OCDD	94	17 - 157
13C12-2378-TCDF	66	24 - 169
13C12-12378-PeCDF	77	24 - 185
13C12-23478-PeCDF	69	21 - 178
13C12-123478-HxCDF	67	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	95	28 - 143
13C12-1234789-HpCDF	70	26 - 138
13C12-OCDF	74	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-161-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-161-SA7-SB

LLI Sample # SW 6460123
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 13:20

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5403 SDG#: DX154-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-161-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-161-SA7-SB

LLI Sample # SW 6460123
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/02/2011 13:20

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5403 SDG#: DX154-03

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/11/2011 21:56	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11325162402A	11/21/2011 19:17	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-108-SA7-SB-2.9-3.9 Soil
SSFL Area IV Collocated Soil Sampling
SL-108-SA7-SB

LLI Sample # SW 6460124
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5404 SDG#: DX154-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	3.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-108-SA7-SB-2.9-3.9 Soil
SSFL Area IV Collocated Soil Sampling
SL-108-SA7-SB

LLI Sample # SW 6460124
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5404 SDG#: DX154-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0324	J	0.0302	1.00	1
11031	12378-PeCDD	40321-76-4	0.0740	JQ	0.0313	5.02	1
11031	123478-HxCDD	39227-28-6	0.0347	U	0.0347	5.02	1
11031	123678-HxCDD	57653-85-7	0.348	JB	0.0369	5.02	1
11031	123789-HxCDD	19408-74-3	0.273	J	0.0334	5.02	1
11031	1234678-HpCDD	35822-46-9	9.73	B	0.0474	5.02	1
11031	OCDD	3268-87-9	100	B	0.0473	10.0	1
11031	2378-TCDF	51207-31-9	0.0270	U	0.0270	1.00	1
11031	12378-PeCDF	57117-41-6	0.101	JBQ	0.0167	5.02	1
11031	23478-PeCDF	57117-31-4	0.117	JBQ	0.0164	5.02	1
11031	123478-HxCDF	70648-26-9	0.105	JBQ	0.0210	5.02	1
11031	123678-HxCDF	57117-44-9	0.0758	JBQ	0.0192	5.02	1
11031	123789-HxCDF	72918-21-9	0.0911	JB	0.0227	5.02	1
11031	234678-HxCDF	60851-34-5	0.0929	JB	0.0195	5.02	1
11031	1234678-HpCDF	67562-39-4	0.944	JB	0.0172	5.02	1
11031	1234789-HpCDF	55673-89-7	0.116	JBQ	0.0271	5.02	1
11031	OCDF	39001-02-0	2.35	JB	0.0360	10.0	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	63	25 - 164
13C12-12378-PeCDD	62	25 - 181
13C12-123478-HxCDD	69	32 - 141
13C12-123678-HxCDD	68	28 - 130
13C12-123789-HxCDD	68	28 - 130
13C12-1234678-HpCDD	72	23 - 140
13C12-OCDD	78	17 - 157
13C12-2378-TCDF	62	24 - 169
13C12-12378-PeCDF	67	24 - 185
13C12-23478-PeCDF	59	21 - 178
13C12-123478-HxCDF	60	26 - 152
13C12-123678-HxCDF	66	26 - 123
13C12-234678-HxCDF	63	28 - 136
13C12-123789-HxCDF	64	29 - 147
13C12-1234678-HpCDF	76	28 - 143
13C12-1234789-HpCDF	60	26 - 138
13C12-OCDF	64	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Sample Description: **SL-108-SA7-SB-2.9-3.9 Soil**
SSFL Area IV Collocated Soil Sampling
SL-108-SA7-SB

LLI Sample # SW 6460124
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5404 SDG#: DX154-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-108-SA7-SB-2.9-3.9 Soil
SSFL Area IV Collocated Soil Sampling
SL-108-SA7-SB

LLI Sample # SW 6460124
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 09:15

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5404 SDG#: DX154-04

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/11/2011 22:53	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-128-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460125
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5405 SDG#: DX154-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.6	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-128-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460125
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5405 SDG#: DX154-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0324	JQ	0.0254	1.03	1
11031	12378-PeCDD	40321-76-4	0.0429	JQ	0.0308	5.17	1
11031	123478-HxCDD	39227-28-6	0.113	J	0.0346	5.17	1
11031	123678-HxCDD	57653-85-7	0.515	JB	0.0363	5.17	1
11031	123789-HxCDD	19408-74-3	0.285	J	0.0375	5.17	1
11031	1234678-HpCDD	35822-46-9	20.4	B	0.0715	5.17	1
11031	OCDD	3268-87-9	323	B	0.0615	10.3	1
11031	2378-TCDF	51207-31-9	0.0282	JQ	0.0256	1.03	1
11031	12378-PeCDF	57117-41-6	0.0521	JB	0.0156	5.17	1
11031	23478-PeCDF	57117-31-4	0.0470	JBQ	0.0153	5.17	1
11031	123478-HxCDF	70648-26-9	0.216	JB	0.0238	5.17	1
11031	123678-HxCDF	57117-44-9	0.133	JBQ	0.0214	5.17	1
11031	123789-HxCDF	72918-21-9	0.207	JBQ	0.0227	5.17	1
11031	234678-HxCDF	60851-34-5	0.163	JB	0.0207	5.17	1
11031	1234678-HpCDF	67562-39-4	2.54	JB	0.0193	5.17	1
11031	1234789-HpCDF	55673-89-7	0.259	JB	0.0257	5.17	1
11031	OCDF	39001-02-0	5.91	JB	0.0294	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	83	32 - 141
13C12-123678-HxCDD	84	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	84	23 - 140
13C12-OCDD	91	17 - 157
13C12-2378-TCDF	77	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	74	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	76	26 - 123
13C12-234678-HxCDF	78	28 - 136
13C12-123789-HxCDF	80	29 - 147
13C12-1234678-HpCDF	84	28 - 143
13C12-1234789-HpCDF	78	26 - 138
13C12-OCDF	81	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-128-SA7-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460125
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5405 SDG#: DX154-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-128-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460125
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5405 SDG#: DX154-05

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/11/2011 23:50	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-128-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460126
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:35

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5406 SDG#: DX154-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-128-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460126
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:35

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5406 SDG#: DX154-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0289	U	0.0289	1.07	1
11031	12378-PeCDD	40321-76-4	0.0671	JQ	0.0314	5.33	1
11031	123478-HxCDD	39227-28-6	0.0793	J	0.0311	5.33	1
11031	123678-HxCDD	57653-85-7	0.230	JBQ	0.0335	5.33	1
11031	123789-HxCDD	19408-74-3	0.213	JQ	0.0315	5.33	1
11031	1234678-HpCDD	35822-46-9	6.87	B	0.0426	5.33	1
11031	OCDD	3268-87-9	66.7	B	0.0396	10.7	1
11031	2378-TCDF	51207-31-9	0.0260	U	0.0260	1.07	1
11031	12378-PeCDF	57117-41-6	0.0361	JB	0.0155	5.33	1
11031	23478-PeCDF	57117-31-4	0.0499	JB	0.0149	5.33	1
11031	123478-HxCDF	70648-26-9	0.0898	JB	0.0211	5.33	1
11031	123678-HxCDF	57117-44-9	0.108	JB	0.0193	5.33	1
11031	123789-HxCDF	72918-21-9	0.0882	JBQ	0.0226	5.33	1
11031	234678-HxCDF	60851-34-5	0.0773	JBQ	0.0194	5.33	1
11031	1234678-HpCDF	67562-39-4	0.777	JB	0.0158	5.33	1
11031	1234789-HpCDF	55673-89-7	0.0643	JBQ	0.0223	5.33	1
11031	OCDF	39001-02-0	1.74	JB	0.0295	10.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	75	25 - 164
13C12-12378-PeCDD	75	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	85	28 - 130
13C12-123789-HxCDD	83	28 - 130
13C12-1234678-HpCDD	87	23 - 140
13C12-OCDD	95	17 - 157
13C12-2378-TCDF	76	24 - 169
13C12-12378-PeCDF	80	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	79	28 - 136
13C12-123789-HxCDF	77	29 - 147
13C12-1234678-HpCDF	91	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	81	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-128-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460126
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:35

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5406 SDG#: DX154-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-128-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-128-SA7-SB

LLI Sample # SW 6460126
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 10:35

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5406 SDG#: DX154-06

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/12/2011 00:46	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460127
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 13:25

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5407 SDG#: DX154-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	4.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-171-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460127
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 13:25

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5407 SDG#: DX154-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0279	U	0.0279	1.03	1
11031	12378-PeCDD	40321-76-4	0.0412	JQ	0.0290	5.15	1
11031	123478-HxCDD	39227-28-6	0.0612	J	0.0294	5.15	1
11031	123678-HxCDD	57653-85-7	0.327	JB	0.0295	5.15	1
11031	123789-HxCDD	19408-74-3	0.216	J	0.0277	5.15	1
11031	1234678-HpCDD	35822-46-9	13.1	B	0.0478	5.15	1
11031	OCDD	3268-87-9	125	B	0.0449	10.3	1
11031	2378-TCDF	51207-31-9	0.0265	U	0.0265	1.03	1
11031	12378-PeCDF	57117-41-6	0.0901	JB	0.0182	5.15	1
11031	23478-PeCDF	57117-31-4	0.0890	JB	0.0173	5.15	1
11031	123478-HxCDF	70648-26-9	0.124	JB	0.0189	5.15	1
11031	123678-HxCDF	57117-44-9	0.0997	JB	0.0177	5.15	1
11031	123789-HxCDF	72918-21-9	0.0887	JB	0.0184	5.15	1
11031	234678-HxCDF	60851-34-5	0.163	JB	0.0172	5.15	1
11031	1234678-HpCDF	67562-39-4	0.873	JB	0.0149	5.15	1
11031	1234789-HpCDF	55673-89-7	0.108	JB	0.0194	5.15	1
11031	OCDF	39001-02-0	2.08	JB	0.0293	10.3	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	75	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	80	32 - 141
13C12-123678-HxCDD	79	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	87	17 - 157
13C12-2378-TCDF	75	24 - 169
13C12-12378-PeCDF	76	24 - 185
13C12-23478-PeCDF	71	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	75	28 - 136
13C12-123789-HxCDF	79	29 - 147
13C12-1234678-HpCDF	83	28 - 143
13C12-1234789-HpCDF	75	26 - 138
13C12-OCDF	79	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460127
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 13:25

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5407 SDG#: DX154-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460127
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 13:25

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5407 SDG#: DX154-07

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/12/2011 01:43	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460128
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5408 SDG#: DX154-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.3	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-171-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460128
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5408 SDG#: DX154-08

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0554	JQ	0.0283	1.06	1
11031	12378-PeCDD	40321-76-4	0.205	J	0.0328	5.28	1
11031	123478-HxCDD	39227-28-6	0.116	J	0.0353	5.28	1
11031	123678-HxCDD	57653-85-7	0.413	JB	0.0384	5.28	1
11031	123789-HxCDD	19408-74-3	0.274	J	0.0367	5.28	1
11031	1234678-HpCDD	35822-46-9	15.5	B	0.0545	5.28	1
11031	OCDD	3268-87-9	153	B	0.0549	10.6	1
11031	2378-TCDF	51207-31-9	0.0481	J	0.0275	1.06	1
11031	12378-PeCDF	57117-41-6	0.221	JBQ	0.0192	5.28	1
11031	23478-PeCDF	57117-31-4	0.271	JB	0.0173	5.28	1
11031	123478-HxCDF	70648-26-9	0.158	JB	0.0232	5.28	1
11031	123678-HxCDF	57117-44-9	0.146	JB	0.0224	5.28	1
11031	123789-HxCDF	72918-21-9	0.120	JBQ	0.0242	5.28	1
11031	234678-HxCDF	60851-34-5	0.139	JB	0.0210	5.28	1
11031	1234678-HpCDF	67562-39-4	1.09	JB	0.0174	5.28	1
11031	1234789-HpCDF	55673-89-7	0.0839	JB	0.0226	5.28	1
11031	OCDF	39001-02-0	2.45	JB	0.0282	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	84	25 - 164
13C12-12378-PeCDD	83	25 - 181
13C12-123478-HxCDD	94	32 - 141
13C12-123678-HxCDD	91	28 - 130
13C12-123789-HxCDD	90	28 - 130
13C12-1234678-HpCDD	92	23 - 140
13C12-OCDD	98	17 - 157
13C12-2378-TCDF	89	24 - 169
13C12-12378-PeCDF	86	24 - 185
13C12-23478-PeCDF	85	21 - 178
13C12-123478-HxCDF	81	26 - 152
13C12-123678-HxCDF	83	26 - 123
13C12-234678-HxCDF	89	28 - 136
13C12-123789-HxCDF	90	29 - 147
13C12-1234678-HpCDF	90	28 - 143
13C12-1234789-HpCDF	87	26 - 138
13C12-OCDF	93	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: **SL-171-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460128
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5408 SDG#: DX154-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-171-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-171-SA7-SB

LLI Sample # SW 6460128
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 14:05

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5408 SDG#: DX154-08

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11314001	11/12/2011 02:40	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11314001	11/10/2011 10:45	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11311162401B	11/07/2011 22:36	Scott W Freisher	1

Lancaster Laboratories

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Analysis Report

Sample Description: EB-SA7-SB-110311 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6460129
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 15:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5409 SDG#: DX154-09EB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received EDL*	As Received MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		pg/l		pg/l	pg/l	
10915	2378-TCDD	1746-01-6	0.253	U	0.253	1.97	1
10915	12378-PeCDD	40321-76-4	0.223	U	0.223	9.84	1
10915	123478-HxCDD	39227-28-6	0.159	U	0.159	9.84	1
10915	123678-HxCDD	57653-85-7	0.219	JBQ	0.169	9.84	1
10915	123789-HxCDD	19408-74-3	0.285	JB	0.169	9.84	1
10915	1234678-HpCDD	35822-46-9	2.43	JBQ	0.204	9.84	1
10915	OCDD	3268-87-9	4.20	JBQ	0.248	19.7	1
10915	2378-TCDF	51207-31-9	0.165	JBQ	0.138	1.97	1
10915	12378-PeCDF	57117-41-6	0.151	JBQ	0.104	9.84	1
10915	23478-PeCDF	57117-31-4	0.343	JBQ	0.0971	9.84	1
10915	123478-HxCDF	70648-26-9	0.248	JBQ	0.106	9.84	1
10915	123678-HxCDF	57117-44-9	0.262	JQ	0.103	9.84	1
10915	123789-HxCDF	72918-21-9	0.147	JBQ	0.105	9.84	1
10915	234678-HxCDF	60851-34-5	0.474	JB	0.101	9.84	1
10915	1234678-HpCDF	67562-39-4	2.14	JBQ	0.0852	9.84	1
10915	1234789-HpCDF	55673-89-7	0.222	JB	0.102	9.84	1
10915	OCDF	39001-02-0	1.31	JBQ	0.276	19.7	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	76	25 - 164
13C12-12378-PeCDD	74	25 - 181
13C12-123478-HxCDD	73	32 - 141
13C12-123678-HxCDD	76	28 - 130
13C12-123789-HxCDD	74	28 - 130
13C12-1234678-HpCDD	68	23 - 140
13C12-OCDD	61	17 - 157
13C12-2378-TCDF	81	24 - 169
13C12-12378-PeCDF	78	24 - 185
13C12-23478-PeCDF	77	21 - 178
13C12-123478-HxCDF	72	26 - 152
13C12-123678-HxCDF	72	26 - 123
13C12-234678-HxCDF	76	28 - 136
13C12-123789-HxCDF	84	29 - 147
13C12-1234678-HpCDF	68	28 - 143
13C12-1234789-HpCDF	69	26 - 138
13C12-OCDF	59	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **EB-SA7-SB-110311 Water**
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6460129
LLI Group # 1274859
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/03/2011 15:00

Submitted: 11/04/2011 09:10
Reported: 11/22/2011 09:13

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5409 SDG#: DX154-09EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received EDL*	As Received MRL	Dilution Factor

S *Saturation of detection signal*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10915	10b Dioxin/Furan by EPA 1613B	EPA 1613B	1	11311001	11/09/2011 00:18	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	11311001	11/07/2011 08:30	Ginelle L Haines	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274859
Reported: 11/22/11 at 09:13 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11311162401B	Sample number(s): 6460121-6460122,6460124-6460128								
Moisture Content by 160.3					100		80-120		
Batch number: 11325162402A	Sample number(s): 6460123								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11311001	Sample number(s): 6460129								
2378-TCDD	0.411 J	0.274	2.00	pg/l	115		67-158		
12378-PeCDD	0.284 U	0.284	10.0	pg/l	116		70-142		
123478-HxCDD	0.185 U	0.185	10.0	pg/l	109		70-164		
123678-HxCDD	0.271 J	0.185	10.0	pg/l	107		76-134		
123789-HxCDD	0.361 J	0.173	10.0	pg/l	114		64-162		
1234678-HpCDD	3.52 J	0.246	10.0	pg/l	114		70-140		
OCDD	5.78 J	0.263	20.0	pg/l	115		78-144		
2378-TCDF	0.269 J	0.170	2.00	pg/l	102		75-158		
12378-PeCDF	0.339 J	0.126	10.0	pg/l	113		80-134		
23478-PeCDF	0.366 J	0.118	10.0	pg/l	104		68-160		
123478-HxCDF	0.775 J	0.127	10.0	pg/l	111		72-134		
123678-HxCDF	0.128 U	0.128	10.0	pg/l	109		84-130		
123789-HxCDF	0.487 J	0.123	10.0	pg/l	111		78-130		
234678-HxCDF	0.440 J	0.120	10.0	pg/l	105		70-156		
1234678-HpCDF	1.93 J	0.115	10.0	pg/l	106		82-122		
1234789-HpCDF	0.597 J	0.137	10.0	pg/l	111		78-138		
OCDF	1.71 J	0.352	20.0	pg/l	115		63-170		
Batch number: 11314001	Sample number(s): 6460121-6460128								
2378-TCDD	0.0297 U	0.0297	1.00	ng/kg	103		67-158		
12378-PeCDD	0.0234 U	0.0234	5.00	ng/kg	104		70-142		
123478-HxCDD	0.0192 U	0.0192	5.00	ng/kg	98		70-164		
123678-HxCDD	0.0211 J	0.0199	5.00	ng/kg	92		76-134		
123789-HxCDD	0.0192 U	0.0192	5.00	ng/kg	101		64-162		
1234678-HpCDD	0.227 J	0.0206	5.00	ng/kg	100		70-140		
OCDD	0.373 J	0.0147	10.0	ng/kg	95		78-144		
2378-TCDF	0.0224 U	0.0224	1.00	ng/kg	99		75-158		
12378-PeCDF	0.0144 J	0.0118	5.00	ng/kg	101		80-134		
23478-PeCDF	0.0487 J	0.0117	5.00	ng/kg	95		68-160		
123478-HxCDF	0.0342 J	0.0138	5.00	ng/kg	84		72-134		
123678-HxCDF	0.0199 J	0.0122	5.00	ng/kg	98		84-130		
123789-HxCDF	0.0237 J	0.0142	5.00	ng/kg	97		78-130		
234678-HxCDF	0.0328 J	0.0126	5.00	ng/kg	93		70-156		
1234678-HpCDF	0.0927 J	0.00670	5.00	ng/kg	90		82-122		
1234789-HpCDF	0.0322 J	0.0102	5.00	ng/kg	96		78-138		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274859
Reported: 11/22/11 at 09:13 AM

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
OCDF	0.140 J	0.0258	10.0	ng/kg	96		63-170		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11311162401B	Sample number(s): 6460121-6460122,6460124-6460128					BKG: P460111			
Moisture Content by 160.3						5.2	5.1	1	20
Batch number: 11325162402A	Sample number(s): 6460123					BKG: P465418			
Moisture Content by 160.3						10.3	10.3	1	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10b Dioxin/Furan by EPA 1613B
Batch number: 11311001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6460129	76	77	72	72	76	84
Blank	78	78	75	75	75	86
OPR	77	76	71	73	73	82
Limits:	25-164	21-178	26-152	26-123	28-136	29-147

	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6460129	68	69	59	74	73	76
Blank	71	69	62	74	75	77
OPR	69	67	60	73	74	74
Limits:	28-143	26-138	17-157	25-181	32-141	28-130

	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF
6460129	74	68	61	81	78
Blank	76	72	64	82	78
OPR	73	70	62	79	77
Limits:	28-130	23-140	17-157	24-169	24-185

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11314001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6460121	67	67	67	73	71	69
6460122	72	71	70	79	76	71

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1274859
Reported: 11/22/11 at 09:13 AM

Surrogate Quality Control

6460123	67	69	67	77	78	69
6460124	63	59	60	66	63	64
6460125	76	74	72	76	78	80
6460126	75	72	72	77	79	77
6460127	75	71	69	73	75	79
6460128	84	85	81	83	89	90
Blank	77	78	74	86	79	83
OPR	70	71	67	70	73	74
Limits:	25-164	21-178	26-152	26-123	28-136	29-147
	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6460121	86	70	76	70	76	77
6460122	94	72	79	73	85	84
6460123	95	70	74	73	88	86
6460124	76	60	64	62	69	68
6460125	84	78	81	74	83	84
6460126	91	76	81	75	86	85
6460127	83	75	79	72	80	79
6460128	90	87	93	83	94	91
Blank	109	81	88	85	91	92
OPR	95	75	81	75	79	84
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6460121	77	82	90	66	75	
6460122	82	87	96	72	80	
6460123	84	88	94	66	77	
6460124	68	72	78	62	67	
6460125	80	84	91	77	78	
6460126	83	87	95	76	80	
6460127	79	82	87	75	76	
6460128	90	92	98	89	86	
Blank	91	101	112	72	86	
OPR	82	90	100	67	76	
Limits:	28-130	23-140	17-157	24-169	24-185	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 AP# 1274559 Sample# 646012 1-29

CHAIN OF CUSTODY RECORD

CDM | **SSFL AREA IV COLLOCATED SOIL SAMPLING**

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Dioxin/Furan EPA 1613B	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Terphenyls EPA 8015B	Other Instructions and Notes
SL-048-SA7-SB-4.0-5.0	11.02.11	0915	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-048-SA7-SB-9.0-10.0	11.02.11	1000	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-161-SA7-SB-4.0-5.0	11.02.11	1320	SOIL	NONE	1 8 oz Jar	X				
SL-108-SA7-SB-2.9-3.9	11.03.11	0915	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-128-SA7-SB-4.0-5.0	11.03.11	1005	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-128-SA7-SB-9.0-10.0	11.03.11	1035	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-171-SA7-SB-4.0-5.0	11.03.11	1325	SOIL	NONE	1 16 oz Jar	X	X	X	X	
SL-171-SA7-SB-9.0-10.0	11.03.11	1405	SOIL	NONE	1 16 oz Jar	X	X	X	X	
EB-SA7-SB-110311	11.03.11	1500	WATER	NONE	3-1 L Amber	X		X	X	ASTM II WATER
EB-SA7-SB-110311	11.03.11	1500	WATER	NONE	2-250 mL Amber		X			ASTM II WATER
EB-SA7-SB-110311	11.03.11	1400	WATER	NONE	1-1 L amber			X		HGL WATER
TB-110311	11.03.11	0800	SOIL	NONE	1-4 oz jar			X		
TB-110311	11.03.11	0800	WATER	NONE	1-1 L amber			X		

Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Laboratory:
	11/03/2011 / 1630	11/4/11 0910	Lancaster Laboratories, Inc.
Received by: (*Signature*)	Date/Time	Airbill No.(s)	
		8767 9857 4880	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

December 05, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 11/05/2011
Group Number: 1275057
SDG: DE280
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-107-SA7-SB-4.0-5.0 Soil	6461454
SL-107-SA7-SB-9.0-10.0 Soil	6461455
SL-107-SA7-SB-13.0-14.0 Soil	6461456
EB-SA7-SB-110411 Water	6461457
TB-110411 Sand	6461458
TB-110411 Water	6461459
TB-110411 Water	6461460

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
1 COPY TO	Data Package Group	

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Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	176	U	176	351	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	2-butoxy-Ethanol	111-76-2	1,800	U	1,800	1,800	1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	35	U	35	180	1
04688	4-Methylphenol	106-44-5	35	U	35	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	3-Nitroaniline	99-09-2	35	U	35	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1
04688	2-phenoxy-Ethanol	122-99-6	1,800	U	1,800	1,800	1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Tetralin	119-64-2	180	U	180	180	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180	1
GC/MS Semivolatiles SW-846 8270C SIM			**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.8	1
10138	Anthracene	120-12-7	0.35	U	0.35	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	0.88	J	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	6.4	J	6.4	19	1
10138	Chrysene	218-01-9	0.84	J	0.35	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	13	J	6.4	19	1
10138	Fluoranthene	206-44-0	0.71	U	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8	1
10138	Pyrene	129-00-0	0.71	U	0.71	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	23.63
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	2.0	J	1.1	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1
GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.43	U	0.43	1.3	1
10199	EFH (C15-C20)	n.a.	0.43	U	0.43	1.3	1
10199	EFH (C21-C30)	n.a.	2.6		0.43	1.3	1
10199	EFH (C30 - C40)	n.a.	10		0.43	1.3	1
10199	EFH (C8-C11)	n.a.	0.43	U	0.43	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	14,500		6.25	20.7	1
07914	Boron	7440-42-8	4.76	J	0.372	5.16	1
01650	Calcium	7440-70-2	4,020		2.58	20.7	1
01654	Iron	7439-89-6	18,600		2.70	20.7	1
01656	Lithium	7439-93-2	22.4		0.64	2.1	1
01657	Magnesium	7439-95-4	4,150		0.454	10.3	1
06958	Manganese	7439-96-5	255		0.0372	0.516	1
10145	Phosphorus	7723-14-0	330		0.361	10.3	1
01662	Potassium	7440-09-7	2,630		11.7	51.6	1
01667	Sodium	7440-23-5	166		6.15	103	1
07968	Strontium	7440-24-6	19.4		0.0258	0.516	1
06969	Tin	7440-31-5	2.46	J	0.331	10.3	1
06970	Titanium	7440-32-6	958		0.0733	1.03	1
10146	Zirconium	7440-67-7	2.06	J	0.475	5.16	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0779	U	0.0779	0.211	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.37		0.0843	0.421	2
06126	Barium	7440-39-3	85.6		0.112	0.421	2
06127	Beryllium	7440-41-7	0.467		0.0169	0.105	2
06128	Cadmium	7440-43-9	0.0970	J	0.0463	0.105	2
06131	Chromium	7440-47-3	14.8		0.126	0.421	2
06132	Cobalt	7440-48-4	5.14		0.0211	0.105	2
06133	Copper	7440-50-8	7.18		0.0843	0.421	2
06135	Lead	7439-92-1	5.37		0.0107	0.211	2
06138	Molybdenum	7439-98-7	0.454		0.0527	0.105	2
06139	Nickel	7440-02-0	9.60		0.105	0.421	2
06141	Selenium	7782-49-2	0.211	J	0.0611	0.421	2
06142	Silver	7440-22-4	0.0278	J	0.0150	0.105	2
06145	Thallium	7440-28-0	0.241		0.0316	0.105	2
06148	Vanadium	7440-62-2	29.7		0.0232	0.105	2
06149	Zinc	7440-66-6	58.7		0.590	3.16	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0135	J	0.0070	0.0998	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.1		0.86	1.1	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	1.8		0.86	1.6	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.6	U	9.6	31.9	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.67	J	0.21	1.1	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

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CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9045C modified**		Std. Units	Std. Units	Std. Units	
00394	17a pH by 9045C	n.a.	8.53	0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11624	Moisture Content by 160.3	n.a.	6.0	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-107-SA7-SB-4.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 04:07	Matthew S Woods	10
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11318SLA026	11/26/2011 09:07	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11318SLB026	11/29/2011 02:59	Gregory J Drahovsky	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11318SLB026	11/14/2011 18:10	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11318SLA026	11/14/2011 18:30	Sally L Appleyard	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11313A16A	11/09/2011 21:42	Marie D John	23.63
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130926096	11/05/2011 14:22	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130926096	11/05/2011 14:22	Christopher D Meeks	n.a.
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 21:52	James H Place	1
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113150020A	11/28/2011 23:30	Sarah M Snyder	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113150020A	11/11/2011 16:00	JoElla L Rice	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113130024A	11/10/2011 23:44	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113200029A	11/16/2011 20:34	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113180012A	11/15/2011 19:38	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113190011A	11/17/2011 21:58	Heather E Williams	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11238	EFH Extraction - Soils	SW-846 3550B	1	113190011A	11/15/2011 16:15	JoElla L Rice	1
10303	Terphenyls soil prep	SW-846 3550B	1	113180012A	11/14/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113130024A	11/10/2011 19:00	Lei Yin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113200029A	11/16/2011 16:30	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01656	Lithium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
10146	Zirconium	SW-846 6010B	1	113115708004	11/09/2011 06:34	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113111026003D	11/09/2011 20:48	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113111026003C	11/09/2011 20:48	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113111026003B	11/09/2011 20:48	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113111026003A	11/09/2011 20:48	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113115711003	11/08/2011 19:00	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113115708004	11/08/2011 11:18	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113111026003	11/08/2011 11:44	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113115711003	11/08/2011 12:34	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202B	11/08/2011 15:07	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11312621202B	11/08/2011 15:07	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11313621202A	11/09/2011 14:06	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 16:44	Elyse P Brunstetter	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461454
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8001 SDG#: DE280-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202B	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11313621202A	11/09/2011 06:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11319039401A	11/15/2011 09:45	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

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Analysis Report

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	177	U	177	354	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	2-butoxy-Ethanol	111-76-2	1,800	U	1,800	1,800	1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	35	U	35	180	1
04688	4-Methylphenol	106-44-5	35	U	35	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	3-Nitroaniline	99-09-2	35	U	35	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1
04688	2-phenoxy-Ethanol	122-99-6	1,800	U	1,800	1,800	1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Tetralin	119-64-2	180	U	180	180	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.8	1
10138	Anthracene	120-12-7	0.35	U	0.35	1.8	1
10138	Benzo(a)anthracene	56-55-3	0.71	U	0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	0.71	U	0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	1.2	J	0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	0.71	U	0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	0.71	U	0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	9.6	J	6.4	19	1
10138	Chrysene	218-01-9	1.0	J	0.35	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	32		6.4	19	1
10138	Fluoranthene	206-44-0	1.8	J	0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	U	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	6.4	U	6.4	19	1
10138	Phenanthrene	85-01-8	0.71	U	0.71	1.8	1
10138	Pyrene	129-00-0	1.3	J	0.71	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1	22.56
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	630	U	630	1,600	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.41	U	0.41	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and surrogate recoveries are within the QC acceptance limits. Since the hold time had expired prior to the second extraction all results are reported from the original extract. Similar results were obtained in both extracts.

GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C15-C20)	n.a.	0.42	U	0.42	1.3	1
10199	EFH (C21-C30)	n.a.	1.5		0.42	1.3	1
10199	EFH (C30 - C40)	n.a.	5.3		0.42	1.3	1
10199	EFH (C8-C11)	n.a.	0.42	U	0.42	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,400		6.30	20.8	1
07914	Boron	7440-42-8	4.77	J	0.375	5.20	1
01650	Calcium	7440-70-2	11,900		2.60	20.8	1
01654	Iron	7439-89-6	17,600		2.72	20.8	1
01656	Lithium	7439-93-2	22.1		0.65	2.1	1
01657	Magnesium	7439-95-4	4,350		0.458	10.4	1
06958	Manganese	7439-96-5	248		0.0375	0.520	1
10145	Phosphorus	7723-14-0	375		0.364	10.4	1
01662	Potassium	7440-09-7	2,510		11.8	52.0	1
01667	Sodium	7440-23-5	151		6.19	104	1
07968	Strontium	7440-24-6	28.3		0.0260	0.520	1
06969	Tin	7440-31-5	2.52	J	0.333	10.4	1
06970	Titanium	7440-32-6	963		0.0739	1.04	1
10146	Zirconium	7440-67-7	2.88	J	0.479	5.20	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0870	J	0.0755	0.204	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	5.20		0.0817	0.408	2
06126	Barium	7440-39-3	91.1		0.108	0.408	2
06127	Beryllium	7440-41-7	0.586		0.0163	0.102	2
06128	Cadmium	7440-43-9	0.111		0.0449	0.102	2
06131	Chromium	7440-47-3	16.0		0.122	0.408	2
06132	Cobalt	7440-48-4	6.03		0.0204	0.102	2
06133	Copper	7440-50-8	7.97		0.0817	0.408	2
06135	Lead	7439-92-1	6.13		0.0104	0.204	2
06138	Molybdenum	7439-98-7	0.494		0.0510	0.102	2
06139	Nickel	7440-02-0	10.2		0.102	0.408	2
06141	Selenium	7782-49-2	0.181	J	0.0592	0.408	2
06142	Silver	7440-22-4	0.0313	J	0.0145	0.102	2
06145	Thallium	7440-28-0	0.299		0.0306	0.102	2
06148	Vanadium	7440-62-2	31.5		0.0225	0.102	2
06149	Zinc	7440-66-6	108		0.572	3.06	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0075	U	0.0075	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	2.6		0.86	1.1	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	2.3		0.86	1.6	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.6	U	9.6	31.8	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.26	J	0.21	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.71		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	5.8		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-107-SA7-SB-9.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 04:27	Matthew S Woods	10
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11318SLA026	11/26/2011 10:23	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11318SLB026	11/29/2011 03:32	Gregory J Drahovsky	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11318SLB026	11/14/2011 18:10	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11318SLA026	11/14/2011 18:30	Sally L Appleyard	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11313A16A	11/09/2011 22:19	Marie D John	22.56
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130926096	11/05/2011 14:23	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130926096	11/05/2011 14:23	Christopher D Meeks	n.a.
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 21:14	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113150020A	11/16/2011 06:49	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113150020A	11/11/2011 16:00	JoElla L Rice	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113130024A	11/11/2011 00:00	Elizabeth J Marin	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113130024A	11/11/2011 18:35	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113200029A	11/16/2011 20:49	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113180012A	11/15/2011 18:10	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113190011A	11/17/2011 21:34	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113190011A	11/15/2011 16:15	JoElla L Rice	1
10303	Terphenyls soil prep	SW-846 3550B	1	113180012A	11/14/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113130024A	11/10/2011 19:00	Lei Yin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113200029A	11/16/2011 16:30	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01656	Lithium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
10146	Zirconium	SW-846 6010B	1	113115708004	11/09/2011 06:59	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113111026003D	11/09/2011 20:20	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113111026003C	11/09/2011 20:20	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113111026003B	11/09/2011 20:20	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113111026003A	11/09/2011 20:20	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113115711003	11/08/2011 19:01	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113115708004	11/08/2011 11:18	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461455
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8002 SDG#: DE280-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113111026003	11/08/2011 11:44	James L Mertz	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113115711003	11/08/2011 12:34	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202B	11/08/2011 15:22	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11312621202B	11/08/2011 15:22	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11313621202A	11/09/2011 15:09	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 17:10	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202B	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11313621202A	11/09/2011 06:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11319039401A	11/15/2011 09:45	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	178	U	178	355	10
	The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.						
	Reporting limits were raised due to interference from the sample matrix.						
GC/MS Semivolatiles SW-846 8270C			**ug/kg**		**ug/kg**	**ug/kg**	
04688	Aniline	62-53-3	180	U	180	530	1
04688	Benzidine	92-87-5	1,200	U	1,200	3,500	1
04688	Benzoic acid	65-85-0	180	U	180	530	1
04688	Benzyl alcohol	100-51-6	180	U	180	530	1
04688	4-Bromophenyl-phenylether	101-55-3	18	U	18	180	1
04688	2-butoxy-Ethanol	111-76-2	1,800	U	1,800	1,800	1
	2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Carbazole	86-74-8	18	U	18	180	1
04688	4-Chloro-3-methylphenol	59-50-7	35	U	35	180	1
04688	4-Chloroaniline	106-47-8	71	U	71	180	1
04688	bis(2-Chloroethoxy)methane	111-91-1	18	U	18	180	1
04688	bis(2-Chloroethyl)ether	111-44-4	18	U	18	180	1
04688	bis(2-Chloroisopropyl)ether	39638-32-9	18	U	18	180	1
04688	2-Chloronaphthalene	91-58-7	18	U	18	180	1
04688	2-Chlorophenol	95-57-8	18	U	18	180	1
04688	4-Chlorophenyl-phenylether	7005-72-3	35	U	35	180	1
04688	Dibenzofuran	132-64-9	18	U	18	180	1
04688	1,2-Dichlorobenzene	95-50-1	18	U	18	180	1
04688	1,3-Dichlorobenzene	541-73-1	18	U	18	180	1
04688	1,4-Dichlorobenzene	106-46-7	18	U	18	180	1
04688	3,3'-Dichlorobenzidine	91-94-1	110	U	110	350	1
04688	2,4-Dichlorophenol	120-83-2	18	U	18	180	1
04688	2,4-Dimethylphenol	105-67-9	35	U	35	180	1
04688	3,5-Dimethylphenol	108-68-9	35	U	35	180	1
04688	4,6-Dinitro-2-methylphenol	534-52-1	180	U	180	530	1
04688	2,4-Dinitrophenol	51-28-5	350	U	350	1,100	1
04688	2,4-Dinitrotoluene	121-14-2	35	U	35	180	1
04688	2,6-Dinitrotoluene	606-20-2	18	U	18	180	1
04688	1,2-Diphenylhydrazine	122-66-7	18	U	18	180	1
04688	Hexachlorobenzene	118-74-1	18	U	18	180	1
04688	Hexachlorobutadiene	87-68-3	71	U	71	180	1
04688	Hexachlorocyclopentadiene	77-47-4	180	U	180	530	1
04688	Hexachloroethane	67-72-1	18	U	18	180	1
04688	Isophorone	78-59-1	18	U	18	180	1
04688	2-Methylphenol	95-48-7	35	U	35	180	1
04688	4-Methylphenol	106-44-5	35	U	35	180	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04688	2-Nitroaniline	88-74-4	18	U	18	180	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
04688	3-Nitroaniline	99-09-2	35	U	35	180	1
04688	4-Nitroaniline	100-01-6	71	U	71	180	1
04688	Nitrobenzene	98-95-3	18	U	18	180	1
04688	2-Nitrophenol	88-75-5	18	U	18	180	1
04688	4-Nitrophenol	100-02-7	180	U	180	530	1
04688	N-Nitroso-di-n-propylamine	621-64-7	18	U	18	180	1
04688	N-Nitrosodiphenylamine	86-30-6	18	U	18	180	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04688	Pentachlorophenol	87-86-5	180	U	180	530	1
04688	Phenol	108-95-2	18	U	18	180	1
04688	2-phenoxy-Ethanol	122-99-6	1,800	U	1,800	1,800	1
	2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	Tetralin	119-64-2	180	U	180	180	1
	1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period.						
04688	1,2,4-Trichlorobenzene	120-82-1	18	U	18	180	1
04688	2,4,5-Trichlorophenol	95-95-4	35	U	35	180	1
04688	2,4,6-Trichlorophenol	88-06-2	35	U	35	180	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
10138	Acenaphthene	83-32-9	0.71	U	0.71	1.8	1
10138	Acenaphthylene	208-96-8	0.35	U	0.35	1.8	1
10138	Anthracene	120-12-7	0.35	U	0.35	1.8	1
10138	Benzo(a)anthracene	56-55-3	2.6		0.71	1.8	1
10138	Benzo(a)pyrene	50-32-8	3.4		0.71	1.8	1
10138	Benzo(b)fluoranthene	205-99-2	5.6		0.71	1.8	1
10138	Benzo(g,h,i)perylene	191-24-2	2.3		0.71	1.8	1
10138	Benzo(k)fluoranthene	207-08-9	2.7		0.71	1.8	1
10138	Butylbenzylphthalate	85-68-7	6.4	U	6.4	19	1
10138	Di-n-butylphthalate	84-74-2	6.4	U	6.4	19	1
10138	Chrysene	218-01-9	3.8		0.35	1.8	1
10138	Dibenz(a,h)anthracene	53-70-3	0.71	U	0.71	1.8	1
10138	Diethylphthalate	84-66-2	6.4	U	6.4	19	1
10138	Dimethylphthalate	131-11-3	6.4	U	6.4	19	1
10138	Bis(2-Ethylhexyl)phthalate	117-81-7	69		6.4	19	1
10138	Fluoranthene	206-44-0	6.7		0.71	1.8	1
10138	Fluorene	86-73-7	0.71	U	0.71	1.8	1
10138	Indeno(1,2,3-cd)pyrene	193-39-5	1.5	J	0.71	1.8	1
10138	1-Methylnaphthalene	90-12-0	0.71	U	0.71	1.8	1
10138	2-Methylnaphthalene	91-57-6	0.71	U	0.71	1.8	1
10138	Naphthalene	91-20-3	0.71	U	0.71	1.8	1
10138	N-Nitrosodimethylamine	62-75-9	0.71	U	0.71	1.8	1
10138	Di-n-octylphthalate	117-84-0	59		6.4	19	1
10138	Phenanthrene	85-01-8	2.4		0.71	1.8	1
10138	Pyrene	129-00-0	5.3		0.71	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	9a TPH by EPA 8015B Gas C5-C12	n.a.	0.2	U	0.2	1.0	24.46
HPLC Organics	**SW-846 8315A**		**ug/kg**		**ug/kg**	**ug/kg**	
04173	20a Formaldehyde 8315A	50-00-0	640	U	640	1,600	1
Pesticides/PCBs	**SW-846 8082**		**ug/kg**		**ug/kg**	**ug/kg**	
10225	Aroclor 5432	63496-31-1	1.1	U	1.1	3.5	1
10225	Aroclor 5442	12642-23-8	1.1	U	1.1	3.5	1
10225	Aroclor 5460	11126-42-4	1.1	U	1.1	3.5	1
10225	PCB-1016	12674-11-2	0.35	U	0.35	1.8	1
10225	PCB-1221	11104-28-2	0.35	U	0.35	1.8	1
10225	PCB-1232	11141-16-5	0.35	U	0.35	1.8	1
10225	PCB-1242	53469-21-9	0.35	U	0.35	1.8	1
10225	PCB-1248	12672-29-6	0.35	U	0.35	1.8	1
10225	PCB-1254	11097-69-1	0.35	U	0.35	1.8	1
10225	PCB-1260	11096-82-5	0.42	U	0.42	1.8	1
10225	PCB-1262	37324-23-5	0.35	U	0.35	1.8	1
10225	PCB-1268	11100-14-4	0.35	U	0.35	1.8	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and surrogate recoveries are within the QC acceptance limits. Since the hold time had expired prior to the second extraction all results are reported from the original extract. Similar results were obtained in both extracts.

GC Miscellaneous	**SW-846 8015B**		**ug/kg**		**ug/kg**	**ug/kg**	
10501	Ethanol	64-17-5	110	U	110	530	1
10501	Isopropanol	67-63-0	110	U	110	530	1
10501	Methanol	67-56-1	110	U	110	530	1
GC Miscellaneous	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
08283	Diethylene glycol	111-46-6	5.3	U	5.3	11	1
08283	Ethylene glycol	107-21-1	5.3	U	5.3	11	1
08283	Propylene glycol	57-55-6	5.3	U	5.3	11	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	**mg/kg**	
10318	m-Terphenyl	92-06-8	1.6	U	1.6	3.7	1
10318	o-Terphenyl	84-15-1	1.6	U	1.6	3.7	1
10318	p-Terphenyl	92-94-4	1.6	U	1.6	3.7	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
10199	EFH (C12-C14)	n.a.	0.43	U	0.43	1.3	1
10199	EFH (C15-C20)	n.a.	0.43	U	0.43	1.3	1
10199	EFH (C21-C30)	n.a.	7.1		0.43	1.3	1
10199	EFH (C30 - C40)	n.a.	30		0.43	1.3	1
10199	EFH (C8-C11)	n.a.	0.43	U	0.43	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,700		6.32	20.9	1
07914	Boron	7440-42-8	4.60	J	0.376	5.22	1
01650	Calcium	7440-70-2	3,060		2.61	20.9	1
01654	Iron	7439-89-6	17,700		2.73	20.9	1
01656	Lithium	7439-93-2	21.6		0.65	2.1	1
01657	Magnesium	7439-95-4	3,880		0.459	10.4	1
06958	Manganese	7439-96-5	236		0.0376	0.522	1
10145	Phosphorus	7723-14-0	261		0.365	10.4	1
01662	Potassium	7440-09-7	2,470		11.8	52.2	1
01667	Sodium	7440-23-5	149		6.21	104	1
07968	Strontium	7440-24-6	16.9		0.0261	0.522	1
06969	Tin	7440-31-5	2.35	J	0.334	10.4	1
06970	Titanium	7440-32-6	948		0.0741	1.04	1
10146	Zirconium	7440-67-7	1.35	J	0.480	5.22	1
	SW-846 6020		**mg/kg**		**mg/kg**	**mg/kg**	
06124	Antimony	7440-36-0	0.0751	U	0.0751	0.203	2
	Due to the nature of the EPA Method 3050B digestion procedure for ICP-MS, the Laboratory Control Standard and Matrix Spike(s) may exhibit low recoveries for antimony.						
06125	Arsenic	7440-38-2	4.80		0.0811	0.406	2
06126	Barium	7440-39-3	74.2		0.108	0.406	2
06127	Beryllium	7440-41-7	0.563		0.0162	0.101	2
06128	Cadmium	7440-43-9	0.0986	J	0.0446	0.101	2
06131	Chromium	7440-47-3	15.1		0.122	0.406	2
06132	Cobalt	7440-48-4	5.23		0.0203	0.101	2
06133	Copper	7440-50-8	8.72		0.0811	0.406	2
06135	Lead	7439-92-1	5.18		0.0103	0.203	2
06138	Molybdenum	7439-98-7	0.482		0.0507	0.101	2
06139	Nickel	7440-02-0	9.73		0.101	0.406	2
06141	Selenium	7782-49-2	0.140	J	0.0588	0.406	2
06142	Silver	7440-22-4	0.0289	J	0.0144	0.101	2
06145	Thallium	7440-28-0	0.251		0.0304	0.101	2
06148	Vanadium	7440-62-2	29.2		0.0223	0.101	2
06149	Zinc	7440-66-6	63.5		0.568	3.04	2
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0081	J	0.0074	0.106	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	11a Anions by 300.0 - Fluoride	16984-48-8	3.1		0.85	1.1	1
07336	11a Anions by 300.0 - Nitrate	14797-55-8	2.5		0.85	1.6	1
	EPA 314.0		**ug/kg**		**ug/kg**	**ug/kg**	
10147	7a Perchlorate EPA 314.0	14797-73-0	9.6	U	9.6	31.9	1
	SW-846 7199		**mg/kg**		**mg/kg**	**mg/kg**	
05892	3a Cr VI by EPA 7199	18540-29-9	0.33	J	0.21	1.1	1
	SW-846 9045C modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	17a pH by 9045C	n.a.	8.30		0.0100	0.0100	1
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	6.1		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501
The volatile analysis was performed on soil from SL-107-SA7-SB-13.5.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 04:46	Matthew S Woods	10
04688	5a Semivolatiles by EPA 8270C	SW-846 8270C	1	11318SLA026	11/26/2011 10:48	Brian K Graham	1
10138	4a Select SVOC EPA 8270SIM	SW-846 8270C SIM	1	11318SLB026	11/29/2011 04:08	Gregory J Drahovsky	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
10479	BNA Soil Extraction SIM	SW-846 3550B	1	11318SLB026	11/14/2011 18:10	Sally L Appleyard	1
00381	BNA Soil Sonication	SW-846 3550B	1	11318SLA026	11/14/2011 18:30	Sally L Appleyard	1
05551	9a TPH by EPA 8015B Gas C5-C12	TPH GRO SW-846 8015B mod	1	11313A16A	11/09/2011 22:57	Marie D John	24.46
06130	GC - 5 g HL Encore Prep	SW-846 5035	1	201130926096	11/05/2011 14:24	Christopher D Meeks	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035	2	201130926096	11/05/2011 14:25	Christopher D Meeks	n.a.
04173	20a Formaldehyde 8315A	SW-846 8315A	1	113110002A	11/08/2011 21:24	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10225	8a PCBs/PCTs by 8082	SW-846 8082	1	113150020A	11/16/2011 07:08	Jessica L Miller	1
00819	Solid Sample Pesticide Extract	SW-846 3550B	1	113150020A	11/11/2011 16:00	JoElla L Rice	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	113110002A	11/07/2011 15:00	Wanda F Oswald	1
10501	18a Alcohols by 8015B	SW-846 8015B	1	113130024A	11/11/2011 00:17	Elizabeth J Marin	1
08283	19a Glycols by 8015B	SW-846 8015B modified	1	113200029A	11/16/2011 21:04	Tyler O Griffin	1
10318	22a Terphenyls by 8015B	SW-846 8015B	1	113180012A	11/15/2011 18:54	Robert Brown	1
10199	9a TPH by EPA 8015B Oil/Diesel	SW-846 8015B modified	1	113190011A	11/17/2011 22:46	Heather E Williams	1
11238	EFH Extraction - Soils	SW-846 3550B	1	113190011A	11/15/2011 16:15	JoElla L Rice	1
10303	Terphenyls soil prep	SW-846 3550B	1	113180012A	11/14/2011 18:00	David S Schrum	1
00380	Solids Extraction for Alcohols	SW-846 8015B	1	113130024A	11/10/2011 19:00	Lei Yin	1
11551	Solids Glycol Extraction	SW-846 8015B modified	1	113200029A	11/16/2011 16:30	Tyler O Griffin	1
01643	Aluminum	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
07914	Boron	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01650	Calcium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01654	Iron	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01656	Lithium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01657	Magnesium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
06958	Manganese	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
10145	Phosphorus	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01662	Potassium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
01667	Sodium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
07968	Strontium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
06969	Tin	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
06970	Titanium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
10146	Zirconium	SW-846 6010B	1	113115708004	11/09/2011 07:12	Joanne M Gates	1
06124	Antimony	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06125	Arsenic	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06126	Barium	SW-846 6020	1	113111026003D	11/09/2011 20:52	Choon Y Tian	2
06127	Beryllium	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06128	Cadmium	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06131	Chromium	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06132	Cobalt	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06133	Copper	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06135	Lead	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06138	Molybdenum	SW-846 6020	1	113111026003C	11/09/2011 20:52	Choon Y Tian	2
06139	Nickel	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06141	Selenium	SW-846 6020	1	113111026003B	11/09/2011 20:52	Choon Y Tian	2
06142	Silver	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06145	Thallium	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06148	Vanadium	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
06149	Zinc	SW-846 6020	1	113111026003A	11/09/2011 20:52	Choon Y Tian	2
00159	Mercury	SW-846 7471A	1	113115711003	11/08/2011 19:03	Nelli S Markaryan	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	113115708004	11/08/2011 11:18	James L Mertz	1
11026	SW SW846 ICP-MS Digest	SW-846 3050B	1	113111026003	11/08/2011 11:44	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461456
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8003 SDG#: DE280-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	113115711003	11/08/2011 12:34	James L Mertz	1
07332	11a Anions by 300.0 - Fluoride	EPA 300.0	1	11312621202B	11/08/2011 16:06	Ashley M Adams	1
07336	11a Anions by 300.0 - Nitrate	EPA 300.0	1	11312621202B	11/08/2011 16:06	Ashley M Adams	1
10147	7a Perchlorate EPA 314.0	EPA 314.0	1	11313621202A	11/09/2011 15:51	Elyse P Brunstetter	1
05892	3a Cr VI by EPA 7199	SW-846 7199	1	11312243201A	11/09/2011 17:31	Elyse P Brunstetter	1
01352	11a Anions by 300.0 - Extract.	EPA 300.0	1	11312621202B	11/08/2011 06:00	William L Hamaker Jr	1
10129	7a Perchlorate EPA 314.0 Prep.	EPA 314.0	1	11313621202A	11/09/2011 06:10	William L Hamaker Jr	1
00394	17a pH by 9045C	SW-846 9045C modified	1	11319039401A	11/15/2011 09:45	Michelle L Lalli	1
02432	3a Cr VI by EPA 7199 - Ext.	SW-846 3060A	1	11312243201A	11/08/2011 08:30	Yolunder Y Bunch	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: EB-SA7-SB-110411 Water
SSFL Area IV Collocated Soil Sampling
EB-SA7-SB

LLI Sample # WW 6461457
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 13:30

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8004 SDG#: DE280-04EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	1.66	0.507	1.01	1

The surrogate recovery of n-nitrosodimethylamine-d6 was above the advisory QC limits in this sample. No further action was taken.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11309WAD026	11/16/2011 22:42	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11309WAD026	11/07/2011 05:00	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: TB-110411 Sand
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # SW 6461458
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 08:00

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8005 SDG#: DE280-05TB

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**EPA 1625C**		**ng/kg**		**ng/kg**	**ng/kg**	
11622	N-Nitrosodimethylamine	62-75-9	16.7	U	16.7	33.3	1

The internal standard peak areas were outside of QC limits in the method blank and LCS associated with this sample. This sample was re-extracted outside of the method required holding time, and acceptable QC and comparable data were observed. The data reported here is from the initial extraction of the sample.

Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	Moisture Content by 160.3	n.a.	0.50	U	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11622	21a NDMA by 1625C	EPA 1625C	1	11313SLF026	11/17/2011 05:06	Matthew S Woods	1
11630	NDMA Soil Microwave	SW-846 3546	1	11313SLF026	11/10/2011 11:45	Kelli M Barto	1
11624	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: TB-110411 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6461459
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 08:00

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8006 SDG#: DE280-06TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		ug/l		ug/l	ug/l	
08229	TPH-GRO S.CA water C5-C12	n.a.	20	U	20	50	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08229	9b TPH by EPA 8015B Gas C5-C12	TPH GRO SW-8015B	1	11313A20A	11/09/2011 13:59	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11313A20A	11/09/2011 13:59	Marie D John	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: TB-110411 Water
SSFL Area IV Collocated Soil Sampling
TB

LLI Sample # WW 6461460
LLI Group # 1275057
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 08:00

Submitted: 11/05/2011 09:30
Reported: 12/05/2011 13:07

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

E8007 SDG#: DE280-07TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles EPA 1625C			**ng/l**	**ng/l**	**ng/l**	
10962	N-Nitrosodimethylamine	62-75-9	0.477 U	0.477	0.953	1

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10962	21b NDMA by 1625C	EPA 1625C	1	11309WAD026	11/16/2011 23:01	Matthew S Woods	1
11629	NDMA Liquid/Liquid Extraction	SW-846 3520C	1	11309WAD026	11/07/2011 05:00	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11309WAD026	Sample number(s): 6461457,6461460									
N-Nitrosodimethylamine	0.500	U	0.500	1.00	ng/l	88	88	70-130	0	30
Batch number: 11313SLF026	Sample number(s): 6461454-6461456,6461458									
N-Nitrosodimethylamine	16.7	U	16.7	33.3	ng/kg	89		70-130		
Batch number: 11318SLA026	Sample number(s): 6461454-6461456									
Aniline	170 U		170.	500	ug/kg	71		20-115		
Benzidine	1,200 U		1,200.	3,300	ug/kg	50		15-121		
Benzoic acid	170 U		170.	500	ug/kg	82		62-113		
Benzyl alcohol	170 U		170.	500	ug/kg	89		68-111		
4-Bromophenyl-phenylether	17	U	17.	170	ug/kg	95		73-114		
2-butoxy-Ethanol	1,700 U		1,700.	1,700	ug/kg					
Carbazole	17	U	17.	170	ug/kg	92		77-113		
4-Chloro-3-methylphenol	33	U	33.	170	ug/kg	96		74-119		
4-Chloroaniline	67	U	67.	170	ug/kg	40		10-110		
bis(2-Chloroethoxy)methane	17	U	17.	170	ug/kg	93		70-118		
bis(2-Chloroethyl)ether	17	U	17.	170	ug/kg	87		70-104		
bis(2-Chloroisopropyl)ether	17	U	17.	170	ug/kg	90		62-115		
2-Chloronaphthalene	17	U	17.	170	ug/kg	93		49-128		
2-Chlorophenol	17	U	17.	170	ug/kg	95		72-112		
4-Chlorophenyl-phenylether	33	U	33.	170	ug/kg	94		74-115		
Dibenzofuran	17	U	17.	170	ug/kg	91		74-116		
1,2-Dichlorobenzene	17	U	17.	170	ug/kg	86		74-99		
1,3-Dichlorobenzene	17	U	17.	170	ug/kg	84		70-98		
1,4-Dichlorobenzene	17	U	17.	170	ug/kg	85		74-106		
3,3'-Dichlorobenzidine	100 U		100.	330	ug/kg	38		10-116		
2,4-Dichlorophenol	17	U	17.	170	ug/kg	97		75-111		
2,4-Dimethylphenol	33	U	33.	170	ug/kg	95		72-111		
3,5-Dimethylphenol	33	U	33.	170	ug/kg	94		83-120		
4,6-Dinitro-2-methylphenol	170 U		170.	500	ug/kg	71		46-120		
2,4-Dinitrophenol	330 U		330.	1,000	ug/kg	50		18-133		
2,4-Dinitrotoluene	33	U	33.	170	ug/kg	95		73-115		
2,6-Dinitrotoluene	17	U	17.	170	ug/kg	98		79-115		
1,2-Diphenylhydrazine	17	U	17.	170	ug/kg	95		71-125		
Hexachlorobenzene	17	U	17.	170	ug/kg	95		73-119		
Hexachlorobutadiene	67	U	67.	170	ug/kg	87		65-117		
Hexachlorocyclopentadiene	170		170.	500	ug/kg	79		46-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	17	U	17.	170	ug/kg	81		61-109		
Isophorone	17	U	17.	170	ug/kg	92		69-110		
2-Methylphenol	33	U	33.	170	ug/kg	96		66-110		
4-Methylphenol	33	U	33.	170	ug/kg	94		66-117		
2-Nitroaniline	17	U	17.	170	ug/kg	91		78-116		
3-Nitroaniline	33	U	33.	170	ug/kg	89		62-109		
4-Nitroaniline	67	U	67.	170	ug/kg	70		49-98		
Nitrobenzene	17	U	17.	170	ug/kg	91		66-119		
2-Nitrophenol	17	U	17.	170	ug/kg	88		76-111		
4-Nitrophenol	170	U	170.	500	ug/kg	80		56-118		
N-Nitroso-di-n-propylamine	17	U	17.	170	ug/kg	84		63-107		
N-Nitrosodiphenylamine	17	U	17.	170	ug/kg	97		67-141		
Pentachlorophenol	170	U	170.	500	ug/kg	85		51-117		
Phenol	17	U	17.	170	ug/kg	98		58-112		
2-phenoxy-Ethanol	1,700	U	1,700.	1,700	ug/kg					
Tetralin	170	U	170.	170	ug/kg					
1,2,4-Trichlorobenzene	17	U	17.	170	ug/kg	90		73-108		
2,4,5-Trichlorophenol	33	U	33.	170	ug/kg	92		76-107		
2,4,6-Trichlorophenol	33	U	33.	170	ug/kg	94		78-111		
Batch number: 11318SLB026	Sample number(s): 6461454-6461456									
Acenaphthene	0.67	U	0.67	1.7	ug/kg	97		63-120		
Acenaphthylene	0.33	U	0.33	1.7	ug/kg	99		60-120		
Anthracene	0.33	U	0.33	1.7	ug/kg	100		73-113		
Benzo(a)anthracene	0.67	U	0.67	1.7	ug/kg	100		74-120		
Benzo(a)pyrene	0.67	U	0.67	1.7	ug/kg	99		58-129		
Benzo(b)fluoranthene	0.67	U	0.67	1.7	ug/kg	101		63-143		
Benzo(g,h,i)perylene	0.67	U	0.67	1.7	ug/kg	107		66-150		
Benzo(k)fluoranthene	0.67	U	0.67	1.7	ug/kg	100		54-142		
Butylbenzylphthalate	6.0	U	6.0	18	ug/kg	105		65-131		
Di-n-butylphthalate	6.0	U	6.0	18	ug/kg	123		75-137		
Chrysene	0.33	U	0.33	1.7	ug/kg	101		73-114		
Dibenz(a,h)anthracene	0.67	U	0.67	1.7	ug/kg	105		53-138		
Diethylphthalate	6.0	U	6.0	18	ug/kg	117		68-125		
Dimethylphthalate	6.0	U	6.0	18	ug/kg	109		79-121		
Bis(2-Ethylhexyl)phthalate	6.0	U	6.0	18	ug/kg	119		67-143		
Fluoranthene	0.67	U	0.67	1.7	ug/kg	102		64-120		
Fluorene	0.67	U	0.67	1.7	ug/kg	105		71-120		
Indeno(1,2,3-cd)pyrene	0.67	U	0.67	1.7	ug/kg	105		56-134		
1-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	94		72-120		
2-Methylnaphthalene	0.67	U	0.67	1.7	ug/kg	93		62-120		
Naphthalene	0.67	U	0.67	1.7	ug/kg	96		67-120		
N-Nitrosodimethylamine	0.67	U	0.67	1.7	ug/kg	90		55-118		
Di-n-octylphthalate	6.0	U	6.0	18	ug/kg	96		68-162		
Phenanthrene	0.67	U	0.67	1.7	ug/kg	97		75-120		
Pyrene	0.67	U	0.67	1.7	ug/kg	97		72-119		
Batch number: 11313A16A	Sample number(s): 6461454-6461456									
9a TPH by EPA 8015B Gas C5-C12	0.2	U	0.2	1.0	mg/kg	78	87	67-119	10	30
Batch number: 11313A20A	Sample number(s): 6461459									
TPH-GRO S.CA water C5-C12	20	U	20.	50	ug/l	109	100	75-135	9	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 113110002A	Sample number(s): 6461454-6461456									
20a Formaldehyde 8315A	600 U		600.	1,500	ug/kg	106		80-126		
Batch number: 113150020A	Sample number(s): 6461454-6461456									
Aroclor 5432	1.0	U	1.0	3.3	ug/kg					
Aroclor 5442	1.0	U	1.0	3.3	ug/kg	71	71	36-106	0	30
Aroclor 5460	1.0	U	1.0	3.3	ug/kg					
PCB-1016	0.33	U	0.33	1.7	ug/kg	79		72-120		
PCB-1221	0.33	U	0.33	1.7	ug/kg					
PCB-1232	0.33	U	0.33	1.7	ug/kg					
PCB-1242	0.33	U	0.33	1.7	ug/kg					
PCB-1248	0.33	U	0.33	1.7	ug/kg					
PCB-1254	0.33	U	0.33	1.7	ug/kg					
PCB-1260	0.39	U	0.39	1.7	ug/kg	86		65-137		
PCB-1262	0.33	U	0.33	1.7	ug/kg					
PCB-1268	0.33	U	0.33	1.7	ug/kg					
Batch number: 113130024A	Sample number(s): 6461454-6461456									
Ethanol	100 U		100.	500	ug/kg	100		71-129		
Isopropanol	100 U		100.	500	ug/kg	96		75-125		
Methanol	100 U		100.	500	ug/kg	102		68-129		
Batch number: 113200029A	Sample number(s): 6461454-6461456									
Diethylene glycol	5.0	U	5.0	10	mg/kg	100		75-125		
Ethylene glycol	5.0	U	5.0	10	mg/kg	106		53-149		
Propylene glycol	5.0	U	5.0	10	mg/kg	99		67-131		
Batch number: 113180012A	Sample number(s): 6461454-6461456									
m-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		64-111		
o-Terphenyl	1.5	U	1.5	3.5	mg/kg	99		75-125		
p-Terphenyl	1.5	U	1.5	3.5	mg/kg	98		69-109		
Batch number: 113190011A	Sample number(s): 6461454-6461456									
EFH (C12-C14)	0.40	U	0.40	1.2	mg/kg	101		70-123		
EFH (C15-C20)	0.40	U	0.40	1.2	mg/kg	108		75-128		
EFH (C21-C30)	0.40	U	0.40	1.2	mg/kg	105		64-134		
EFH (C30 - C40)	0.40	U	0.40	1.2	mg/kg	115		65-128		
EFH (C8-C11)	0.40	U	0.40	1.2	mg/kg	89		49-107		
Batch number: 113111026003A	Sample number(s): 6461454-6461456									
Antimony	0.0725	U	0.0725	0.196	mg/kg	70		40-227		
Arsenic	0.0784	U	0.0784	0.392	mg/kg	103		83-111		
Beryllium	0.0157	U	0.0157	0.0980	mg/kg	103		84-112		
Cadmium	0.0431	U	0.0431	0.0980	mg/kg	101		83-111		
Chromium	0.118	U	0.118	0.392	mg/kg	108		77-123		
Cobalt	0.0196	U	0.0196	0.0980	mg/kg	108		85-114		
Copper	0.0784	U	0.0784	0.392	mg/kg	103		81-110		
Lead	0.0285	J	0.0100	0.196	mg/kg	98		84-112		
Nickel	0.0980	U	0.0980	0.392	mg/kg	101		81-110		
Silver	0.0139	U	0.0139	0.0980	mg/kg	101		83-112		
Thallium	0.0294	U	0.0294	0.0980	mg/kg	97		82-112		
Vanadium	0.0265	J	0.0216	0.0980	mg/kg	100		76-110		
Zinc	0.549	U	0.549	2.94	mg/kg	99		82-110		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 113111026003B	Sample number(s): 6461454-6461456									
Selenium	0.0569	U	0.0569	0.392	mg/kg	95		79-110		
Batch number: 113111026003C	Sample number(s): 6461454-6461456									
Molybdenum	0.0490	U	0.0490	0.0980	mg/kg	99		80-110		
Batch number: 113111026003D	Sample number(s): 6461454-6461456									
Barium	0.104	U	0.104	0.392	mg/kg	102		83-110		
Batch number: 113115708004	Sample number(s): 6461454-6461456									
Aluminum	6.43	J	5.87	19.4	mg/kg	83		40-127		
Boron	0.350	U	0.350	4.85	mg/kg	98		83-110		
Calcium	9.65	J	2.43	19.4	mg/kg	95		81-110		
Iron	4.14	J	2.53	19.4	mg/kg	81		47-129		
Lithium	0.60	U	0.60	1.9	mg/kg	98		80-120		
Magnesium	5.60	J	0.427	9.71	mg/kg	87		63-116		
Manganese	0.0350	U	0.0350	0.485	mg/kg	97		85-116		
Phosphorus	1.15	J	0.340	9.71	mg/kg	100		80-120		
Potassium	11.0	U	11.0	48.5	mg/kg	97		71-110		
Sodium	5.78	U	5.78	97.1	mg/kg	98		76-110		
Strontium	0.0272	J	0.0243	0.485	mg/kg	97		84-110		
Tin	1.39	J	0.311	9.71	mg/kg	95		86-120		
Titanium	0.0689	U	0.0689	0.971	mg/kg	84		80-120		
Zirconium	0.447	U	0.447	4.85	mg/kg	100		80-120		
Batch number: 113115711003	Sample number(s): 6461454-6461456									
Mercury	0.0069	U	0.0069	0.0984	mg/kg	102		83-119		
Batch number: 11312243201A	Sample number(s): 6461454-6461456									
3a Cr VI by EPA 7199	0.20	U	0.20	1.0	mg/kg	81		80-120		
Batch number: 11312621202B	Sample number(s): 6461454-6461456									
11a Anions by 300.0 - Fluoride	0.80	U	0.80	1.0	mg/kg	104		90-110		
11a Anions by 300.0 - Nitrate	0.80	U	0.80	1.5	mg/kg	102		90-110		
Batch number: 11313621202A	Sample number(s): 6461454-6461456									
7a Perchlorate EPA 314.0	9.0	U	9.0	30.0	ug/kg	99		85-115		
Batch number: 11319039401A	Sample number(s): 6461454-6461456									
17a pH by 9045C						100		95-105		
Batch number: 11315162401B	Sample number(s): 6461454-6461456,6461458									
Moisture Content by 160.3						100		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11313SLF026	Sample number(s): 6461454-6461456,6461458 UNSPK: P457188								
N-Nitrosodimethylamine	84	83	70-130	1	30				

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 11318SLA026	Sample number(s): 6461454-6461456 UNSPK: 6461454								
Aniline	53	73	18-116	32*	30				
Benzidine	0*	0*	35-141	0	30				
Benzoic acid	42	50	10-173	18	30				
Benzyl alcohol	89	98	67-115	9	30				
4-Bromophenyl-phenylether	91	100	67-129	10	30				
Carbazole	87	96	64-120	10	30				
4-Chloro-3-methylphenol	92	100	62-122	8	30				
4-Chloroaniline	37	68	13-107	58*	30				
bis(2-Chloroethoxy)methane	86	96	75-104	10	30				
bis(2-Chloroethyl)ether	83	92	60-116	10	30				
bis(2-Chloroisopropyl)ether	87	96	55-142	9	30				
2-Chloronaphthalene	88	93	50-141	6	30				
2-Chlorophenol	94	104	73-121	10	30				
4-Chlorophenyl-phenylether	91	99	80-109	9	30				
Dibenzofuran	88	96	71-112	8	30				
1,2-Dichlorobenzene	83	88	66-108	6	30				
1,3-Dichlorobenzene	80	87	63-109	8	30				
1,4-Dichlorobenzene	82	88	58-108	7	30				
3,3'-Dichlorobenzidine	46	64	28-109	33*	30				
2,4-Dichlorophenol	93	104	66-123	10	30				
2,4-Dimethylphenol	91	100	68-118	9	30				
3,5-Dimethylphenol	88	97	71-127	9	30				
4,6-Dinitro-2-methylphenol	52	60	11-126	14	30				
2,4-Dinitrophenol	30	34	20-143	14	30				
2,4-Dinitrotoluene	90	97	56-129	7	30				
2,6-Dinitrotoluene	93	101	69-123	9	30				
1,2-Diphenylhydrazine	91	103	71-129	12	30				
Hexachlorobenzene	90	102	77-114	12	30				
Hexachlorobutadiene	84	91	62-120	8	30				
Hexachlorocyclopentadiene	76	86	10-153	12	30				
Hexachloroethane	79	85	57-109	7	30				
Isophorone	86	94	73-102	9	30				
2-Methylphenol	93	104	75-111	11	30				
4-Methylphenol	92	102	59-123	10	30				
2-Nitroaniline	90	99	67-125	10	30				
3-Nitroaniline	84	95	59-122	12	30				
4-Nitroaniline	65	79	41-109	19	30				
Nitrobenzene	86	94	57-125	8	30				
2-Nitrophenol	88	96	56-127	9	30				
4-Nitrophenol	77	85	37-129	9	30				
N-Nitroso-di-n-propylamine	81	89	60-116	10	30				
N-Nitrosodiphenylamine	91	102	71-122	11	30				
Pentachlorophenol	70	75	28-127	6	30				
Phenol	94	104	58-126	10	30				
1,2,4-Trichlorobenzene	85	92	72-115	8	30				
2,4,5-Trichlorophenol	90	100	58-129	10	30				
2,4,6-Trichlorophenol	93	102	56-134	9	30				
Batch number: 11318SLB026	Sample number(s): 6461454-6461456 UNSPK: P462616								
Acenaphthene	97	93	63-105	4	30				
Acenaphthylene	96	96	67-114	0	30				
Anthracene	96	99	73-115	3	30				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzo(a)anthracene	98	100	59-128	2	30				
Benzo(a)pyrene	96	97	58-142	1	30				
Benzo(b)fluoranthene	116	117	54-163	1	30				
Benzo(g,h,i)perylene	77	77	33-141	0	30				
Benzo(k)fluoranthene	91	91	57-153	0	30				
Butylbenzylphthalate	105	110	57-173	5	30				
Di-n-butylphthalate	105	108	65-148	2	30				
Chrysene	92	95	67-123	3	30				
Dibenz(a,h)anthracene	86	87	22-133	0	30				
Diethylphthalate	110	113	70-136	2	30				
Dimethylphthalate	100	104	74-118	4	30				
Bis(2-Ethylhexyl)phthalate	64	71	39-167	5	30				
Fluoranthene	101	103	51-149	2	30				
Fluorene	98	98	66-122	1	30				
Indeno(1,2,3-cd)pyrene	84	84	21-143	0	30				
1-Methylnaphthalene	92	92	72-123	1	30				
2-Methylnaphthalene	90	91	64-103	1	30				
Naphthalene	93	94	61-102	2	30				
N-Nitrosodimethylamine	86	84	48-113	3	30				
Di-n-octylphthalate	98	98	40-192	0	30				
Phenanthrene	93	96	62-122	3	30				
Pyrene	89	92	51-131	3	30				
Batch number: 113110002A	Sample number(s): 6461454-6461456 UNSPK: P457188								
20a Formaldehyde 8315A	113	116	80-120	3	50				
Batch number: 113150020A	Sample number(s): 6461454-6461456 UNSPK: P465418								
PCB-1016	74	79	29-146	7	50				
PCB-1260	85	94	39-149	10	50				
Batch number: 113130024A	Sample number(s): 6461454-6461456 UNSPK: P462617								
Ethanol	98	48	48-130	68*	20				
Isopropanol	94	41	12-149	78*	20				
Methanol	98	47	43-138	70*	20				
Batch number: 113200029A	Sample number(s): 6461454-6461456 UNSPK: 6461456								
Diethylene glycol	23*	22*	59-109	4	20				
Ethylene glycol	64	65	63-107	1	20				
Propylene glycol	73	73	63-107	1	20				
Batch number: 113180012A	Sample number(s): 6461454-6461456 UNSPK: 6461454								
m-Terphenyl	101	100	75-125	1	20				
o-Terphenyl	102	101	75-125	1	20				
p-Terphenyl	101	100	75-125	1	20				
Batch number: 113190011A	Sample number(s): 6461454-6461456 UNSPK: P462617								
EFH (C12-C14)	85	98	49-123	14	20				
EFH (C15-C20)	99	108	49-123	8	20				
EFH (C21-C30)	102	111	49-123	9	20				
EFH (C30 - C40)	73	86	49-123	11	20				
EFH (C8-C11)	71	79	49-123	10	20				
Batch number: 113111026003A	Sample number(s): 6461454-6461456 UNSPK: 6461455 BKG: 6461455								

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Antimony	35*	44*	75-125	18	20	0.0820 J	0.0976 J	17 (1)	20
Arsenic	90	133*	75-125	11	20	4.90	4.04	19	20
Beryllium	100	128*	75-125	14	20	0.552	0.475	15 (1)	20
Cadmium	111	125	75-125	8	20	0.105	0.0877 J	18 (1)	20
Chromium	103	136*	75-125	11	20	15.0	14.1	6	20
Cobalt	115	129*	75-125	8	20	5.68	4.52	23*	20
Copper	113	137*	75-125	11	20	7.51	6.37	16	20
Lead	96	133*	75-125	11	20	5.77	4.78	19	20
Nickel	124	147*	75-125	9	20	9.65	8.66	11	20
Silver	113	124	75-125	7	20	0.0295 J	0.0174 J	51* (1)	20
Thallium	101	127*	75-125	13	20	0.282	0.219	25* (1)	20
Vanadium	111	159*	75-125	10	20	29.7	27.3	8	20
Zinc	-122 (2)	-106 (2)	75-125	2	20	102	68.9	38*	20
Batch number: 113111026003B	Sample number(s): 6461454-6461456 UNSPK: 6461455 BKG: 6461455								
Selenium	100	106	75-125	4	20	0.170 J	0.169 J	1 (1)	20
Batch number: 113111026003C	Sample number(s): 6461454-6461456 UNSPK: 6461455 BKG: 6461455								
Molybdenum	112	123	75-125	7	20	0.466	0.324	36* (1)	20
Batch number: 113111026003D	Sample number(s): 6461454-6461456 UNSPK: 6461455 BKG: 6461455								
Barium	107 (2)	128 (2)	75-125	2	20	85.8	75.6	13	20
Batch number: 113115708004	Sample number(s): 6461454-6461456 UNSPK: 6461454 BKG: 6461454								
Aluminum	1372 (2)	839 (2)	75-125	6	20	13,700	12,600	8	20
Boron	95	94	84-115	1	20	4.47 J	3.74 J	18 (1)	20
Calcium	149 (2)	117 (2)	75-125	3	20	3,780	3,550	6	20
Iron	475 (2)	-112 (2)	75-125	3	20	17,400	16,900	3	20
Lithium	98	97	82-114	1	20	21.1	20.1	5	20
Magnesium	146 (2)	167 (2)	75-125	1	20	3,900	3,770	3	20
Manganese	60 (2)	67 (2)	75-125	1	20	240	229	4	20
Phosphorus	101	103	75-125	0	20	310	306	1	20
Potassium	116	109	75-125	2	20	2,480	2,360	5	20
Sodium	96	94	75-125	2	20	156	145	7 (1)	20
Strontium	98	96	75-115	2	20	18.3	16.9	8	20
Tin	89	87	80-110	2	20	2.31 J	2.27 J	2 (1)	20
Titanium	187 (2)	194 (2)	75-125	1	20	901	881	2	20
Zirconium	99	97	81-110	2	20	1.93 J	2.26 J	16 (1)	20
Batch number: 113115711003	Sample number(s): 6461454-6461456 UNSPK: 6461456 BKG: 6461456								
Mercury	100	102	65-135	1	20	0.0076 J	0.0069 U	200* (1)	20
Batch number: 11312243201A	Sample number(s): 6461454-6461456 UNSPK: P451564 BKG: P451564								
3a Cr VI by EPA 7199	98		75-125			0.43 J	0.47 J	10 (1)	20
Batch number: 11312621202B	Sample number(s): 6461454-6461456 UNSPK: P454456 BKG: P454456								
11a Anions by 300.0 - Fluoride	77*		80-120			5.1	4.7	9 (1)	20
11a Anions by 300.0 - Nitrate	96		80-120			1.7	1.8	8 (1)	20
Batch number: 11313621202A	Sample number(s): 6461454-6461456 UNSPK: 6461454 BKG: 6461454								

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc		DUP Conc		DUP RPD	Dup RPD Max
7a Perchlorate EPA 314.0	103		80-120			9.0	U	9.0	U	0 (1)	15
Batch number: 11319039401A	Sample number(s): 6461454-6461456					BKG: 6461454					
17a pH by 9045C						8.53		8.53		0	3
Batch number: 11315162401B	Sample number(s): 6461454-6461456,6461458					BKG: P463912					
Moisture Content by 160.3						0.50	U	0.50	U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 21b. NDMA in Water
Batch number: 11309WAD026

	N-Nitrosodimethylamine-d6
6461457	173*
6461460	129
Blank	113
LCS	120
LCSD	117
Limits:	50-150

Analysis Name: 21a NDMA by 1625C
Batch number: 11313SLF026

	N-Nitrosodimethylamine-d6
6461454	124
6461455	122
6461456	121
6461458	110
Blank	136
LCS	148
MS	133
MSD	138
Limits:	50-150

Analysis Name: 5a Semivolatiles by EPA 8270C
Batch number: 11318SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6461454	100	102	94	89	91	90
6461455	96	97	85	83	87	85
6461456	95	95	87	79	85	86
Blank	92	95	87	85	91	87

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Surrogate Quality Control

LCS	95	97	89	85	87	84
MS	99	102	92	86	91	86
MSD	102	104	94	87	93	88
Limits:	25-120	25-130	35-130	40-130	45-130	45-135

Analysis Name: 4a Select SVOC EPA 8270SIM
Batch number: 11318SLB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6461454	109	96	99
6461455	101	91	95
6461456	103	93	101
Blank	114	105	118
LCS	104	94	99
MS	98	90	96
MSD	103	91	104
Limits:	40-130	45-130	45-135

Analysis Name: 9a TPH by EPA 8015B Gas C5-C12
Batch number: 11313A16A

	Trifluorotoluene-F
6461454	90
6461455	84
6461456	85
Blank	97
LCS	84
LCSD	93
Limits:	61-122

Analysis Name: 9b TPH by EPA 8015B Gas C5-C12
Batch number: 11313A20A

	Trifluorotoluene-F
6461459	93
Blank	93
LCS	120
LCSD	119
Limits:	63-135

Analysis Name: 20a Formaldehyde 8315A
Batch number: 113110002A

	Butyraldehyde
6461454	96
6461455	93
6461456	93
Blank	96
LCS	84
MS	97
MSD	84
Limits:	64-126

*- Outside of specification
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Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Surrogate Quality Control

Analysis Name: 8a PCBs/PCTs by 8082
Batch number: 113150020A

	Tetrachloro-m-xylene	Decachlorobiphenyl
6461454	93	90
6461455	104	43*
6461456	90	37*
Blank	90	97
LCS	89	96
LCSD	96	102
MS	85	88
MSD	93	99
Limits:	53-139	45-120

Analysis Name: 18a Alcohols by 8015B
Batch number: 113130024A

	Acetone
6461454	81
6461455	79
6461456	80
Blank	84
LCS	86
MS	4*
MSD	22*
Limits:	42-138

Analysis Name: 22a Terphenyls by 8015B
Batch number: 113180012A

	n-Triacontane-d62
6461454	80
6461455	78
6461456	82
Blank	79
LCS	76
MS	78
MSD	78
Limits:	19-152

Analysis Name: 9a TPH by EPA 8015B Oil/Diesel
Batch number: 113190011A

	Chlorobenzene	Orthoterphenyl
6461454	64	86
6461455	67	83
6461456	63	79
Blank	71	89
LCS	78	94
MS	68	85
MSD	68	87
Limits:	37-125	47-145

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275057
Reported: 12/05/11 at 01:07 PM

Surrogate Quality Control

Analysis Name: 19a Glycols by 8015B
Batch number: 113200029A

	Tetramethylene glycol
6461454	91
6461455	91
6461456	91
Blank	102
LCS	102
MS	91
MSD	92
Limits:	29-137

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct#13013 Ap#1275057 Sample# 6461454-60

CHAIN OF CUSTODY RECORD

CDM SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020/7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH GRO EPA 8015B $	**TPH-EPH EPA 8015B Mod.	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Triphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Downhill EPA 8270	Other Instructions and Notes
SL-107-SA7-SB-4.5	11.04.11	0920	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-4.0-5.0	11.04.11	0915	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-4.0-5.0	11.04.11	0915	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
SL-107-SA7-SB-9.5	11.04.11	1010	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-9.0-10.0	11.04.11	1005	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-9.0-10.0	11.04.11	1005	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
SL-107-SA7-SB-13.5	11.04.11	1110	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-13.0-14.0	11.04.11	1105	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-13.0-14.0	11.04.11	1105	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
EB-SA7-SB-110411	11.04.11	1330	WATER	NONE	1-1 L Amber														X							
TB-110411	11.04.11	0800	SOIL	NONE	1-4 oz jar														X							
TB-110411	11.04.11	0800	WATER	NONE	2-40 mL Vials										X											
TB-110411	11.04.11	0800	WATER	NONE	1-1 L amber														X							

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Laboratory:
	11/04/2011 / 1630	Brandy Barclay 11-5-11 930 LL	Lancaster Laboratories, Inc.
Received by: (Signature)	Date/Time	Airbill No.(s)	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

November 17, 2011

Project: SSFL Area IV Collocated Soil Sampling

Submittal Date: 11/05/2011
Group Number: 1275058
SDG: DX153
PO Number: 1203-004-009-AL
Release Number: TRACKING #12571
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
SL-107-SA7-SB-4.0-5.0 Soil	6461461
SL-107-SA7-SB-9.0-10.0 Soil	6461462
SL-107-SA7-SB-13.0-14.0 Soil	6461463

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CDM Federal Services Program	Attn: Todd Burgesser
ELECTRONIC COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,



Michele J. Smith
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461461
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5317 SDG#: DX153-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.0	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461461
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5317 SDG#: DX153-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**	**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0251 U	0.0251	1.06	1
11031	12378-PeCDD	40321-76-4	0.0800 JBQ	0.0297	5.32	1
11031	123478-HxCDD	39227-28-6	0.0778 J	0.0310	5.32	1
11031	123678-HxCDD	57653-85-7	0.379 JB	0.0318	5.32	1
11031	123789-HxCDD	19408-74-3	0.255 JB	0.0304	5.32	1
11031	1234678-HpCDD	35822-46-9	10.7 B	0.0449	5.32	1
11031	OCDD	3268-87-9	95.0 B	0.0417	10.6	1
11031	2378-TCDF	51207-31-9	0.0312 J	0.0227	1.06	1
11031	12378-PeCDF	57117-41-6	0.0430 JB	0.0146	5.32	1
11031	23478-PeCDF	57117-31-4	0.183 JB	0.0155	5.32	1
11031	123478-HxCDF	70648-26-9	0.169 JB	0.0237	5.32	1
11031	123678-HxCDF	57117-44-9	0.0915 JB	0.0203	5.32	1
11031	123789-HxCDF	72918-21-9	0.0932 JBQ	0.0229	5.32	1
11031	234678-HxCDF	60851-34-5	0.123 JB	0.0204	5.32	1
11031	1234678-HpCDF	67562-39-4	1.10 JB	0.0138	5.32	1
11031	1234789-HpCDF	55673-89-7	0.136 JB	0.0226	5.32	1
11031	OCDF	39001-02-0	2.28 JB	0.0303	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	71	25 - 181
13C12-123478-HxCDD	75	32 - 141
13C12-123678-HxCDD	75	28 - 130
13C12-123789-HxCDD	77	28 - 130
13C12-1234678-HpCDD	80	23 - 140
13C12-OCDD	89	17 - 157
13C12-2378-TCDF	74	24 - 169
13C12-12378-PeCDF	81	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	64	26 - 152
13C12-123678-HxCDF	71	26 - 123
13C12-234678-HxCDF	72	28 - 136
13C12-123789-HxCDF	73	29 - 147
13C12-1234678-HpCDF	94	28 - 143
13C12-1234789-HpCDF	66	26 - 138
13C12-OCDF	65	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-107-SA7-SB-4.0-5.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461461
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5317 SDG#: DX153-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-4.0-5.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461461
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 09:15

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5317 SDG#: DX153-17

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 09:48	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461462
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5318 SDG#: DX153-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	5.8	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461462
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5318 SDG#: DX153-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0290 U	0.0290	1.05	1
11031	12378-PeCDD	40321-76-4	0.0468 JBQ	0.0265	5.23	1
11031	123478-HxCDD	39227-28-6	0.0482 JQ	0.0261	5.23	1
11031	123678-HxCDD	57653-85-7	0.245 JBQ	0.0264	5.23	1
11031	123789-HxCDD	19408-74-3	0.180 JB	0.0253	5.23	1
11031	1234678-HpCDD	35822-46-9	6.00 B	0.0389	5.23	1
11031	OCDD	3268-87-9	65.1 B	0.0322	10.5	1
11031	2378-TCDF	51207-31-9	0.0234 U	0.0234	1.05	1
11031	12378-PeCDF	57117-41-6	0.0645 JB	0.0136	5.23	1
11031	23478-PeCDF	57117-31-4	0.0956 JBQ	0.0136	5.23	1
11031	123478-HxCDF	70648-26-9	0.0771 JB	0.0178	5.23	1
11031	123678-HxCDF	57117-44-9	0.0897 JB	0.0151	5.23	1
11031	123789-HxCDF	72918-21-9	0.101 JB	0.0200	5.23	1
11031	234678-HxCDF	60851-34-5	0.104 JB	0.0154	5.23	1
11031	1234678-HpCDF	67562-39-4	0.663 JB	0.0108	5.23	1
11031	1234789-HpCDF	55673-89-7	0.0623 JB	0.0229	5.23	1
11031	OCDF	39001-02-0	1.44 JB	0.0327	10.5	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	81	32 - 141
13C12-123678-HxCDD	81	28 - 130
13C12-123789-HxCDD	79	28 - 130
13C12-1234678-HpCDD	83	23 - 140
13C12-OCDD	92	17 - 157
13C12-2378-TCDF	69	24 - 169
13C12-12378-PeCDF	80	24 - 185
13C12-23478-PeCDF	70	21 - 178
13C12-123478-HxCDF	66	26 - 152
13C12-123678-HxCDF	77	26 - 123
13C12-234678-HxCDF	75	28 - 136
13C12-123789-HxCDF	68	29 - 147
13C12-1234678-HpCDF	106	28 - 143
13C12-1234789-HpCDF	63	26 - 138
13C12-OCDF	61	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-107-SA7-SB-9.0-10.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461462
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5318 SDG#: DX153-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-9.0-10.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461462
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 10:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5318 SDG#: DX153-18

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 10:44	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461463
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5319 SDG#: DX153-19*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**EPA 160.3 modified**		%	%	%	
11625	Moisture Content by 160.3	n.a.	6.1	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461463
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5319 SDG#: DX153-19*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry EDL*	Dry MRL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg		ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	0.0284	J	0.0281	1.06	1
11031	12378-PeCDD	40321-76-4	0.0804	JB	0.0263	5.31	1
11031	123478-HxCDD	39227-28-6	0.0687	J	0.0281	5.31	1
11031	123678-HxCDD	57653-85-7	0.285	JB	0.0289	5.31	1
11031	123789-HxCDD	19408-74-3	0.257	JB	0.0276	5.31	1
11031	1234678-HpCDD	35822-46-9	7.23	B	0.0372	5.31	1
11031	OCDD	3268-87-9	71.7	B	0.0354	10.6	1
11031	2378-TCDF	51207-31-9	0.0247	U	0.0247	1.06	1
11031	12378-PeCDF	57117-41-6	0.0494	JB	0.0150	5.31	1
11031	23478-PeCDF	57117-31-4	0.136	JB	0.0147	5.31	1
11031	123478-HxCDF	70648-26-9	0.125	JBQ	0.0184	5.31	1
11031	123678-HxCDF	57117-44-9	0.0942	JB	0.0168	5.31	1
11031	123789-HxCDF	72918-21-9	0.109	JB	0.0187	5.31	1
11031	234678-HxCDF	60851-34-5	0.107	JBQ	0.0165	5.31	1
11031	1234678-HpCDF	67562-39-4	0.912	JB	0.0113	5.31	1
11031	1234789-HpCDF	55673-89-7	0.0907	JBQ	0.0192	5.31	1
11031	OCDF	39001-02-0	1.68	JB	0.0260	10.6	1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	75	25 - 164
13C12-12378-PeCDD	76	25 - 181
13C12-123478-HxCDD	86	32 - 141
13C12-123678-HxCDD	86	28 - 130
13C12-123789-HxCDD	84	28 - 130
13C12-1234678-HpCDD	89	23 - 140
13C12-OCDD	99	17 - 157
13C12-2378-TCDF	77	24 - 169
13C12-12378-PeCDF	84	24 - 185
13C12-23478-PeCDF	76	21 - 178
13C12-123478-HxCDF	73	26 - 152
13C12-123678-HxCDF	81	26 - 123
13C12-234678-HxCDF	81	28 - 136
13C12-123789-HxCDF	82	29 - 147
13C12-1234678-HpCDF	108	28 - 143
13C12-1234789-HpCDF	76	26 - 138
13C12-OCDF	75	17 - 157

Dioxins/Furans Data Qualifiers:

B Detected in Method Blank
U Undetected
J Estimated concentration between Estimated Detection Limit and Minimum Level
E Exceeds calibration range
C Confirmed quantitation on secondary GC column
Q EMPC - Estimated Maximum Possible Concentration
F Interference is present

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: **SL-107-SA7-SB-13.0-14.0 Soil**
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461463
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5319 SDG#: DX153-19*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry EDL*	Dry MRL	Dilution Factor

S *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Sample Description: SL-107-SA7-SB-13.0-14.0 Soil
SSFL Area IV Collocated Soil Sampling
SL-107-SA7-SB

LLI Sample # SW 6461463
LLI Group # 1275058
Account # 13013

Project Name: SSFL Area IV Collocated Soil Sampling

Collected: 11/04/2011 11:05

Submitted: 11/05/2011 09:30
Reported: 11/17/2011 23:37

CDM Federal Programs Corp.
14420 Albemarle Point Place
Suite 210
Chantilly VA 20151

X5319 SDG#: DX153-19*

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	10a Dioxin/Furan by EPA 1613B	EPA 1613B	1	11312001	11/10/2011 11:41	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	11312001	11/08/2011 09:00	Ginelle L Haines	1
11625	Moisture Content by 160.3	EPA 160.3 modified	1	11315162401B	11/11/2011 22:24	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275058
Reported: 11/17/11 at 11:37 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11315162401B	Sample number(s): 6461461-6461463								
Moisture Content by 160.3					100		80-120		

Analysis Name	Blank Result	Blank EDL**	Blank MRL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 11312001	Sample number(s): 6461461-6461463								
2378-TCDD	0.0363 U	0.0363	1.00	ng/kg	111		67-158		
12378-PeCDD	0.0798 J	0.0298	5.00	ng/kg	108		70-142		
123478-HxCDD	0.0215 U	0.0215	5.00	ng/kg	105		70-164		
123678-HxCDD	0.0367 J	0.0206	5.00	ng/kg	103		76-134		
123789-HxCDD	0.0394 J	0.0210	5.00	ng/kg	107		64-162		
1234678-HpCDD	0.346 J	0.0222	5.00	ng/kg	104		70-140		
OCDD	0.581 J	0.0163	10.0	ng/kg	102		78-144		
2378-TCDF	0.0291 U	0.0291	1.00	ng/kg	106		75-158		
12378-PeCDF	0.0252 J	0.0149	5.00	ng/kg	108		80-134		
23478-PeCDF	0.0569 J	0.0150	5.00	ng/kg	99		68-160		
123478-HxCDF	0.0719 J	0.0162	5.00	ng/kg	104		72-134		
123678-HxCDF	0.0445 J	0.0151	5.00	ng/kg	107		84-130		
123789-HxCDF	0.0751 J	0.0163	5.00	ng/kg	105		78-130		
234678-HxCDF	0.0744 J	0.0148	5.00	ng/kg	103		70-156		
1234678-HpCDF	0.203 J	0.00860	5.00	ng/kg	95		82-122		
1234789-HpCDF	0.105 J	0.0145	5.00	ng/kg	103		78-138		
OCDF	0.318 J	0.0314	10.0	ng/kg	101		63-170		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 10a Dioxin/Furan by EPA 1613B
Batch number: 11312001

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6461461	72	70	64	71	72	73
6461462	69	70	66	77	75	68
6461463	75	76	73	81	81	82
Blank	77	82	80	90	84	91
OPR	65	73	69	78	75	79

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1275058
Reported: 11/17/11 at 11:37 PM

Surrogate Quality Control

Limits:	25-164	21-178	26-152	26-123	28-136	29-147
	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6461461	94	66	65	71	75	75
6461462	106	63	61	72	81	81
6461463	108	76	75	76	86	86
Blank	122	89	96	85	93	96
OPR	112	77	83	76	82	84

Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6461461	77	80	89	74	81	
6461462	79	83	92	69	80	
6461463	84	89	99	77	84	
Blank	95	108	122	76	92	
OPR	87	97	109	62	79	

Limits:	28-130	23-140	17-157	24-169	24-185

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Qp# 1275058 Sample# 64601461-63

CHAIN OF CUSTODY RECORD

CDM | SSFL AREA IV COLLOCATED SOIL SAMPLING

NOTES:
*Primary Analyses as indicated on sample labels
**Secondary Analyses as indicated on sample labels
$ Moisture by EPA 160.3 will be performed on soil in 16 oz. jar collected from the same interval from which Encores were collected
For samples collected from Subarea 6 (SA6) & Subarea 7 (SA7) also report Tetralin under EPA Method 8270C.

Samplers Signatures:

SAMPLE NUMBER	DATE	TIME	MATRIX	Preservative	Type & No. of Containers	*Metals EPA 6010/6020&7471A	*Fluoride EPA 300.0	*SVOCs EPA 8270C & PAHs 8270 SIM	*PCBs/PCTs EPA 8082	*Dioxin/Furan EPA 1613B	*Perchlorate EPA 314.0	*Hex Chrome EPA 7199	*pH EPA 9045C/9040B	Perchlorate Confirmation by EPA 6850 (10%)	TPH-GRO EPA 8015B $	**TPH-EFH EPA 8015B Mod	**Nitrates EPA 300.0	**Formaldehyde EPA 8315A	**n-NDMA EPA 1625C	**Energetics EPA 8330A	**Cyanide EPA 9012B	**Terphenyls EPA 8015B	**Glycols EPA 8015B	**Alcohols EPA 8015B	**Dowonol EPA 8270	Other Instructions and Notes
SL-107-SA7-SB-4.5	11.04.11	0920	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-4.0-5.0	11.04.11	0915	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-4.0-5.0	11.04.11	0915	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
SL-107-SA7-SB-9.5	11.04.11	1010	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-9.0-10.0	11.04.11	1005	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-9.0-10.0	11.04.11	1005	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
SL-107-SA7-SB-13.5	11.04.11	1110	SOIL	NONE	2-Encores										X											
SL-107-SA7-SB-13.0-14.0	11.04.11	1105	SOIL	NONE	1-SS Sleeve			X	X																	
SL-107-SA7-SB-13.0-14.0	11.04.11	1105	SOIL	NONE	1-16 oz Jar	X	X			X	X	X	X			X	X	X	X			X	X	X	X	
EB-SA7-SB-110411	11.04.11	1330	WATER	NONE	1- 1 L Amber														X							
TB-110411	11.04.11	0800	SOIL	NONE	1-4 oz jar																					
TB-110411	11.04.11	0800	WATER	NONE	2-40 mL Vials										X											
TB-110411	11.04.11	0800	WATER	NONE	1-1 L amber														X							

Relinquished by: (*Signature*) — Date/Time: 11/04/2011 / 1630

Received by: (*Signature*) — Date/Time

Received for Laboratory by: (*Signature*) Brandy Barclay 11-5-11 930 LL

Airbill No.(s)

Laboratory: Lancaster Laboratories, Inc.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Appendix C
Data Usability Assessment Report
(On CD)

Appendix C
Data Usability Assessment Report

The purposes of this data usability and assessment report (DUAR) are to 1) summarize the data validation performed on the data sets for the Historic Site Assessment (HSA) Subarea 7 samples collected, and 2) determine whether the sample results meet the Data Quality Objectives (DQOs) outlined in the *Master Work Plan/Field Sampling and Anlaysis Plan, Co-Located Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California (CDM Federal Programs Corporation* [CDM] 2011a) (WP/FSAP) and *Addendum No. 6 to Master Work Plan/Field Sampling and Analysis Plan, Co-Located Chemical Sampling at Area IV Santa Susana Field Laboratory, Ventura County, California, EPA Subareas 3, 5D South, 7 and 8 South Soil Sampling* (CDM 2011b).

C.1 Usability Summary

For this data usability assessment, 58 data sets were reviewed. A data set consists of 20 or fewer samples grouped together by analytical method for analyses depending on the time and date of when the samples were received by the laboratory. A data set is called a sample delivery group, or SDG. The analyses performed are discussed in Section 2.5 of the Subarea 7 Technical Memorandum (TM).

Samples were collected and analyzed in accordance with the WP/FSAP (CDM 2011a). Deviations were encountered during the field investigation for the Subarea 7 sampling activities and are discussed in detail in Section 2.8 of the Subarea 7 TM.

The validated data for Subarea 7 samples are usable as reported, with the exception of of three antimony results, three diethylene glycol results, three EFH (C12-C14) results, two EFH (C15-C20) results, four EFH (C18-C11) results, 34 pesticide results, 88 herbicide results, 27 SVOC results, 2 SVOC SIM results, and one cyanide result (0.38 percent of all analytes) that were rejected for Subarea 7 data. These rejected data do not impact project objectives and goals. Specific details are provided in the validation reports in this Appendix and below in Section C.8.

C.2 Data Validation Procedures

Data were validated by the independent data validation firm Laboratory Data Consultants, Inc. All data validation was conducted in accordance with *U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004), *EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008), and *EPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (EPA 2005).

The data validation strategy employed was to validate 10 percent of the data according to EPA Level IV protocols (all QC parameters and raw data) and the

remaining 90 percent according to EPA Level III (all QC parameters except calibrations and raw data) protocols.

Table C-1 shows all SDGs that include Subarea 7 samples and which SDGs were validated as Level III or Level IV. Some SDGs contain samples from other subareas[1] but all samples in an SDG were validated together.

In order to evaluate the quality of the laboratory and the validation firm, CDM Smith chemists reviewed 10 percent of the Subarea 7 sample SDGs. The purpose of the review was to identify any quality control issues with the laboratory not identified by the validation firm or any discrepancies in validation procedures by the validation firm. No additional qualifiers were applied to the data based on CDM Smith's review.

C.3 Quality Assurance Objectives

Quality assurance (QA) objectives for measurement data are expressed in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS). The QA objectives provide a mechanism for evaluating and measuring data quality.

A review of the collected data is necessary to determine if data quality objectives established in the WP/FSAP (CDM 2011a and 2011b) have been met. The following data measurement tasks were evaluated:

- Specification and adherence to analytical method and reporting detection limit requirements
- Identification of the appropriate laboratory analytical QC requirements and verification of whether these QC requirements were met
- Verification that measurement performance criteria (representativeness and completeness) for the data have been met
- Verification that field procedures were followed, deviations were documented, and determination of impact on data quality from these deviations

The data validation review determines if the collected data are of sufficient quality (except for the rejected results) to support their intended use.

C.4 Summary of Field and Laboratory QA Activities

CDM completed sampling activities in Subarea 7 in accordance with the approved WP/FSAP (CDM 2011a). A total of 266 soil samples were collected and analyzed from 116 drainage and surface locations, and 102 soil boring locations for Subarea 7. Tables

[1] Some SDGS contain samples from other subareas, but all samples in an SDG were validated together.

2-1 and 2-2 in the Subarea 7 TM provide a summary of the samples collected and the laboratory analyses requested.

Table C-1 in this report presents the SDGs and validation level for the HSA Subarea 7 sample data. An index of samples associated with each SDG is presented at the beginning of the data validation reports presented in this appendix. The WP/FSAP (CDM 2011a) defined the procedures to be followed and the data quality requirements for the field sampling events.

C.5 Field Quality QA/QC

Field QC samples, such as matrix spike/matrix spike duplicates (MS/MSDs) and field duplicates, were to be collected at a frequency of 1 per 20 samples (5 percent) for MS/MSDs and field duplicates. MS/MSD and field duplicate samples were collected by CDM at 11 sample locations for Subarea 7. MS/MSD and field duplicate samples met the frequency requirements detailed in the WP/FSAP (CDM 2011a).

Nine equipment rinsate blank samples were collected for Subarea 7. The equipment rinsate blank results are presented in Table C-2.

Two field blanks were collected during sampling for Subarea 7. The field blanks associated with this ASTM decontamination water have been applied to the Subarea 7 samples accordingly. The results for these samples are presented in Table C-3.

Thirty-five trip blank samples were shipped with the Subarea 7 samples. The results for these samples are presented in Tables C-4. Data qualifications based on blank detections are discussed in Section C.7.3 and in the Appendix C validation reports.

Temperature blanks were to be included with each shipment of samples. Based on validation results, all temperature blanks for Subarea 7 met criteria.

The number of field QC samples collected satisfies the minimum requirements for the Subarea 7 sampling events specified in the WP/FSAP (CDM 2011a) and any implemented modifications. Field QA/QC objectives were accomplished through the use of appropriate sampling techniques and collection of the required QC samples at the required frequencies.

C.6 Laboratory Quality QA/QC

Analytical QA/QC was assessed by laboratory QC checks, method blanks, sample custody tracking, sample preservation, adherence to holding times, laboratory control samples (LCSs), MSs, calibration recoveries, surrogates, tuning criteria, second column confirmations, internal standards, serial dilutions, laboratory duplicates, and interference check standards. The majority of the laboratory QC sample criteria met project requirements as indicated in the data validation reports in this appendix with the appropriate qualifiers applied. Three antimony results, three diethylene glycol results, three EFH (C12-C14) results, two EFH (C15-C20) results, four EFH (C18-C11) results, 34 pesticide results, 88 herbicide results, 27 SVOC results, 2 SVOC SIM results,

and one cyanide result (0.38 percent of all analytes) were rejected for Subarea 7 as discussed below and in the validation reports presented in this appendix.

C.7 Data Quality Indicators

This section summarizes the validation performed. Individual SDG validation reports with specific sample detail are provided in this appendix.

Achievement of the DQOs was determined in part by the use of data quality indicators (DQIs) as described in the WP/FSAP (CDM 2011a). These DQIs for measurement data are expressed in terms of PARCCS. The DQIs provide a mechanism for ongoing control to evaluate and measure data quality throughout the project. These criteria are defined in the sections below.

C.7.1 Precision

Precision is a quantitative term that estimates the reproducibility of a set of replicate measurements under a given set of conditions. It is defined as a measurement of mutual agreement between measurements of the same property and is expressed in terms of relative percent difference (RPD) between duplicate determinations.

RPD is calculated as follows:

$$\text{RPD} = \text{absolute value } [(C1-C2)/\{(C1+C2)/2)\}] \times 100\%$$

Where:

C1 = concentration of primary sample
C2 = concentration of duplicate sample

Field and analytical precision were determined from the review of the field duplicate results. The sample results were compared by calculating their RPDs. The field duplicate samples were collected in the same manner as the original samples but were collected in separate, individual containers, given separate sample identifiers, and treated as individual samples by the laboratory.

Laboratory duplicate RPD control limits are presented in the WP/FSAP (CDM 2011a) or are laboratory specific. For laboratory duplicates, if one or both of the sample results were less than two times the RL, a control limit of the absolute difference equal to the RL value was used for comparison.

The field duplicate RPD criterion is 50 percent. Field duplicates for this project were validated using the following: If one result is non-detect and the other result is above the RL, the RPD result is shown as 200 percent and the field duplicate sample and parent sample results are qualified as estimated "J" or "UJ." If the field duplicate RPD was above the 50 percent criterion (and both sample results were above the RL), the field duplicate and parent sample results for that analyte were qualified as estimated "J."

Qualifiers were applied to applicable sample analyte results during the validation process based on laboratory and field duplicate precision results. Details are discussed in the laboratory validation reports in this appendix. Table C-5 show the field duplicate pairs and RPD results for Subarea 7. RPD results outside of criteria are highlighted.

The following individual analyte results were qualified as estimated "J/UJ" based on precision criteria for Subarea 7 samples:

- Six dioxin results, three alcohol and terphenyl results, 16 pesticide results, 11 PCB/PCT results and 16 herbicide results were qualified as estimated based on second column RPD results

- Twelve fluoride/nitrate results; 887 metal analyte results and 60 PCB/PCT results were qualified as estimated based on laboratory precision criteria

- Fifty-two dioxin results; 12 metal results; five hexavalent chromium results; five mercury results; two alcohol/terphenyl result; 12 TPH/glycol results; 11 pesticide results; 11 PCB/PCT results; 11 herbicide results; 159 SVOC result; 70 SVOC SIM and one cyanide result was qualified based on field duplicate criteria

The following individual analyte results were rejected "R" based on precision criteria:

- Three antimony results based on MSs

There is no discernable pattern or reason for the laboratory and field sample RPD exceedances identified. No field sampling issues were identified from the RPD results that were outside of criteria and the exceedances are reasonable for this type of sampling activity. Sample results that have been qualified as estimated "J/UJ" due to precision criteria are usable for project decisions with a degree of caution.

C.7.2 Accuracy

Accuracy is the degree of agreement between a measurement and the accepted reference or true value and is a measure of the bias in a system. Accuracy of the data was assessed by comparing LCS recovery, MS recovery, calibration recovery, Inductively Coupled Plasma (ICP) interferences, and by performing serial dilution checks during metals analyses. Accuracy is expressed as percent recovery (%R), which is calculated by:

$$\text{Percent Recovery} = \frac{(\text{Total Analyte Found} - \text{Analyte Originally Present})}{\text{Analyte Added}} \times 100$$

Analytical accuracy for the entire data collection activity is difficult to assess because several sources of error exist. Errors can be introduced by any of the following:

- Sampling procedure
- Field contamination

- Sample preservation and handling
- Sample matrix
- Sample preparation
- Analytical techniques

Accuracy is maintained to the extent possible by adhering to the EPA method and approved field and analytical standard operating procedures.

Qualifiers were applied to applicable sample analyte results during the validation process based on laboratory accuracy results and are discussed in detail in the laboratory validation reports in Appendix C.

The following individual analyte results were qualified as nondetect "U" or nondetect estimated "UJ" based on accuracy criteria for Subarea 7 samples:

- Six hundred and twenty metal analyte results were qualified as estimated based on inductively coupled plasma serial dilution results

- Seven alcohol/terphenyl results, one hundred and sixty-five pesticide results, six PCB/PCT results and two energetic results were qualified as estimated based on calibration criteria

- Seventeen pesticide results; 14 PCB/PCT result; 81 herbicide results; and 65 SVOC results were qualified as estimated based on LCS percent recovery criteria

- Three dioxin results; 158 fluoride/nitrate results; 2,529 metal analyte results; 55 TPH/glycol results; 22 pesticide results; nine PCB/PCT results; 26 herbicide results; 41 SVOC results; 6 SVOC SIM results; and one cyanide result were qualified as estimated based on MS percent recovery criteria

- Two NDMA results; 11 alcohol/terphenyl results; 18 TPH/glycols results; 187 pesticide results; and 57 PCB/PCT results were qualified as estimated based on surrogate recovery criteria

The following individual analyte results were rejected "R" based on accuracy criteria for the Subarea 7 samples:

- Three antimony results based on MS

- Three diethylene glycol results, three EFH (C12-C14) results, two EFH (C15-C20) results and four EFH (C8-C11) results based on MSs and surrogates

- Thirty-four pesticide results based on MSs and surrogates

- Eighty-eight herbicide results based on LCSs and MSs

- Twenty-seven SVOC results based on MSs and LCSs

- Two SVOC SIM results (Di-n-octylphthalate and benzo(k) fluoranthene) based on internal standards and MSs

- One cyanide result based on MS

Sample preservation, handling, and holding times are additional measures of accuracy of the data. All sample preservation, holding times and handling criteria were met except for ten TPH and glycol results. These results were qualified as estimated "J/UJ."

Sample results that have been qualified as estimated "J/UJ" due to accuracy criteria are usable for project decisions. Results that have been rejected "R" are not usable.

C.7.3 Blank Contamination

Field blanks (e.g., equipment and trip) and laboratory method blanks are analyzed to identify possible sources of contamination. Contamination of a sample can be introduced by field sample collection methods, sample handling, preparation, and/or analysis. The laboratory validation reports in this appendix and summarized below discuss the results qualified based on field and laboratory blank contamination.

The following individual analyte results were qualified as nondetect "U" based on blank contamination for the Subarea 7 samples:

- One thousand, two hundred and fifty-three dioxin results (28%); 371 metal results (5%); 57 mercury results (23%); 15 TPH/glycol result (0.99%); 5 VOC results (2.4%); and 11 SVOC SIM results (0.2%) were qualified as non-detect due to blank contamination criteria

The percentage of results qualified as non-detect based on laboratory blank contamination was less than or equal to 5% for all these analyses except for the following analytes: 28 percent of the dioxins and 23 percent of the mercury results for Subarea 7.

Estimated detection limits (EDLs) for the dioxins are calculated for each sample. The EDLs for this analysis are very low, reported in ng/kg or parts per trillion, resulting in numerous results qualified as estimated "J" values because they are below the RL. Many of these estimated values have been subsequently qualified as nondetect "U" because the compound was detected in related laboratory blanks. Low level detections of dioxin analytes are somewhat inevitable because of the nature and universal extent of the compounds. The dioxin levels found in the blanks were well below site-related action levels. Therefore, the resulting qualification of associated sample results as not detected or "U" qualified data do not falsely diminish identification of site-related contaminants.

The other reported analytes that had blank qualifications greater than 5 percent do not indicate a laboratory blank contamination problem as the overall sample counts

for those analytes were low. For example, there were only 257 mercury samples analyzed and out of those samples 57 mercury results were qualified due to blank contamination.

Tables C-2 through C-4 provide a summary of chemicals observed in the equipment, field and trip blank samples. Most of the equipment blanks, field blanks and trip blanks detected compounds were below the RLs but above the MDLs. Compounds detected above the RL in equipment and trip blanks are highlighted yellow in the associated tables. ASTM Type II water is not typically certified "clean" to the low RLs established for the low level methods used for the co-located sampling program.

A review of the ASTM Type II field blanks for all Phase 1 sampling showed one detect of heptachlor, three detects of naphthalene, and one detect of RDX above their respective RL. One field blank had detects above the RLs for four metal analytes and one field blank had detects above the RLs for a variety of VOC analytes. ASTM Type II water field blanks will continue to be reviewed to monitor for detected concentrations of analytes throughout the sampling program. The associated sample results were qualified accordingly during the validation process.

A review of all Phase 1 equipment blanks was also performed. In general, a variety of analytes were detected above their respective RLs. The most frequently detected analytes were naphthalene, NDMA and RDX. Napthalene was detected in 28 percent of the equipment blanks, NDMA in 27 percent of the equipment blanks and RDX in 26 percent of the equipment blanks. Other analytes were detected in the equipment blanks with methylene chloride being detected in eight percent of the equipment blanks. All other analytes were detected in less than five percent of the equipment blank samples.

Further review of the equipment blanks is being conducted and all Phase 3 equipment blanks collected to-date are being evaluated to determine if these low level detections are consistent indicating a possible deficiency in decontamination procedures and/or source water impacts that need to be addressed and corrected. Associated sample results were qualified accordingly during the validation process regarding field blank contamination. No sample results were rejected due to detected concentrations in field blanks or laboratory blanks.

C.7.4 Representativeness, Comparability, and Sensitivity

Representativeness, comparability, and sensitivity are achieved by using EPA-approved sampling procedures and analytical methodologies. By following the procedures described in the WP/FSAP (CDM 2011a) for this sampling event and future sampling events, sample analysis should yield results representative of environmental conditions at the time of sampling. Similarly, reasonable comparability of analytical results for this and future sampling events can be achieved if approved EPA analytical methods and standardized reporting units are employed.

C.7.4.1 Representativeness

Representativeness is a qualitative term that expresses the degree to which the sample data accurately and precisely represent the environmental conditions corresponding to the location and depth interval of sample collection. Requirements and procedures for sample collection are designed to maximize sample representativeness.

Representativeness also can be monitored by reviewing field documentation and/or by performing field audits. For this report, a detailed review was performed on the COC forms, field data collection forms, laboratory sample confirmation logs, and data validation packages. Laboratory QA/QC requirements were included in the WP/FSAP (CDM 2011a) and laboratory statements of work (SOWs) to ensure that the laboratory analytical results were representative of true field conditions.

Field sampling accuracy was attained through strict adherence to the approved WP/FSAP (CDM 2011a) and by using approved standard operating procedures for field data collection. Based on this, the data should represent as near as possible the actual field conditions at the time of sampling.

Representativeness has been achieved by the performed field work and laboratory analyses. The analytical data generated, that have not been rejected, are viewed to be a representative characterization of the project area.

C.7.4.2 Comparability

Comparability is a qualitative term that expresses the confidence with which a data set can be compared with another. Strict adherence to standard sample collection procedures, analytical detection limits, and analytical methods assures that data from like samples and sample conditions are comparable. This comparability is independent of laboratory personnel, data reviewers, or sampling personnel. Comparability criteria are met for the project if, based on data review, the sample collection and analytical procedures are determined to have been followed, or defined to show that variations did not affect the values reported.

To ensure comparability of data generated for the site, standard sample collection procedures and Department of Toxic Substances Control (DTSC)-approved analytical methods were utilized by CDM. The sample analyses were performed by LLI and EMAX. Utilizing such procedures and methods enables the current data to be comparable with previous and future data sets generated with similar methods.

C.7.4.3 Sensitivity

Sensitivity is related to the ability to compare analytical results with project-specific levels of interest, such as risk-based screening levels or action levels. Analytical detection limits for the various sample analytes should be below the level of interest to allow an effective comparison.

Detection Limits

Each analytical method used during the sampling events was selected because it had potential to achieve RLs established for this project. RLs were established for each analyte in consultation with the laboratory to achieve analytical results at or below regulatory comparison criteria.

The method detection limit (MDL) is defined as the concentration of an analyte that produces a signal with a 99 percent confidence that the concentration is above that of a blank but that that concentration cannot be accurately quantified. A blank is a sample that does not contain measurable concentrations of the analyte of concern. Tested by statistical performance, calibration samples, and LCSs, MDLs represent the best fundamental measurement of instrument sensitivity and the basis for establishing RLs.

The laboratory RL is typically about 3 to 5 times higher than the MDL and is a laboratory-specific number. The actual sample RL is variable based on the sample matrix, moisture content, and other sample-specific factors. When a sample has to be diluted before analysis, either because of matrix problems or to bring the instrument response within the linear dynamic range, the RL is raised by a factor corresponding to the dilution factor.

In reporting environmental sample results, laboratories follow protocols that help ensure that the result reported is at the lowest level and is defensible, taking into account the ability of the instrument to differentiate a signal generated by the analyte from the background instrument noise, imprecision added to the detection capabilities of the analyte due to the sample processing manipulations (MDLs) and sample matrix affects, and adjustments made to the detection limits based on difficulties encountered in analyzing the sample (dilution factors, etc.).

The result for an analyte is flagged with a "U" if that analyte was not detected, or qualified with a "J" flag if blank or other QC results fall outside the appropriate tolerance limits. If an analyte is present at a concentration between the MDL and the RL, the analytical result is flagged with a "J," indicating an estimated quantity. Qualifying the result as an estimated concentration reflects increased uncertainty in the reported value.

The following analyses and individual analyte sample results were qualified as estimated "J" due to the sample results being reported as detected below the RL for Subarea 5D North samples:

- Method 1613B (Dioxins)
  - 1,998 individual analyte results
- Method 1625C (NDMA)
  - 3 individual analyte results
- Method 300 (Fluoride/Nitrate)

  - 32 individual analyte results

- Methods 6010B/6020 (Metals)
  - 965 individual analyte results

- Method 6850 (Perchlorate)
  - 2 individual analyte results

- Method 7199 (Hexavalent Chromium)
  - 120 individual analyte results

- Method 7471A (Mercury)
  - 78 individual analyte results

- Method 8015B (Alcohols and terphenyls)
  - 49 individual analyte results

- Method 8015M (TPHs and glycols)
  - 95 individual analyte results

- Method 8081A (Pesticides)
  - 134 individual analyte results

- Method 8082 (PCBs)
  - 127 individual analyte results

- Method 8151A (Herbicides)
  - 31 individual analyte results

- Method 8260B (VOCs)
  - 6 individual analyte results

- Method 8270C (SVOCs)
  - 282 individual analyte results

- Method 8270C SIM (SVOCs)
  - 589 individual analyte results

- Method 8315A (Formaldehyde)
  - 8 individual analyte results

- Method 8330A (Energetics)
  - 11 individual analyte results

- Method 9012B (Cyanide)
  - 3 individual analyte results

As discussed in Section C.7.3, the EDLs for the dioxins are calculated for each sample and are very low resulting in numerous results qualified as estimated "J" values because they are below the RL as indicated above. The qualification of the dioxins results as estimated "J" based on RL criteria does not falsely diminish identification of site-related contaminants.

RLs for the modified methods identified in Table 2-2 of the Subarea 7 TM are evaluated through the analysis of RL-LCS and RL-MS samples created by LLI. The evaluation of these QC samples is ongoing throughout all subareas and recommendations regarding program-wide sample qualification based on the RL-LCS and RL-MS QC results have not been finalized. Qualification of individual sample results for Subareas 5D North and 5D South, based on the current RL-LCS and RL-MS QC sample results, was not performed.

In general, for the data validated in this report, detection limits for the sample results were low enough to compare to the action levels stated in the WP/FSAP (CDM 2011a). The detection limits for this project are lower than "normal" environmental data analyses. Analytical laboratory methods were modified in order to achieve the lowest practicable RL. Current laboratory instrumentation technology cannot achieve all of these low project RLs, and thus some of the RLs were above project criteria. These results are still considered usable for project decisions.

C.8 Review of Selected Validation Reports

CDM performed a review of 10 percent of the validation reports identified in Table C-1. This review involved comparing the validation report results against the laboratory data packages as well as the validation guidance documents. All validation report results that were reviewed were verified against the laboratory data packages and determined that validation documents were followed as required.

C.9 Data Completeness

Completeness of the data collection program is defined as the percentage of samples planned for collection as listed in the WP/FSAP (CDM 2011a) versus the actual number of samples collected during the field program (see equation A).

Completeness for acceptable data is defined as the percentage of acceptable data obtained judged to be valid versus the total quantity of data generated (see equation B). Acceptable data include both data that pass all the QC criteria (unqualified data) and data that may not pass all the QC criteria but had appropriate corrective actions taken (qualified but usable data).

A. $$\%\text{Completeness} = Cx\frac{100}{n}$$

Where:

C = actual number of samples collected
n = total number of samples planned

B. $$\%Completeness = Vx\frac{100}{n'}$$

Where:

V = number of measurements judged valid
n' = total number of measurements made

The overall completeness goal, as defined in the WP/FSAP (CDM 2011a), for these sampling events was 90 percent for all project data.

A total of 266 Subarea 7 soil samples including the field duplicates were collected and analyzed. As discussed in Section 2.8 of the TM, 185 locations were to be sampled in Subarea 7. Some locations required only a subsurface sample while other locations required both a surface and subsurface sample. The number of subsurface samples to be collected at each location is not pre-determined because the total depth of each boring varies depending on the local geology. Of the locations to be sampled in Subarea 7, subsurface samples were not collected at 65 locations due to shallow refusal at less than 2.5 feet and one location was not sampled due to archeological concerns.

As discussed in Section 2.8 of the TM, the sampling deviations do not impact completeness objectives for this sampling event. Ninety-nine percent of the sample locations identified in the WP/FSAP Addendum were sampled meeting the completeness goal for the number of locations sampled versus number of locations planned to be sampled.

The completeness goal for acceptable data achieved was 99.6 percent of the number of measurements judged to be valid versus the total number of measurements made for all Subarea 7 samples analyzed. Table C-6, Completeness Calculation Summary, show a summary of the results that were estimated or rejected.

The following Subarea 7 individual analyte results were rejected per analyses:

- Method 6020
  - Three out of 4,378 antimony results (0.068 percent)
- Method 8015M
  - Twelve out of 1,557 individual TPH and glycol results (0.77 percent)
- Method 8081A
  - Thirty-four out of 2,415 individual pesticide results (1.4 percent)

- Method 8151A
  - Eight-eight out of 1,150 individual herbicide results (7.6 percent)
- Method 8270C
  - Twenty-seven out of 13,501 individual SVOC results (0.199 percent)
- Method 8270C SIM
  - Two out of 5,832 individual SVOC SIM results (0.034 percent)
- Method 9012B
  - One out of 133 cyanide results (0.75 percent)

The completeness goals for both the locations sampled and the number of measurements judged to be valid were met.

Sampling deviations from that described in the WP/FSAP (CDM Smith 2011a) are discussed in Section 2.8 of the TM. Deviations did not impact DQOs for this sampling event. The data reported and not rejected are suitable for their intended use for characterization of Area IV of SSFL. The DQIs identified in the WP/FSAP (CDM 2011a) met appropriate criteria. The achievement of the completeness goals for the data indicates a sufficient amount of usable data has been generated on which to base project decisions.

C.10 Assessment of Data Usability and Reconciliation with WP/FSAP Goals

Over 99 percent of the data validated and reported for Subarea 7 are suitable for their intended use for site characterization. Sample results that were rejected are not suitable for project use. The rejected analyte results do not impact achievement of the overall project objectives. The detection limits reported generally met the expected limits proposed by the analytical laboratory in their contract agreement with CDM.

Sample results that were qualified as estimated are usable for project decisions. Numerous dioxin results were qualified as estimated and/or non-detect due to the low detection limits. This data is considered usable.

Field duplicate precision also met criteria a majority of the time. RPDs were outside criteria predominantly when the sample results were close to the RL and/or below the project required action limits. Decisions based on results close to the RL should be made with a degree of caution. The achievement of the completeness goals for number of samples collected, and the number of sample results acceptable for use provides sufficient quality data to support project decisions.

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Appendix C. Samples by SDG Subarea 7

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP-01-SA7-QC-110111	11K007	SO	11/1/2011	FIELD
SA7	DUP02-SA7-QC-110211	11K007	SO	11/2/2011	FIELD
SA7	EB-SA7-SB-110311S	11K007	WQ	11/3/2011	FIELD
SA7	FB-SA7-110111	11K007	AQ	11/1/2011	FIELD
SA7	SL-001-SA7-SB-4.0-5.0S	11K007	SO	10/31/2011	FIELD
SA7	SL-048-SA7-SB-4.0-5.0S	11K007	SO	11/2/2011	FIELD
SA7	SL-048-SA7-SB-4.5	11K007	SO	11/2/2011	FIELD
SA7	SL-048-SA7-SB-9.0-10.0S	11K007	SO	11/2/2011	FIELD
SA7	SL-048-SA7-SB-9.5	11K007	SO	11/2/2011	FIELD
SA7	SL-108-SA7-SB-2.9-3.9S	11K007	SO	11/3/2011	FIELD
SA7	SL-108-SA7-SB-3.3	11K007	SO	11/3/2011	FIELD
SA7	SL-120-SA7-SB-4.0-5.0S	11K007	SO	10/31/2011	FIELD
SA7	SL-120-SA7-SB-4.5	11K007	SO	10/31/2011	FIELD
SA7	SL-120-SA7-SB-9.0-10.0S	11K007	SO	10/31/2011	FIELD
SA7	SL-120-SA7-SB-9.5	11K007	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-4.0-5.0S	11K007	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-4.5	11K007	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-9.0-10.0S	11K007	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-9.5	11K007	SO	10/31/2011	FIELD
SA7	SL-123-SA7-SB-4.0-5.0S	11K007	SO	11/1/2011	FIELD
SA7	SL-123-SA7-SB-4.5	11K007	SO	11/1/2011	FIELD
SA7	SL-123-SA7-SB-9.0-10.0S	11K007	SO	11/1/2011	FIELD
SA7	SL-123-SA7-SB-9.5	11K007	SO	11/1/2011	FIELD
SA7	SL-128-SA7-SB-4.0-5.0S	11K007	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-4.5	11K007	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-9.0-10.0S	11K007	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-9.5	11K007	SO	11/3/2011	FIELD
SA7	SL-160-SA7-SB-0.0-1.0S	11K007	SO	11/1/2011	FIELD
SA7	SL-161-SA7-SB-4.0-5.0S	11K007	SO	11/2/2011	FIELD
SA7	SL-171-SA7-SB-4.0-5.0S	11K007	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-4.5	11K007	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-9.0-10.0S	11K007	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-9.5	11K007	SO	11/3/2011	FIELD
SA7	SL-175-SA7-SB-4.0-5.0S	11K007	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-4.5	11K007	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-9.0-10.0S	11K007	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-9.5	11K007	SO	11/1/2011	FIELD
SA7	SL-185-SA7-SB-3.0-4.0S	11K007	SO	11/1/2011	FIELD
	TB-110111S	11K007	AQ	11/1/2011	FIELD
	TB-110211	11K007	AQ	11/2/2011	FIELD
	TB-110311S	11K007	AQ	11/3/2011	FIELD
SA7	SL-030-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-034-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-035-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-037-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-040-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-041-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-070-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-071-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-073-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
SA7	SL-146-SA7-SS-0.0-0.5	DE242	SO	9/13/2011	FIELD
	TB-091311	DE242	AQ	9/13/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	EB-SA7-SS-091411	DE243	WQ	9/14/2011	FIELD
SA7	SL-024-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-028-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-029-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-032-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-033-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-036-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-038-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-039-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-041-SA7-SB-4.0-5.0	DE243	SO	9/14/2011	FIELD
SA7	SL-071-SA7-SB-4.0-5.0	DE243	SO	9/14/2011	FIELD
SA7	SL-076-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-077-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-078-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-099-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-144-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-145-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
SA7	SL-183-SA7-SS-0.0-0.5	DE243	SO	9/14/2011	FIELD
	TB-091411	DE243	AQ	9/14/2011	FIELD
SA7	EB-SA7-SB-091511	DE244	WQ	9/15/2011	FIELD
SA7	SL-010-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-014-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-018-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-021-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-037-SA7-SB-4.0-5.0	DE244	SO	9/15/2011	FIELD
SA7	SL-070-SA7-SB-3.0-4.0	DE244	SO	9/15/2011	FIELD
SA7	SL-081-SA7-SB-4.0-5.0	DE244	SO	9/15/2011	FIELD
SA7	SL-081-SA7-SB-9.0-10.0	DE244	SO	9/15/2011	FIELD
SA7	SL-091-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-092-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-096-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-097-SA7-SS-0.0-0.5	DE244	SO	9/15/2011	FIELD
SA7	SL-183-SA7-SB-4.0-5.0	DE244	SO	9/15/2011	FIELD
SA7	SL-183-SA7-SB-9.0-10.0	DE244	SO	9/15/2011	FIELD
	TB-091511	DE244	AQ	9/15/2011	FIELD
SA7	DUP01-SA7-QC-091511	DE245	SO	9/15/2011	FIELD
SA7	SL-007-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD
SA7	SL-008-SA7-SS-0.0-0.5	DE245	SO	9/15/2011	FIELD
SA7	SL-026-SA7-SS-0.0-0.5	DE245	SO	9/14/2011	FIELD
SA7	SL-034-SA7-SB-4.0-5.0	DE245	SO	9/16/2011	FIELD
SA7	SL-034-SA7-SB-9.0-10.0	DE245	SO	9/16/2011	FIELD
SA7	SL-035-SA7-SB-4.0-5.0	DE245	SO	9/16/2011	FIELD
SA7	SL-035-SA7-SB-9.0-10.0	DE245	SO	9/16/2011	FIELD
SA7	SL-045-SA7-SS-0.0-0.5	DE245	SO	9/15/2011	FIELD
SA7	SL-079-SA7-SB-2.0-3.0	DE245	SO	9/16/2011	FIELD
SA7	SL-080-SA7-SB-4.0-5.0	DE245	SO	9/16/2011	FIELD
SA7	SL-080-SA7-SB-9.0-10.0	DE245	SO	9/16/2011	FIELD
SA7	SL-086-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD
SA7	SL-087-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD
SA7	SL-090-SA7-SS-0.0-0.5	DE245	SO	9/15/2011	FIELD
SA7	SL-098-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD
SA7	SL-146-SA7-SB-4.0-5.0	DE245	SO	9/16/2011	FIELD
SA7	SL-146-SA7-SB-9.0-10.0	DE245	SO	9/16/2011	FIELD
SA7	SL-157-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD
SA7	SL-179-SA7-SS-0.0-0.5	DE245	SO	9/16/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	SL-009-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-017-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-022-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-052-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-053-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-054-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-083-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-100-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-165-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	SL-184-SA7-SS-0.0-0.5	DE246	SO	9/16/2011	FIELD
SA7	DUP02-SA7-QC-091911	DE247	SO	9/19/2011	FIELD
SA7	SL-002-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-003-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-004-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-025-SA7-SB-4.0-5.0	DE247	SO	9/19/2011	FIELD
SA7	SL-025-SA7-SB-9.0-10.0	DE247	SO	9/19/2011	FIELD
SA7	SL-032-SA7-SB-4.0-5.0	DE247	SO	9/19/2011	FIELD
SA7	SL-032-SA7-SB-9.0-10.0	DE247	SO	9/19/2011	FIELD
SA7	SL-042-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-048-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-110-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-111-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-122-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-130-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-133-SA7-SS-0.0-0.5	DE247	SO	9/19/2011	FIELD
SA7	SL-144-SA7-SB-4.0-5.0	DE247	SO	9/19/2011	FIELD
SA7	SL-144-SA7-SB-9.0-10.0	DE247	SO	9/19/2011	FIELD
SA7	SL-145-SA7-SB-4.0-5.0	DE247	SO	9/19/2011	FIELD
SA7	SL-145-SA7-SB-9.0-10.0	DE247	SO	9/19/2011	FIELD
	TB-091911	DE247	AQ	9/19/2011	FIELD
SA7	DUP03-SA7-QC-092011	DE248	SO	9/20/2011	FIELD
SA7	SL-005-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-006-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-043-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-046-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-047-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-049-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-050-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-051-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-085-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-125-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-129-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-131-SA7-SS-0.0-0.5	DE248	SO	9/19/2011	FIELD
SA7	SL-134-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-135-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-136-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-137-SA7-SS-0.0-0.5	DE248	SO	9/19/2011	FIELD
SA7	SL-138-SA7-SS-0.0-0.5	DE248	SO	9/19/2011	FIELD
SA7	SL-173-SA7-SS-0.0-0.5	DE248	SO	9/20/2011	FIELD
SA7	SL-058-SA7-SB-0.5-1.5	DE249	SO	9/20/2011	FIELD
SA7	SL-059-SA7-SB-5.0-6.0	DE249	SO	9/20/2011	FIELD
SA7	SL-149-SA7-SB-0.0-1.0	DE249	SO	9/20/2011	FIELD
SA7	SL-150-SA7-SB-0.0-1.0	DE249	SO	9/20/2011	FIELD
SA7	SL-154-SA7-SB-0.0-1.0	DE249	SO	9/20/2011	FIELD
SA7	SL-174-SA7-SB-1.0-2.0	DE249	SO	9/20/2011	FIELD
	TB-092011	DE249	AQ	9/20/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP04-SA7-QC-092111	DE250	SO	9/21/2011	FIELD
SA7	EB-SA7-SS-092111	DE250	WQ	9/21/2011	FIELD
SA7	SL-001-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-056-SA7-SB-4.0-5.0	DE250	SO	9/21/2011	FIELD
SA7	SL-057-SA7-SB-3.0-4.0	DE250	SO	9/21/2011	FIELD
SA7	SL-061-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-078-SA7-SB-4.0-5.0	DE250	SO	9/21/2011	FIELD
SA7	SL-078-SA7-SB-7.0-8.0	DE250	SO	9/21/2011	FIELD
SA7	SL-119-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-120-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-121-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-123-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-124-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
SA7	SL-156-SA7-SB-4.0-5.0	DE250	SO	9/21/2011	FIELD
SA7	SL-156-SA7-SB-7.5-8.5	DE250	SO	9/21/2011	FIELD
SA7	SL-158-SA7-SB-4.0-5.0	DE250	SO	9/21/2011	FIELD
SA7	SL-175-SA7-SS-0.0-0.5	DE250	SO	9/21/2011	FIELD
	TB-092111	DE250	AQ	9/21/2011	FIELD
SA7	EB-SA7-SB-092211	DE251	WQ	9/22/2011	FIELD
SA7	SL-011-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-012-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-013-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-020-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-023-SA7-SS-0.0-0.5	DE251	SO	9/21/2011	FIELD
SA7	SL-039-SA7-SB-4.0-5.0	DE251	SO	9/22/2011	FIELD
SA7	SL-055-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-072-SA7-SB-4.0-5.0	DE251	SO	9/22/2011	FIELD
SA7	SL-072-SA7-SB-7.5-8.5	DE251	SO	9/22/2011	FIELD
SA7	SL-074-SA7-SB-4.0-5.0	DE251	SO	9/22/2011	FIELD
SA7	SL-075-SA7-SB-4.0-5.0	DE251	SO	9/22/2011	FIELD
SA7	SL-075-SA7-SB-9.0-10.0	DE251	SO	9/22/2011	FIELD
SA7	SL-077-SA7-SB-4.0-5.0	DE251	SO	9/22/2011	FIELD
SA7	SL-088-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-101-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
SA7	SL-141-SA7-SS-0.0-0.5	DE251	SO	9/21/2011	FIELD
SA7	SL-142-SA7-SS-0.0-0.5	DE251	SO	9/21/2011	FIELD
SA7	SL-143-SA7-SS-0.0-0.5	DE251	SO	9/21/2011	FIELD
SA7	SL-151-SA7-SS-0.0-0.5	DE251	SO	9/22/2011	FIELD
	TB-092211	DE251	AQ	9/22/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP05-SA7-QC-092211	DE252	SO	9/22/2011	FIELD
SA7	SL-015-SA7-SS-0.0-0.5	DE252	SO	9/22/2011	FIELD
SA7	SL-019-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-025-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-027-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-028-SA7-SB-4.0-5.0	DE252	SO	9/23/2011	FIELD
SA7	SL-030-SA7-SB-4.0-5.0	DE252	SO	9/23/2011	FIELD
SA7	SL-062-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-066-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-067-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-068-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-069-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-073-SA7-SB-4.0-5.0	DE252	SO	9/23/2011	FIELD
SA7	SL-076-SA7-SB-2.5-3.5	DE252	SO	9/23/2011	FIELD
SA7	SL-089-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-139-SA7-SS-0.0-0.5	DE252	SO	9/22/2011	FIELD
SA7	SL-140-SA7-SS-0.0-0.5	DE252	SO	9/22/2011	FIELD
SA7	SL-152-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-153-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
SA7	SL-181-SA7-SS-0.0-0.5	DE252	SO	9/23/2011	FIELD
	TB-092311	DE252	AQ	9/23/2011	FIELD
SA7	SL-028-SA7-SB-8.0-9.0	DE253	SO	9/23/2011	FIELD
SA7	SL-102-SA7-SB-4.0-5.0	DE254	SO	9/26/2011	FIELD
SA7	SL-102-SA7-SB-9.0-10.0	DE254	SO	9/26/2011	FIELD
SA7	SL-109-SA7-SB-4.0-5.0	DE254	SO	9/26/2011	FIELD
SA7	SL-109-SA7-SB-9.0-10.0	DE254	SO	9/26/2011	FIELD
SA7	DUP07-SA7-QC-092611	DE255	SO	9/26/2011	FIELD
SA7	DUP08-SA7-QC-092611	DE255	SO	9/26/2011	FIELD
SA7	SL-125-SA7-SB-4.0-5.0	DE255	SO	9/26/2011	FIELD
SA7	SL-170-SA7-SB-4.0-5.0	DE255	SO	9/26/2011	FIELD
SA7	SL-170-SA7-SB-9.0-10.0	DE255	SO	9/26/2011	FIELD
	TB-092611	DE255	AQ	9/26/2011	FIELD
SA7	DUP-09-SA7-QC-092711	DE256	SO	9/27/2011	FIELD
SA7	EB-SA7-SB-092711	DE256	AQ	9/27/2011	FIELD
SA7	SL-103-SA7-SB-4.0-5.0	DE256	SO	9/27/2011	FIELD
SA7	SL-103-SA7-SB-9.0-10.0	DE256	SO	9/27/2011	FIELD
SA7	SL-104-SA7-SB-4.0-5.0	DE256	SO	9/27/2011	FIELD
SA7	SL-104-SA7-SB-9.0-10.0	DE256	SO	9/27/2011	FIELD
SA7	SL-105-SA7-SB-4.0-5.0	DE256	SO	9/27/2011	FIELD
SA7	SL-172-SA7-SB-4.0-5.0	DE256	SO	9/27/2011	FIELD
SA7	SL-172-SA7-SB-9.0-10.0	DE256	SO	9/27/2011	FIELD
	TB-092711	DE256	AQ	9/27/2011	FIELD
SA7	SL-103-SA7-SB-18.0-19.0	DE257	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-15.5	DE257	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-16.5-17.5	DE257	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-19.0-20.0	DE257	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-4.0-5.0	DE257	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-9.0-10.0	DE257	SO	9/28/2011	FIELD
	TB-092711	DE257	AQ	9/27/2011	FIELD
SA7	SL-126-SA7-SB-4.0-5.0	DE258	SO	9/29/2011	FIELD
SA7	SL-127-SA7-SB-4.0-5.0	DE258	SO	9/29/2011	FIELD
SA7	SL-177-SA7-SB-3.0-4.0	DE258	SO	9/29/2011	FIELD
	TB-092911	DE258	AQ	9/29/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	EB-SA7-SB-093011	DE259	AQ	9/30/2011	FIELD
SA7	FB-SA7-SB-093011	DE259	AQ	9/30/2011	FIELD
SA7	SL-084-SA7-SB-0.0-1.0	DE259	SO	9/30/2011	FIELD
SA7	SL-113-SA7-SB-0.0-1.0	DE259	SO	9/30/2011	FIELD
SA7	SL-115-SA7-SB-0.5-1.5	DE259	SO	9/30/2011	FIELD
SA7	SL-132-SA7-SB-4.0-5.0	DE259	SO	9/30/2011	FIELD
SA7	SL-132-SA7-SB-8.5-9.5	DE259	SO	9/30/2011	FIELD
SA7	SL-180-SA7-SB-2.0-3.0	DE259	SO	9/30/2011	FIELD
	TB-092911	DE259	AQ	9/29/2011	FIELD
SA7	EB-SA7-SB-100711	DE264	WQ	10/7/2011	FIELD
SA7	SL-046-SA7-SB-2.5-3.5	DE264	SO	10/7/2011	FIELD
SA7	SL-137-SA7-SB-0.0-1.0	DE264	SO	10/7/2011	FIELD
SA7	SL-138-SA7-SB-1.5-2.5	DE264	SO	10/7/2011	FIELD
	TB-100711-AQ	DE264	AQ	10/7/2011	FIELD
	TB-100711-SO	DE264	SO	10/7/2011	FIELD
SA7	EB-SA7-SB-101011	DE265	WQ	10/10/2011	FIELD
SA7	SL-112-SA7-SB-0.0-1.0	DE265	SO	10/10/2011	FIELD
SA7	SL-159-SA7-SB-3.0-4.0	DE265	SO	10/10/2011	FIELD
SA7	SL-169-SA7-SB-3.0-4.0	DE265	SO	10/10/2011	FIELD
	TB-101011-AQ	DE265	AQ	10/10/2011	FIELD
	TB-101011-SO	DE265	SO	10/10/2011	FIELD
SA7	EB-SA7-SB-101111	DE266	AQ	10/11/2011	FIELD
SA7	SL-049-SA7-SB-4.0-5.0	DE266	SO	10/11/2011	FIELD
SA7	SL-147-SA7-SB-1.0-2.0	DE266	SO	10/11/2011	FIELD
SA7	SL-155-SA7-SB-1.5-2.5	DE266	SO	10/11/2011	FIELD
SA7	SL-162-SA7-SB-0.0-1.0	DE266	SO	10/11/2011	FIELD
SA7	SL-166-SA7-SB-1.0-2.0	DE266	SO	10/11/2011	FIELD
SA7	SL-167-SA7-SB-0.5-1.5	DE266	SO	10/11/2011	FIELD
SA7	SL-168-SA7-SB-0.5-1.5	DE266	SO	10/11/2011	FIELD
	TB-101111	DE266	SO	10/11/2011	FIELD
SA7	SL-096-SA7-SB-2.0-3.0	DE267	SO	10/12/2011	FIELD
	TB-101211	DE267	SO	10/12/2011	FIELD
SA7	DUP09-SA7-QC-101311	DE268	SO	10/13/2011	FIELD
SA7	EB-SA7-SB-101311	DE268	AQ	10/13/2011	FIELD
SA7	EB-SA7-SB-NDMA-101311	DE268	WQ	10/13/2011	FIELD
SA7	SL-089-SA7-SB-3.5-4.5	DE268	SO	10/13/2011	FIELD
	TB-101311	DE268	SO	10/13/2011	FIELD
SA7	SL-164-SA7-SB-0.5-1.5	DE269	SO	10/14/2011	FIELD
	TB-101411	DE269	SO	10/14/2011	FIELD
SA7	SL-139-SA7-SB-2.0-3.0	DE270	SO	10/17/2011	FIELD
	TB-101711	DE270	SO	10/17/2011	FIELD
SA7	EB-SA7-SB-101811	DE271	AQ	10/18/2011	FIELD
SA7	SL-020-SA7-SB-4.0-5.0	DE271	SO	10/18/2011	FIELD
SA7	SL-020-SA7-SB-9.0-10.0	DE271	SO	10/18/2011	FIELD
SA7	SL-140-SA7-SB-3.0-4.0	DE271	SO	10/18/2011	FIELD
	TB-101811	DE271	SO	10/18/2011	FIELD
SA7	EB-SA7-SB-101911	DE272	AQ	10/19/2011	FIELD
SA7	SL-142-SA7-SB-2.0-3.0	DE272	SO	10/19/2011	FIELD
SA7	SL-142-SA7-SB-7.0-8.0	DE272	SO	10/19/2011	FIELD
SA7	SL-143-SA7-SB-5.0-6.0	DE272	SO	10/19/2011	FIELD
SA7	SL-143-SA7-SB-9.0-10.0	DE272	SO	10/19/2011	FIELD
	TB-101911	DE272	SO	10/19/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	SL-023-SA7-SB-2.0-3.0	DE273	SO	10/20/2011	FIELD
SA7	SL-060-SA7-SB-2.5-3.5	DE273	SO	10/20/2011	FIELD
SA7	SL-069-SA7-SB-2.5-3.5	DE273	SO	10/20/2011	FIELD
SA7	SL-148-SA7-SB-0.0-1.0	DE273	SO	10/20/2011	FIELD
	TB-102011	DE273	AQ	10/20/2011	FIELD
SA7	EB-SA7-SB-102611	DE274	AQ	10/26/2011	FIELD
SA7	FB-SA7-102611	DE274	AQ	10/26/2011	FIELD
SA7	SL-033-SA7-SB-4.0-5.0	DE274	SO	10/24/2011	FIELD
SA7	SL-033-SA7-SB-9.0-10.0	DE274	SO	10/24/2011	FIELD
SA7	SL-038-SA7-SB-4.0-5.0	DE274	SO	10/24/2011	FIELD
SA7	SL-082-SA7-SB-4.0-5.0	DE274	SO	10/25/2011	FIELD
SA7	SL-086-SA7-SB-3.0-4.0	DE274	SO	10/26/2011	FIELD
SA7	SL-157-SA7-SB-2.5-3.5	DE274	SO	10/26/2011	FIELD
	TB-102611	DE274	AQ	10/26/2011	FIELD
SA7	EB-SA7-SB-102711	DE275	WQ	10/27/2011	FIELD
SA7	SL-008-SA7-SB-2.5-3.0	DE275	SO	10/27/2011	FIELD
	TB-102711	DE275	AQ	10/27/2011	FIELD
SA7	SL-091-SA7-SB-2.5-3.5	DE276	SO	10/27/2011	FIELD
SA7	SL-116-SA7-SB-0.0-0.5	DE276	SO	10/28/2011	FIELD
SA7	SL-117-SA7-SB-2.5-3.5	DE276	SO	10/28/2011	FIELD
SA7	SL-118-SA7-SB-4.0-5.0	DE276	SO	10/28/2011	FIELD
SA7	SL-119-SA7-SB-4.0-5.0	DE276	SO	10/28/2011	FIELD
	TB-102811	DE276	AQ	10/28/2011	FIELD
SA7	SL-065-SA7-SB-2.0-3.0	DE277	SO	10/21/2011	FIELD
SA7	EB-SA7-SB-103111	DE278	WQ	10/31/2011	FIELD
SA7	SL-120-SA7-SB-4.0-5.0	DE278	SO	10/31/2011	FIELD
SA7	SL-120-SA7-SB-9.0-10.0	DE278	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-4.0-5.0	DE278	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-9.0-10.0	DE278	SO	10/31/2011	FIELD
SA7	SL-123-SA7-SB-4.0-5.0	DE278	SO	11/1/2011	FIELD
SA7	SL-123-SA7-SB-9.0-10.0	DE278	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-4.0-5.0	DE278	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-9.0-10.0	DE278	SO	11/1/2011	FIELD
	TB-110111-AQ	DE278	AQ	11/1/2011	FIELD
	TB-110111-SO	DE278	SO	11/1/2011	FIELD
SA7	EB-SA7-SB-110311	DE279	AQ	11/3/2011	FIELD
SA7	EB-SA7-SB-NDMA-110311	DE279	WQ	11/3/2011	FIELD
SA7	SL-048-SA7-SB-4.0-5.0	DE279	SO	11/2/2011	FIELD
SA7	SL-048-SA7-SB-9.0-10.0	DE279	SO	11/2/2011	FIELD
SA7	SL-108-SA7-SB-2.9-3.9	DE279	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-4.0-5.0	DE279	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-9.0-10.0	DE279	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-4.0-5.0	DE279	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-9.0-10.0	DE279	SO	11/3/2011	FIELD
	TB-110311-AQ	DE279	AQ	11/3/2011	FIELD
	TB-110311-SO	DE279	SO	11/3/2011	FIELD
SA7	EB-SA7-SB-110411	DE280	WQ	11/4/2011	FIELD
SA7	SL-107-SA7-SB-13.0-14.0	DE280	SO	11/4/2011	FIELD
SA7	SL-107-SA7-SB-4.0-5.0	DE280	SO	11/4/2011	FIELD
SA7	SL-107-SA7-SB-9.0-10.0	DE280	SO	11/4/2011	FIELD
	TB-110411-AQ	DE280	AQ	11/4/2011	FIELD
	TB-110411-SO	DE280	SO	11/4/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	SL-030-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-034-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-035-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-037-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-040-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-041-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-070-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-071-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-073-SA7-SS-0.0-0.5	DX133	SO	9/13/2011	FIELD
SA7	SL-024-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-028-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-029-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-032-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-033-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-036-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-038-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-039-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-076-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-077-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-078-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-099-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-144-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-145-SA7-SS-0.0-0.5	DX134	SO	9/14/2011	FIELD
SA7	SL-146-SA7-SS-0.0-0.5	DX134	SO	9/13/2011	FIELD
SA7	EB-SA7-SB-091511	DX135	WQ	9/15/2011	FIELD
SA7	EB-SA7-SS-091411	DX135	WQ	9/14/2011	FIELD
SA7	SL-010-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-014-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-018-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-021-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-037-SA7-SB-4.0-5.0	DX135	SO	9/15/2011	FIELD
SA7	SL-041-SA7-SB-4.0-5.0	DX135	SO	9/14/2011	FIELD
SA7	SL-070-SA7-SB-3.0-4.0	DX135	SO	9/15/2011	FIELD
SA7	SL-071-SA7-SB-4.0-5.0	DX135	SO	9/14/2011	FIELD
SA7	SL-081-SA7-SB-4.0-5.0	DX135	SO	9/15/2011	FIELD
SA7	SL-081-SA7-SB-9.0-10.0	DX135	SO	9/15/2011	FIELD
SA7	SL-091-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-092-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-096-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-097-SA7-SS-0.0-0.5	DX135	SO	9/15/2011	FIELD
SA7	SL-183-SA7-SB-4.0-5.0	DX135	SO	9/15/2011	FIELD
SA7	SL-183-SA7-SB-9.0-10.0	DX135	SO	9/15/2011	FIELD
SA7	SL-183-SA7-SS-0.0-0.5	DX135	SO	9/14/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP01-SA7-QC-091511	DX136	SO	9/15/2011	FIELD
SA7	SL-007-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-008-SA7-SS-0.0-0.5	DX136	SO	9/15/2011	FIELD
SA7	SL-026-SA7-SS-0.0-0.5	DX136	SO	9/14/2011	FIELD
SA7	SL-034-SA7-SB-4.0-5.0	DX136	SO	9/16/2011	FIELD
SA7	SL-034-SA7-SB-9.0-10.0	DX136	SO	9/16/2011	FIELD
SA7	SL-035-SA7-SB-4.0-5.0	DX136	SO	9/16/2011	FIELD
SA7	SL-035-SA7-SB-9.0-10.0	DX136	SO	9/16/2011	FIELD
SA7	SL-045-SA7-SS-0.0-0.5	DX136	SO	9/15/2011	FIELD
SA7	SL-079-SA7-SB-2.0-3.0	DX136	SO	9/16/2011	FIELD
SA7	SL-080-SA7-SB-4.0-5.0	DX136	SO	9/16/2011	FIELD
SA7	SL-080-SA7-SB-9.0-10.0	DX136	SO	9/16/2011	FIELD
SA7	SL-086-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-087-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-090-SA7-SS-0.0-0.5	DX136	SO	9/15/2011	FIELD
SA7	SL-098-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-146-SA7-SB-4.0-5.0	DX136	SO	9/16/2011	FIELD
SA7	SL-146-SA7-SB-9.0-10.0	DX136	SO	9/16/2011	FIELD
SA7	SL-157-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-179-SA7-SS-0.0-0.5	DX136	SO	9/16/2011	FIELD
SA7	SL-002-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-003-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-004-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-009-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-017-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-022-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-042-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-048-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-052-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-053-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-054-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-083-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-100-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-110-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-111-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-122-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-130-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-133-SA7-SS-0.0-0.5	DX137	SO	9/19/2011	FIELD
SA7	SL-165-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD
SA7	SL-184-SA7-SS-0.0-0.5	DX137	SO	9/16/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP02-SA7-QC-091911	DX138	SO	9/19/2011	FIELD
SA7	SL-005-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-006-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-025-SA7-SB-4.0-5.0	DX138	SO	9/19/2011	FIELD
SA7	SL-025-SA7-SB-9.0-10.0	DX138	SO	9/19/2011	FIELD
SA7	SL-032-SA7-SB-4.0-5.0	DX138	SO	9/19/2011	FIELD
SA7	SL-032-SA7-SB-9.0-10.0	DX138	SO	9/19/2011	FIELD
SA7	SL-043-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-046-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-047-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-049-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-050-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-051-SA7-SS-0.0-0.5	DX138	SO	9/20/2011	FIELD
SA7	SL-131-SA7-SS-0.0-0.5	DX138	SO	9/19/2011	FIELD
SA7	SL-137-SA7-SS-0.0-0.5	DX138	SO	9/19/2011	FIELD
SA7	SL-138-SA7-SS-0.0-0.5	DX138	SO	9/19/2011	FIELD
SA7	SL-144-SA7-SB-4.0-5.0	DX138	SO	9/19/2011	FIELD
SA7	SL-144-SA7-SB-9.0-10.0	DX138	SO	9/19/2011	FIELD
SA7	SL-145-SA7-SB-4.0-5.0	DX138	SO	9/19/2011	FIELD
SA7	SL-145-SA7-SB-9.0-10.0	DX138	SO	9/19/2011	FIELD
SA7	DUP03-SA7-QC-092011	DX139	SO	9/20/2011	FIELD
SA7	SL-001-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-058-SA7-SB-0.5-1.5	DX139	SO	9/20/2011	FIELD
SA7	SL-059-SA7-SB-5.0-6.0	DX139	SO	9/20/2011	FIELD
SA7	SL-061-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-085-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-119-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-120-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-121-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-123-SA7-SS-0.0-0.5	DX139	SO	9/21/2011	FIELD
SA7	SL-125-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-129-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-134-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-135-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-136-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-149-SA7-SB-0.0-1.0	DX139	SO	9/20/2011	FIELD
SA7	SL-150-SA7-SB-0.0-1.0	DX139	SO	9/20/2011	FIELD
SA7	SL-154-SA7-SB-0.0-1.0	DX139	SO	9/20/2011	FIELD
SA7	SL-173-SA7-SS-0.0-0.5	DX139	SO	9/20/2011	FIELD
SA7	SL-174-SA7-SB-1.0-2.0	DX139	SO	9/20/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP04-SA7-QC-092111	DX140	SO	9/21/2011	FIELD
SA7	EB-SA7-SS-092111	DX140	WQ	9/21/2011	FIELD
SA7	SL-011-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-012-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-013-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-020-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-023-SA7-SS-0.0-0.5	DX140	SO	9/21/2011	FIELD
SA7	SL-055-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-056-SA7-SB-4.0-5.0	DX140	SO	9/21/2011	FIELD
SA7	SL-057-SA7-SB-3.0-4.0	DX140	SO	9/21/2011	FIELD
SA7	SL-078-SA7-SB-4.0-5.0	DX140	SO	9/21/2011	FIELD
SA7	SL-078-SA7-SB-7.0-8.0	DX140	SO	9/21/2011	FIELD
SA7	SL-088-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-101-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-124-SA7-SS-0.0-0.5	DX140	SO	9/21/2011	FIELD
SA7	SL-141-SA7-SS-0.0-0.5	DX140	SO	9/21/2011	FIELD
SA7	SL-151-SA7-SS-0.0-0.5	DX140	SO	9/22/2011	FIELD
SA7	SL-156-SA7-SB-4.0-5.0	DX140	SO	9/21/2011	FIELD
SA7	SL-156-SA7-SB-7.5-8.5	DX140	SO	9/21/2011	FIELD
SA7	SL-158-SA7-SB-4.0-5.0	DX140	SO	9/21/2011	FIELD
SA7	SL-175-SA7-SS-0.0-0.5	DX140	SO	9/21/2011	FIELD
SA7	DUP05-SA7-QC-092211	DX141	SO	9/22/2011	FIELD
SA7	EB-SA7-SB-092211	DX141	WQ	9/22/2011	FIELD
SA7	SL-015-SA7-SS-0.0-0.5	DX141	SO	9/22/2011	FIELD
SA7	SL-019-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-025-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-027-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-039-SA7-SB-4.0-5.0	DX141	SO	9/22/2011	FIELD
SA7	SL-062-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-066-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-067-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-068-SA7-SS-0.0-0.5	DX141	SO	9/23/2011	FIELD
SA7	SL-072-SA7-SB-4.0-5.0	DX141	SO	9/22/2011	FIELD
SA7	SL-072-SA7-SB-7.5-8.5	DX141	SO	9/22/2011	FIELD
SA7	SL-074-SA7-SB-4.0-5.0	DX141	SO	9/22/2011	FIELD
SA7	SL-075-SA7-SB-4.0-5.0	DX141	SO	9/22/2011	FIELD
SA7	SL-075-SA7-SB-9.0-10.0	DX141	SO	9/22/2011	FIELD
SA7	SL-077-SA7-SB-4.0-5.0	DX141	SO	9/22/2011	FIELD
SA7	SL-139-SA7-SS-0.0-0.5	DX141	SO	9/22/2011	FIELD
SA7	SL-140-SA7-SS-0.0-0.5	DX141	SO	9/22/2011	FIELD
SA7	SL-142-SA7-SS-0.0-0.5	DX141	SO	9/21/2011	FIELD
SA7	SL-143-SA7-SS-0.0-0.5	DX141	SO	9/21/2011	FIELD
SA7	SL-028-SA7-SB-4.0-5.0	DX142	SO	9/23/2011	FIELD
SA7	SL-028-SA7-SB-8.0-9.0	DX142	SO	9/23/2011	FIELD
SA7	SL-030-SA7-SB-4.0-5.0	DX142	SO	9/23/2011	FIELD
SA7	SL-069-SA7-SS-0.0-0.5	DX142	SO	9/23/2011	FIELD
SA7	SL-073-SA7-SB-4.0-5.0	DX142	SO	9/23/2011	FIELD
SA7	SL-076-SA7-SB-2.5-3.5	DX142	SO	9/23/2011	FIELD
SA7	SL-089-SA7-SS-0.0-0.5	DX142	SO	9/23/2011	FIELD
SA7	SL-152-SA7-SS-0.0-0.5	DX142	SO	9/23/2011	FIELD
SA7	SL-153-SA7-SS-0.0-0.5	DX142	SO	9/23/2011	FIELD
SA7	SL-181-SA7-SS-0.0-0.5	DX142	SO	9/23/2011	FIELD
SA7	SL-102-SA7-SB-4.0-5.0	DX143	SO	9/26/2011	FIELD
SA7	SL-102-SA7-SB-9.0-10.0	DX143	SO	9/26/2011	FIELD
SA7	SL-109-SA7-SB-4.0-5.0	DX143	SO	9/26/2011	FIELD
SA7	SL-109-SA7-SB-9.0-10.0	DX143	SO	9/26/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP07-SA7-QC-092611	DX144	SO	9/26/2011	FIELD
SA7	DUP08-SA7-QC-092611	DX144	SO	9/26/2011	FIELD
SA7	SL-103-SA7-SB-18.0-19.0	DX144	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-16.5-17.5	DX144	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-19.0-20.0	DX144	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-4.0-5.0	DX144	SO	9/28/2011	FIELD
SA7	SL-106-SA7-SB-9.0-10.0	DX144	SO	9/28/2011	FIELD
SA7	SL-125-SA7-SB-4.0-5.0	DX144	SO	9/26/2011	FIELD
SA7	SL-170-SA7-SB-4.0-5.0	DX144	SO	9/26/2011	FIELD
SA7	SL-170-SA7-SB-9.0-10.0	DX144	SO	9/26/2011	FIELD
SA7	DUP-09-SA7-QC-092711	DX145	SO	9/27/2011	FIELD
SA7	EB-SA7-SB-092711	DX145	AQ	9/27/2011	FIELD
SA7	SL-103-SA7-SB-4.0-5.0	DX145	SO	9/27/2011	FIELD
SA7	SL-103-SA7-SB-9.0-10.0	DX145	SO	9/27/2011	FIELD
SA7	SL-104-SA7-SB-4.0-5.0	DX145	SO	9/27/2011	FIELD
SA7	SL-104-SA7-SB-9.0-10.0	DX145	SO	9/27/2011	FIELD
SA7	SL-105-SA7-SB-4.0-5.0	DX145	SO	9/27/2011	FIELD
SA7	SL-172-SA7-SB-4.0-5.0	DX145	SO	9/27/2011	FIELD
SA7	SL-172-SA7-SB-9.0-10.0	DX145	SO	9/27/2011	FIELD
SA7	SL-084-SA7-SB-0.0-1.0	DX146	SO	9/30/2011	FIELD
SA7	SL-113-SA7-SB-0.0-1.0	DX146	SO	9/30/2011	FIELD
SA7	SL-115-SA7-SB-0.5-1.5	DX146	SO	9/30/2011	FIELD
SA7	SL-132-SA7-SB-4.0-5.0	DX146	SO	9/30/2011	FIELD
SA7	SL-132-SA7-SB-8.5-9.5	DX146	SO	9/30/2011	FIELD
SA7	SL-180-SA7-SB-2.0-3.0	DX146	SO	9/30/2011	FIELD
SA7	SL-126-SA7-SB-4.0-5.0	DX147	SO	9/29/2011	FIELD
SA7	SL-127-SA7-SB-4.0-5.0	DX147	SO	9/29/2011	FIELD
SA7	SL-177-SA7-SB-3.0-4.0	DX147	SO	9/29/2011	FIELD
SA7	SL-046-SA7-SB-2.5-3.5	DX148	SO	10/7/2011	FIELD
SA7	SL-049-SA7-SB-4.0-5.0	DX148	SO	10/11/2011	FIELD
SA7	SL-112-SA7-SB-0.0-1.0	DX148	SO	10/10/2011	FIELD
SA7	SL-137-SA7-SB-0.0-1.0	DX148	SO	10/7/2011	FIELD
SA7	SL-138-SA7-SB-1.5-2.5	DX148	SO	10/7/2011	FIELD
SA7	SL-147-SA7-SB-1.0-2.0	DX148	SO	10/11/2011	FIELD
SA7	SL-155-SA7-SB-1.5-2.5	DX148	SO	10/11/2011	FIELD
SA7	SL-159-SA7-SB-3.0-4.0	DX148	SO	10/10/2011	FIELD
SA7	SL-162-SA7-SB-0.0-1.0	DX148	SO	10/11/2011	FIELD
SA7	SL-166-SA7-SB-1.0-2.0	DX148	SO	10/11/2011	FIELD
SA7	SL-167-SA7-SB-0.5-1.5	DX148	SO	10/11/2011	FIELD
SA7	SL-169-SA7-SB-3.0-4.0	DX148	SO	10/10/2011	FIELD
SA7	SL-020-SA7-SB-4.0-5.0	DX149	SO	10/18/2011	FIELD
SA7	SL-020-SA7-SB-9.0-10.0	DX149	SO	10/18/2011	FIELD
SA7	SL-096-SA7-SB-2.0-3.0	DX149	SO	10/12/2011	FIELD
SA7	SL-140-SA7-SB-3.0-4.0	DX149	SO	10/18/2011	FIELD
SA7	SL-164-SA7-SB-0.5-1.5	DX149	SO	10/14/2011	FIELD
SA7	SL-168-SA7-SB-0.5-1.5	DX149	SO	10/11/2011	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
SA7	DUP09-SA7-QC-101311	DX150	SO	10/13/2011	FIELD
SA7	EB-SA7-SB-101311	DX150	AQ	10/13/2011	FIELD
SA7	EB-SA7-SB-101911	DX150	AQ	10/19/2011	FIELD
SA7	SL-023-SA7-SB-2.0-3.0	DX150	SO	10/20/2011	FIELD
SA7	SL-060-SA7-SB-2.5-3.5	DX150	SO	10/20/2011	FIELD
SA7	SL-069-SA7-SB-2.5-3.5	DX150	SO	10/20/2011	FIELD
SA7	SL-089-SA7-SB-3.5-4.5	DX150	SO	10/13/2011	FIELD
SA7	SL-142-SA7-SB-2.0-3.0	DX150	SO	10/19/2011	FIELD
SA7	SL-142-SA7-SB-7.0-8.0	DX150	SO	10/19/2011	FIELD
SA7	SL-143-SA7-SB-5.0-6.0	DX150	SO	10/19/2011	FIELD
SA7	SL-143-SA7-SB-9.0-10.0	DX150	SO	10/19/2011	FIELD
SA7	SL-148-SA7-SB-0.0-1.0	DX150	SO	10/20/2011	FIELD
SA7	SL-139-SA7-SB-2.0-3.0	DX151	SO	10/17/2011	FIELD
SA7	EB-SA7-SB-102611	DX152	AQ	10/26/2011	FIELD
SA7	FB-SA7-102611	DX152	AQ	10/26/2011	FIELD
SA7	SL-008-SA7-SB-2.5-3.0	DX152	SO	10/27/2011	FIELD
SA7	SL-033-SA7-SB-4.0-5.0	DX152	SO	10/24/2011	FIELD
SA7	SL-033-SA7-SB-9.0-10.0	DX152	SO	10/24/2011	FIELD
SA7	SL-038-SA7-SB-4.0-5.0	DX152	SO	10/24/2011	FIELD
SA7	SL-065-SA7-SB-2.0-3.0	DX152	SO	10/21/2011	FIELD
SA7	SL-082-SA7-SB-4.0-5.0	DX152	SO	10/25/2011	FIELD
SA7	SL-086-SA7-SB-3.0-4.0	DX152	SO	10/26/2011	FIELD
SA7	SL-157-SA7-SB-2.5-3.5	DX152	SO	10/26/2011	FIELD
SA7	SL-001-SA7-SB-4.0-5.0	DX153	SO	10/31/2011	FIELD
SA7	SL-091-SA7-SB-2.5-3.5	DX153	SO	10/27/2011	FIELD
SA7	SL-107-SA7-SB-13.0-14.0	DX153	SO	11/4/2011	FIELD
SA7	SL-107-SA7-SB-4.0-5.0	DX153	SO	11/4/2011	FIELD
SA7	SL-107-SA7-SB-9.0-10.0	DX153	SO	11/4/2011	FIELD
SA7	SL-116-SA7-SB-0.0-0.5	DX153	SO	10/28/2011	FIELD
SA7	SL-117-SA7-SB-2.5-3.5	DX153	SO	10/28/2011	FIELD
SA7	SL-118-SA7-SB-4.0-5.0	DX153	SO	10/28/2011	FIELD
SA7	SL-119-SA7-SB-4.0-5.0	DX153	SO	10/28/2011	FIELD
SA7	SL-120-SA7-SB-4.0-5.0	DX153	SO	10/31/2011	FIELD
SA7	SL-120-SA7-SB-9.0-10.0	DX153	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-4.0-5.0	DX153	SO	10/31/2011	FIELD
SA7	SL-121-SA7-SB-9.0-10.0	DX153	SO	10/31/2011	FIELD
SA7	SL-123-SA7-SB-4.0-5.0	DX153	SO	11/1/2011	FIELD
SA7	SL-123-SA7-SB-9.0-10.0	DX153	SO	11/1/2011	FIELD
SA7	SL-160-SA7-SB-0.0-1.0	DX153	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-4.0-5.0	DX153	SO	11/1/2011	FIELD
SA7	SL-175-SA7-SB-9.0-10.0	DX153	SO	11/1/2011	FIELD
SA7	SL-185-SA7-SB-3.0-4.0	DX153	SO	11/1/2011	FIELD
SA7	EB-SA7-SB-110311	DX154	AQ	11/3/2011	FIELD
SA7	SL-048-SA7-SB-4.0-5.0	DX154	SO	11/2/2011	FIELD
SA7	SL-048-SA7-SB-9.0-10.0	DX154	SO	11/2/2011	FIELD
SA7	SL-108-SA7-SB-2.9-3.9	DX154	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-4.0-5.0	DX154	SO	11/3/2011	FIELD
SA7	SL-128-SA7-SB-9.0-10.0	DX154	SO	11/3/2011	FIELD
SA7	SL-161-SA7-SB-4.0-5.0	DX154	SO	11/2/2011	FIELD
SA7	SL-171-SA7-SB-4.0-5.0	DX154	SO	11/3/2011	FIELD
SA7	SL-171-SA7-SB-9.0-10.0	DX154	SO	11/3/2011	FIELD

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l			5	U			5	U	5	U		
1,1,1-Trichloroethane	8260B	ug/l			5	U			5	U	5	U		
1,1,2,2-Tetrachloroethane	8260B	ug/l			5	U			5	U	5	U		
1,1,2-Trichloroethane	8260B	ug/l			5	U			5	U	5	U		
1,1-Dichloroethane	8260B	ug/l			5	U			5	U	5	U		
1,1-Dichloroethene	8260B	ug/l			5	U			5	U	5	U		
1,1-Dichloropropene	8260B	ug/l			5	U			5	U	5	U		
1,2,3,4,6,7,8-HpCDD	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,4,6,7,8-HpCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,4,7,8,9-HpCDF	1613B	pg/l	0.429	J	0.284	J	9.72	U	10.9	U	10.3	U		
1,2,3,4,7,8-HxCDD	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,4,7,8-HxCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,6,7,8-HxCDD	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,6,7,8-HxCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,7,8,9-HxCDD	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3,7,8,9-HxCDF	1613B	pg/l	9.48	U	10.1	U	0.333	J	10.9	U	10.3	U		
1,2,3,7,8-PeCDD	1613B	pg/l	9.48	U	0.503	J	0.324	J	0.380	J	10.3	U		
1,2,3,7,8-PeCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
1,2,3-Trichlorobenzene	8260B	ug/l			5	U			5	U	5	U		
1,2,3-Trichloropropane	8260B	ug/l			5	U			5	U	5	U		
1,2,4-Trichlorobenzene	8260B	ug/l			5	U			5	U	5	U		
1,2,4-Trichlorobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
1,2,4-Trimethylbenzene	8260B	ug/l			5	U			5	U	5	U		
1,2-Dibromo-3-chloropropane	8260B	ug/l			5	U			5	U	5	U		
1,2-Dibromoethane	8260B	ug/l			5	U			5	U	5	U		
1,2-Dichlorobenzene	8260B	ug/l			5	U			5	U	5	U		
1,2-Dichlorobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
1,2-Dichloroethane	8260B	ug/l			5	U			5	U	5	U		
1,2-Dichloropropane	8260B	ug/l			5	U			5	U	5	U		
1,2-Diphenylhydrazine	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
1,3,5-Trimethylbenzene	8260B	ug/l			5	U			5	U	5	U		
1,3,5-Trinitrobenzene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U		
1,3-Dichlorobenzene	8260B	ug/l			5	U			5	U	5	U		
1,3-Dichlorobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
1,3-Dichloropropane	8260B	ug/l			5	U			5	U	5	U		
1,4-Dichlorobenzene	8260B	ug/l			5	U			5	U	5	U		
1,4-Dichlorobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
1,4-Dioxane	8260B SIM	ug/l			2.0	U			2.0	U	2.0	U		
1-Methylnaphthalene	8270C	ug/l												
1-Methylnaphthalene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U		
2,2-Dichloropropane	8260B	ug/l			5	U			5	U	5	U		
2,2-Dichlor-Propionic Acid	8151A	ug/l	1.4	U	1.3	U	1.2	U						
2,3,4,6,7,8-HxCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		
2,3,4,7,8-PeCDF	1613B	pg/l	9.48	U	10.1	U	9.72	U	10.9	U	10.3	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
2,3,7,8-TCDD	1613B	pg/l	1.90	U	2.02	U	1.94	U	2.18	U	2.06	U				
2,3,7,8-TCDF	1613B	pg/l	1.90	U	2.02	U	1.94	U	2.18	U	2.06	U				
2,4 DB	8151A	ug/l	1.1	U	1.0	U	0.98	U								
2,4,5-T	8151A	ug/l	0.055	U	0.051	U	0.049	U								
2,4,5-TP	8151A	ug/l	0.055	U	0.051	U	0.049	U								
2,4,5-Trichlorophenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2,4,6-Trichlorophenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2,4,6-Trinitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2,4-D	8151A	ug/l	0.55	U	0.51	U	0.49	U								
2,4-Diamino-6-nitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2,4-Dichlorophenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2,4-Dimethylphenol	8270C	ug/l	10	U	10	U	11	U	11	U	11	U				
2,4-Dinitrophenol	8270C	ug/l	30	U	31	U	34	U	34	U	33	U				
2,4-Dinitrotoluene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2,4-Dinitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2,6-Diamino-4-nitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2,6-Dinitrotoluene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2,6-Dinitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2-Amino-4,6-Dinitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2-Butanone	8260B	ug/l			10	U			10	U	10	U				
2-butoxy-Ethanol	8270C	ug/l					50	U	50	U						
2-Chloroethyl Vinyl Ether	8260B	ug/l			10	U			10	U	10	U				
2-Chloronaphthalene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2-Chlorophenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2-Chlorotoluene	8260B	ug/l			5	U			5	U	5	U				
2-Hexanone	8260B	ug/l			10	U			10	U	10	U				
2-Methylnaphthalene	8270C	ug/l														
2-Methylnaphthalene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
2-Methylphenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2-Nitroaniline	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2-Nitrophenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
2-Nitrotoluene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
2-phenoxy-Ethanol	8270C	ug/l					50	U	50	U						
2-Propanol	8015B	ug/l	1000	U	1000	U	1000	U	1000	U	1000	U				
3,3`-Dichlorobenzidine	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
3,5-Dimethylphenol	8270C	ug/l	10	U	10	U	11	U	11	U	11	U				
3-Nitroaniline	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
3-Nitrotoluene	8330A	ug/l	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U				
4,4'-DDD	8081A	ug/l	0.020	U	0.020	U	0.021	U								
4,4'-DDE	8081A	ug/l	0.020	U	0.020	U	0.021	U								
4,4'-DDT	8081A	ug/l	0.020	U	0.020	U	0.021	U								
4,6-Dinitro-2-Methylphenol	8270C	ug/l	15	U	16	U	17	U	17	U	17	U				
4-Amino-2,6-Dinitrotoluene	8330A	ug/l	0.80		0.75		0.82		0.77		0.65	U				
4-Bromophenyl Phenyl Ether	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
4-Chloro-3-Methylphenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
4-Chloroaniline	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
4-Chlorophenyl Phenylether	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
4-Chlorotoluene	8260B	ug/l			5	U			5	U	5	U				
4-Methyl-2-Pentanone	8260B	ug/l			10	U			10	U	10	U				
4-Methylphenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
4-Nitroaniline	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
4-Nitrophenol	8270C	ug/l	30	U	31	U	34	U	34	U	33	U				
4-Nitrotoluene	8330A	ug/l	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U				
Acenaphthene	8270C	ug/l														
Acenaphthene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Acenaphthylene	8270C	ug/l														
Acenaphthylene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Acetone	8260B	ug/l			30				22		26					
Aldrin	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Alpha-BHC	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Aluminum	6010B	mg/l	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U				
Aluminum	6020	mg/l														
Aniline	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Anthracene	8270C	ug/l														
Anthracene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Antimony	6020	mg/l	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U				
Aroclor 1016	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1221	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1232	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1242	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1248	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1254	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1260	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1262	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 1268	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 5432	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 5442	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Aroclor 5460	8082	ug/l	0.49	U	0.51	U	0.52	U	0.54	U	0.51	U				
Arsenic	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U				
Barium	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U				
Benzene	8260B	ug/l			5	U			5	U	5	U				
Benzidine	8270C	ug/l	61	U	63	U	67	U	67	U	66	U				
Benzo(a)anthracene	8270C	ug/l														
Benzo(a)anthracene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Benzo(a)pyrene	8270C	ug/l														
Benzo(a)pyrene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Benzo(b)fluoranthene	8270C	ug/l														
Benzo(b)fluoranthene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Benzo(g,h,i)perylene	8270C	ug/l												
Benzo(g,h,i)perylene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U		
Benzo(k)fluoranthene	8270C	ug/l												
Benzo(k)fluoranthene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U		
Benzoic Acid	8270C	ug/l	15	U	16	U	17	UJ	17	UJ	17	UJ		
Benzyl Alcohol	8270C	ug/l	15	U	16	U	17	U	17	U	17	U		
Beryllium	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U		
Beta-BHC	8081A	ug/l	0.010	U	0.0099	U	0.010	U						
Bis(2-Chloroethoxy) methane	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
Bis(2-Chloroethyl) ether	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
bis(2-Chloroisopropyl) ether	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
Bis(2-Ethylhexyl) phthalate	8270C	ug/l												
Bis(2-Ethylhexyl) phthalate	8270C SIM	ug/l	1.0	U	1.1	U	1.1	U	1.0	U	0.13	J		
Boron	6010B	mg/l	0.0500	U	0.0500	U	0.0500	U	0.0033	J	0.0039	J		
Boron	6020	mg/l												
Bromobenzene	8260B	ug/l			5	U			5	U	5	U		
Bromochloromethane	8260B	ug/l			5	U			5	U	5	U		
Bromodichloromethane	8260B	ug/l			5	U			5	U	5	U		
Bromoform	8260B	ug/l			5	U			5	U	5	U		
Bromomethane	8260B	ug/l			5	U			5	U	5	U		
Butylbenzylphthalate	8270C	ug/l												
Butylbenzylphthalate	8270C SIM	ug/l	1.0	U	1.1	U	1.1	U	1.0	U	1.1	U		
Cadmium	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U		
Calcium	6010B	mg/l	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U		
Calcium	6020	mg/l												
Carbazole	8270C	ug/l	5	U	5	U	6	U	6	U	6	U		
Carbon tetrachloride	8260B	ug/l			5	U			5	U	5	U		
Chlordane	8081A	ug/l	0.50	U	0.49	U	0.52	U						
Chlorobenzene	8260B	ug/l			5	U			5	U	5	U		
Chloroethane	8260B	ug/l			5	U			5	U	5	U		
Chloroform	8260B	ug/l			5	U			5	U	5	U		
Chloromethane	8260B	ug/l			5	U			5	U	5	U		
Chlorotrifluoroethene	8260B	ug/l			5	U			5	U	5	U		
Chromium	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U		
Chromium VI	7199	ug/l	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		
Chrysene	8270C	ug/l												
Chrysene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U		
cis-1,2-Dichloroethene	8260B	ug/l			5	U			5	U	5	U		
cis-1,3-Dichloropropene	8260B	ug/l			5	U			5	U	5	U		
Cobalt	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U		
Copper	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U		
Cyanide	9012B	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U		
Cyanide	9014	mg/l												

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Delta-BHC	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Dibenzo(a,h)anthracene	8270C	ug/l														
Dibenzo(a,h)anthracene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Dibenzofuran	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Dibromochloromethane	8260B	ug/l			5	U			5	U	5	U				
Dibromomethane	8260B	ug/l			5	U			5	U	5	U				
Dicamba	8151A	ug/l	0.33	U	0.30	U	0.30	U								
Dichlorodifluoromethane	8260B	ug/l			5	U			5	U	5	U				
Dichlorprop	8151A	ug/l	0.55	U	0.51	U	0.49	U								
Dieldrin	8081A	ug/l	0.020	U	0.020	U	0.021	U								
Diethylene Glycol	8015M	mg/l	200	UJ	200	UJ	200	U	200	U	200	U				
Diethylphthalate	8270C	ug/l														
Diethylphthalate	8270C SIM	ug/l	0.31	J	0.27	J	0.35	J	0.34	J	0.36	J				
Dimethylphthalate	8270C	ug/l														
Dimethylphthalate	8270C SIM	ug/l	1.0	U	1.1	U	1.1	U	1.0	U	1.1	U				
Di-n-Butylphthalate	8270C	ug/l														
Di-n-Butylphthalate	8270C SIM	ug/l	0.94	J	0.83	J	0.83	J	0.82	J	0.79	J				
Dinitrobutyl Phenol	8151A	ug/l	0.55	U	0.51	U	0.49	U								
Di-N-Octyl Phthalate	8270C	ug/l														
Di-N-Octyl Phthalate	8270C SIM	ug/l	1.0	U	1.1	U	1.1	U	1.0	U	0.11	J				
EFH (C12-C14)	8015B EFH	mg/l														
EFH (C12-C14)	8015M	mg/l	0.62	U	0.59	U	0.63	U	0.67	U	0.57	U				
EFH (C15-C20)	8015B EFH	mg/l														
EFH (C15-C20)	8015M	mg/l	0.62	UJ	0.59	UJ	0.63	U	0.67	U	0.57	U				
EFH (C21-C30)	8015B EFH	mg/l														
EFH (C21-C30)	8015M	mg/l	0.62	UJ	0.59	UJ	0.63	U	0.67	U	0.57	U				
EFH (C30-C40)	8015B EFH	mg/l														
EFH (C30-C40)	8015M	mg/l	0.62	UJ	0.59	UJ	0.63	U	0.67	U	0.57	U				
EFH (C8-C11)	8015B EFH	mg/l														
EFH (C8-C11)	8015M	mg/l	0.62	U	0.59	U	0.63	U	0.67	U	0.57	U				
Endosulfan I	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Endosulfan II	8081A	ug/l	0.020	U	0.020	U	0.021	U								
Endosulfan Sulfate	8081A	ug/l	0.020	U	0.020	U	0.021	U								
Endrin	8081A	ug/l	0.020	U	0.020	U	0.021	UJ								
Endrin Aldehyde	8081A	ug/l	0.10	U	0.099	U	0.10	U								
Endrin Ketone	8081A	ug/l	0.020	U	0.020	U	0.021	U								
Ethanol	8015B	ug/l	1000	U	1000	U	1000	U	1000	U	1000	U				
Ethylbenzene	8260B	ug/l			5	U			5	U	5	U				
Ethylene Glycol	8015M	mg/l	200	UJ	200	UJ	200	U	200	U	200	U				
Fluoranthene	8270C	ug/l														
Fluoranthene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Fluorene	8270C	ug/l														
Fluorene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Fluoride	300.0	mg/l	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Formaldehyde	8315A	ug/l	50	U	50	U	50	U	50	U	50	U				
Freon 113	8260B	ug/l			10	U			10	U	10	U				
Freon 113a	8260B	ug/l			5	U			5	U	5	U				
Gamma-BHC (Lindane)	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
GRO (C5-C12)	8015B GRO	ug/l														
GRO (C5-C12)	8015M	ug/l			26	J			50	U	50	U				
Heptachlor	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Heptachlor Epoxide	8081A	ug/l	0.010	U	0.0099	U	0.010	U								
Hexachlorobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Hexachlorobutadiene	8260B	ug/l			5	U			5	U	5	U				
Hexachlorobutadiene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Hexachlorocyclopentadiene	8270C	ug/l	15	U	16	U	17	U	17	U	17	U				
Hexachloroethane	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
HMX	8330A	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U				
Indeno(1,2,3-Cd)Pyrene	8270C	ug/l														
Indeno(1,2,3-Cd)Pyrene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Iron	6010B	mg/l	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U				
Iron	6020	mg/l														
Isophorone	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Isopropylbenzene	8260B	ug/l			5	U			5	U	5	U				
Isopropyltoluene	8260B	ug/l			5	U			5	U	5	U				
Lead	6020	mg/l	0.0010	U	0.0010	U	0.00021	J	0.00042	J	0.0010	U				
Lithium	6010B	mg/l	0.0200	U	0.0200	U	0.0200	U	0.0200	U	0.0200	U				
Lithium	6020	mg/l														
m,p-Xylene	8260B	ug/l			5	U			5	U	5	U				
Magnesium	6010B	mg/l	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U				
Magnesium	6020	mg/l														
Manganese	6010B	mg/l	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U				
Manganese	6020	mg/l														
MCPA	8151A	ug/l	1100	U	1000	U	980	U								
MCPP	8151A	ug/l	220	U	200	U	200	U								
m-Dinitrobenzene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
Mercury	7470A	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U				
Methanol	8015B	ug/l	1000	U	1000	U	1000	U	1000	U	1000	U				
Methoxychlor	8081A	ug/l	0.10	U	0.099	U	0.10	U								
Methyl tert-Butyl Ether	8260B	ug/l			5	U			5	U	5	U				
Methylene chloride	8260B	ug/l			5				3	J	3	J				
Mirex	8081A	ug/l	0.25	U	0.25	U	0.26	U								
Molybdenum	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U				
m-Terphenyl	8015B	mg/l	0.27	U	0.26	U	0.25	U	0.26	U	0.27	U				
Naphthalene	8270C	ug/l														
Naphthalene	8270C SIM	ug/l	0.051	U	0.056	U	0.057		0.060		0.091					
N-Butylbenzene	8260B	ug/l			5	U			5	U	5	U				
Nickel	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Nitrate	300.0	mg/l	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U				
Nitrobenzene	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Nitrobenzene	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U				
Nitroglycerin	8330A	ug/l	15	U	15	U	15	U	15	U	15	U				
Nitroglycerin	8332	ug/l														
N-Nitrosodimethylamine	1625C	ng/l	2.99		4.34	J	2.3800000000	UJ	3.1900000000	UJ	3.2300000000	UJ	0.956	UJ		
N-Nitrosodimethylamine	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
N-Nitroso-Di-N-Propylamine	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
N-Nitrosodiphenylamine	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
N-Propylbenzene	8260B	ug/l			5	U			5	U	5	U				
OCDD	1613B	pg/l	19.0	U	20.2	U	19.4	U	21.8	U	20.6	U				
OCDF	1613B	pg/l	19.0	U	20.2	U	19.4	U	21.8	U	20.6	U				
o-Terphenyl	8015B	mg/l	0.27	U	0.26	U	0.25	U	0.26	U	0.27	U				
o-Xylene	8260B	ug/l			5	U			5	U	5	U				
Pentachlorophenol	8270C	ug/l	15	U	16	U	17	U	17	U	17	U				
Perchlorate	314.0	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U				
PETN	8330A	ug/l	18	U	18	U	18	U	18	U	18	U				
PETN	8332	ug/l														
pH	9040B	pH unit	5.6		5.5		5.6		5.4		5.7					
pH	9040C	pH unit														
Phenanthrene	8270C	ug/l														
Phenanthrene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
Phenol	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				
Phosphorus	6010B	mg/l	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U				
Phosphorus	6020	mg/l														
Potassium	6010B	mg/l	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U				
Potassium	6020	mg/l														
Propylene glycol	8015M	mg/l	200	UJ	200	UJ	200	U	200	U	200	U				
p-Terphenyl	8015B	mg/l	0.27	U	0.26	U	0.25	U	0.26	U	0.27	U				
Pyrene	8270C	ug/l														
Pyrene	8270C SIM	ug/l	0.051	U	0.056	U	0.056	U	0.051	U	0.055	U				
RDX	8330A	ug/l	2.5		2.9		3.2		3.0		3.4					
sec-Butylbenzene	8260B	ug/l			5	U			5	U	5	U				
Selenium	6020	mg/l	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U				
Silver	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U				
Sodium	6010B	mg/l	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U				
Sodium	6020	mg/l														
Strontium	6010B	mg/l	0.0050	U	0.0050	U	0.0050	U	0.0050	U	0.0050	U				
Strontium	6020	mg/l														
Styrene	8260B	ug/l			5	U			5	U	5	U				
tert-Butylbenzene	8260B	ug/l			5	U			5	U	5	U				
Tetrachloroethene	8260B	ug/l			5	U			5	U	5	U				
Tetralin	8270C	ug/l	5	U	5	U	6	U	6	U	6	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SS-091411		EB-SA7-SB-091511		EB-SA7-SS-092111		EB-SA7-SB-092211		EB-SA7-SB-092711		EB-SA7-SB-093011	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		09/14/2011		09/15/2011		09/21/2011		09/22/2011		09/27/2011		09/30/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Tetryl	8330A	ug/l	0.60	U	0.60	U	0.60	U	0.60	U	0.60	UJ				
Thallium	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U				
Tin	6010B	mg/l	0.0200	U	0.0200	U	0.0200	U	0.0200	U	0.0200	U				
Tin	6020	mg/l														
Titanium	6010B	mg/l	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U				
Titanium	6020	mg/l														
Toluene	8260B	ug/l			5	U			5	U	5	U				
Toxaphene	8081A	ug/l	3.0	U	3.0	U	3.1	U								
trans-1,2-Dichloroethene	8260B	ug/l			5	U			5	U	5	U				
trans-1,3-Dichloropropene	8260B	ug/l			5	U			5	U	5	U				
Trichloroethene	8260B	ug/l			5	U			5	U	5	U				
Trichlorofluoromethane	8260B	ug/l			5	U			5	U	5	U				
Vanadium	6020	mg/l	0.00050	U	0.00050	U	0.00050	U	0.00050	U	0.00050	U				
Vinyl Chloride	8260B	ug/l			5	U			5	U	5	U				
Zinc	6020	mg/l	0.0150	U	0.0150	U	0.0150	U	0.0150	U	0.0150	U				
Zirconium	6010B	mg/l	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U				
Zirconium	6020	mg/l														

ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit
(a) Some SVOC results had two values - one for SVOC and one for SVOC SIM. The validators used the value with the lowest detection limit for validation purposes

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l														
1,1,1-Trichloroethane	8260B	ug/l														
1,1,2,2-Tetrachloroethane	8260B	ug/l														
1,1,2-Trichloroethane	8260B	ug/l														
1,1-Dichloroethane	8260B	ug/l														
1,1-Dichloroethene	8260B	ug/l														
1,1-Dichloropropene	8260B	ug/l														
1,2,3,4,6,7,8-HpCDD	1613B	pg/l									9.99	U				
1,2,3,4,6,7,8-HpCDF	1613B	pg/l									9.99	U				
1,2,3,4,7,8,9-HpCDF	1613B	pg/l									9.99	U				
1,2,3,4,7,8-HxCDD	1613B	pg/l									9.99	U				
1,2,3,4,7,8-HxCDF	1613B	pg/l									9.99	U				
1,2,3,6,7,8-HxCDD	1613B	pg/l									0.265	J				
1,2,3,6,7,8-HxCDF	1613B	pg/l									9.99	U				
1,2,3,7,8,9-HxCDD	1613B	pg/l									9.99	U				
1,2,3,7,8,9-HxCDF	1613B	pg/l									9.99	U				
1,2,3,7,8-PeCDD	1613B	pg/l									9.99	U				
1,2,3,7,8-PeCDF	1613B	pg/l									9.99	U				
1,2,3-Trichlorobenzene	8260B	ug/l														
1,2,3-Trichloropropane	8260B	ug/l														
1,2,4-Trichlorobenzene	8260B	ug/l														
1,2,4-Trichlorobenzene	8270C	ug/l									5	U				
1,2,4-Trimethylbenzene	8260B	ug/l														
1,2-Dibromo-3-chloropropane	8260B	ug/l														
1,2-Dibromoethane	8260B	ug/l														
1,2-Dichlorobenzene	8260B	ug/l														
1,2-Dichlorobenzene	8270C	ug/l									5	U				
1,2-Dichloroethane	8260B	ug/l														
1,2-Dichloropropane	8260B	ug/l														
1,2-Diphenylhydrazine	8270C	ug/l									5	U				
1,3,5-Trimethylbenzene	8260B	ug/l														
1,3,5-Trinitrobenzene	8330A	ug/l									0.60	U				
1,3-Dichlorobenzene	8260B	ug/l														
1,3-Dichlorobenzene	8270C	ug/l									5	U				
1,3-Dichloropropane	8260B	ug/l														
1,4-Dichlorobenzene	8260B	ug/l														
1,4-Dichlorobenzene	8270C	ug/l									5	U				
1,4-Dioxane	8260B SIM	ug/l														
1-Methylnaphthalene	8270C	ug/l														
1-Methylnaphthalene	8270C SIM	ug/l									0.049	U				
2,2-Dichloropropane	8260B	ug/l														
2,2-Dichlor-Propionic Acid	8151A	ug/l														
2,3,4,6,7,8-HxCDF	1613B	pg/l									9.99	U				
2,3,4,7,8-PeCDF	1613B	pg/l									9.99	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

	Sample Name:	EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
	Location:	EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
	Sample Date:	10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
	Sample Type	EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
2,3,7,8-TCDD	1613B	pg/l							2.00	U				
2,3,7,8-TCDF	1613B	pg/l							2.00	U				
2,4 DB	8151A	ug/l												
2,4,5-T	8151A	ug/l												
2,4,5-TP	8151A	ug/l												
2,4,5-Trichlorophenol	8270C	ug/l							5	U				
2,4,6-Trichlorophenol	8270C	ug/l							5	U				
2,4,6-Trinitrotoluene	8330A	ug/l							0.60	U				
2,4-D	8151A	ug/l												
2,4-Diamino-6-nitrotoluene	8330A	ug/l							0.60	U				
2,4-Dichlorophenol	8270C	ug/l							5	U				
2,4-Dimethylphenol	8270C	ug/l							10	U				
2,4-Dinitrophenol	8270C	ug/l							29	U				
2,4-Dinitrotoluene	8270C	ug/l							5	U				
2,4-Dinitrotoluene	8330A	ug/l							0.60	U				
2,6-Diamino-4-nitrotoluene	8330A	ug/l							0.60	U				
2,6-Dinitrotoluene	8270C	ug/l							5	U				
2,6-Dinitrotoluene	8330A	ug/l							0.60	U				
2-Amino-4,6-Dinitrotoluene	8330A	ug/l							0.60	U				
2-Butanone	8260B	ug/l												
2-butoxy-Ethanol	8270C	ug/l							48	U				
2-Chloroethyl Vinyl Ether	8260B	ug/l												
2-Chloronaphthalene	8270C	ug/l							5	U				
2-Chlorophenol	8270C	ug/l							5	U				
2-Chlorotoluene	8260B	ug/l												
2-Hexanone	8260B	ug/l												
2-Methylnaphthalene	8270C	ug/l												
2-Methylnaphthalene	8270C SIM	ug/l							0.049	U				
2-Methylphenol	8270C	ug/l							5	U				
2-Nitroaniline	8270C	ug/l							5	U				
2-Nitrophenol	8270C	ug/l							5	U				
2-Nitrotoluene	8330A	ug/l							0.60	U				
2-phenoxy-Ethanol	8270C	ug/l							48	U				
2-Propanol	8015B	ug/l							1000	U				
3,3`-Dichlorobenzidine	8270C	ug/l							5	U				
3,5-Dimethylphenol	8270C	ug/l							10	U				
3-Nitroaniline	8270C	ug/l							5	U				
3-Nitrotoluene	8330A	ug/l							1.2	U				
4,4'-DDD	8081A	ug/l												
4,4'-DDE	8081A	ug/l												
4,4'-DDT	8081A	ug/l												
4,6-Dinitro-2-Methylphenol	8270C	ug/l							14	U				
4-Amino-2,6-Dinitrotoluene	8330A	ug/l							0.60	U				
4-Bromophenyl Phenyl Ether	8270C	ug/l							5	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
4-Chloro-3-Methylphenol	8270C	ug/l									5	U				
4-Chloroaniline	8270C	ug/l									5	U				
4-Chlorophenyl Phenylether	8270C	ug/l									5	U				
4-Chlorotoluene	8260B	ug/l														
4-Methyl-2-Pentanone	8260B	ug/l														
4-Methylphenol	8270C	ug/l									5	U				
4-Nitroaniline	8270C	ug/l									5	U				
4-Nitrophenol	8270C	ug/l									29	U				
4-Nitrotoluene	8330A	ug/l									1.2	U				
Acenaphthene	8270C	ug/l														
Acenaphthene	8270C SIM	ug/l									0.049	U				
Acenaphthylene	8270C	ug/l														
Acenaphthylene	8270C SIM	ug/l									0.049	U				
Acetone	8260B	ug/l														
Aldrin	8081A	ug/l														
Alpha-BHC	8081A	ug/l														
Aluminum	6010B	mg/l									0.200	U				
Aluminum	6020	mg/l														
Aniline	8270C	ug/l									5	U				
Anthracene	8270C	ug/l														
Anthracene	8270C SIM	ug/l									0.049	U				
Antimony	6020	mg/l									0.0010	U				
Aroclor 1016	8082	ug/l									0.50	U				
Aroclor 1221	8082	ug/l									0.50	U				
Aroclor 1232	8082	ug/l									0.50	U				
Aroclor 1242	8082	ug/l									0.50	U				
Aroclor 1248	8082	ug/l									0.50	U				
Aroclor 1254	8082	ug/l									0.50	U				
Aroclor 1260	8082	ug/l									0.50	U				
Aroclor 1262	8082	ug/l									0.50	U				
Aroclor 1268	8082	ug/l									0.50	U				
Aroclor 5432	8082	ug/l									0.50	U				
Aroclor 5442	8082	ug/l									0.50	U				
Aroclor 5460	8082	ug/l									0.50	U				
Arsenic	6020	mg/l									0.0020	U				
Barium	6020	mg/l									0.0020	U				
Benzene	8260B	ug/l														
Benzidine	8270C	ug/l									57	U				
Benzo(a)anthracene	8270C	ug/l														
Benzo(a)anthracene	8270C SIM	ug/l									0.049	U				
Benzo(a)pyrene	8270C	ug/l														
Benzo(a)pyrene	8270C SIM	ug/l									0.049	U				
Benzo(b)fluoranthene	8270C	ug/l														
Benzo(b)fluoranthene	8270C SIM	ug/l									0.049	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

	Sample Name:	EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
	Location:	EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
	Sample Date:	10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
	Sample Type	EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Benzo(g,h,i)perylene	8270C	ug/l												
Benzo(g,h,i)perylene	8270C SIM	ug/l							0.049	U				
Benzo(k)fluoranthene	8270C	ug/l												
Benzo(k)fluoranthene	8270C SIM	ug/l							0.049	U				
Benzoic Acid	8270C	ug/l							14	U				
Benzyl Alcohol	8270C	ug/l							14	U				
Beryllium	6020	mg/l							0.00050	U				
Beta-BHC	8081A	ug/l												
Bis(2-Chloroethoxy) methane	8270C	ug/l							5	U				
Bis(2-Chloroethyl) ether	8270C	ug/l							5	U				
bis(2-Chloroisopropyl) ether	8270C	ug/l							5	U				
Bis(2-Ethylhexyl) phthalate	8270C	ug/l												
Bis(2-Ethylhexyl) phthalate	8270C SIM	ug/l							0.98	U				
Boron	6010B	mg/l							0.0500	U				
Boron	6020	mg/l												
Bromobenzene	8260B	ug/l												
Bromochloromethane	8260B	ug/l												
Bromodichloromethane	8260B	ug/l												
Bromoform	8260B	ug/l												
Bromomethane	8260B	ug/l												
Butylbenzylphthalate	8270C	ug/l												
Butylbenzylphthalate	8270C SIM	ug/l							0.98	U				
Butylbenzylphthalate	8270C	ug/l												
Butylbenzylphthalate	8270C SIM	ug/l							0.98	U				
Cadmium	6020	mg/l							0.00050	U				
Calcium	6010B	mg/l							0.200	U				
Calcium	6020	mg/l												
Carbazole	8270C	ug/l							5	U				
Carbon tetrachloride	8260B	ug/l												
Chlordane	8081A	ug/l												
Chlorobenzene	8260B	ug/l												
Chloroethane	8260B	ug/l												
Chloroform	8260B	ug/l												
Chloromethane	8260B	ug/l												
Chlorotrifluoroethene	8260B	ug/l												
Chromium	6020	mg/l							0.0020	U				
Chromium VI	7199	ug/l							10.0	U				
Chrysene	8270C	ug/l												
Chrysene	8270C SIM	ug/l							0.049	U				
cis-1,2-Dichloroethene	8260B	ug/l												
cis-1,3-Dichloropropene	8260B	ug/l												
Cobalt	6020	mg/l							0.00050	U				
Copper	6020	mg/l							0.0020	U				
Cyanide	9012B	mg/l							0.010	U				
Cyanide	9014	mg/l												

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Delta-BHC	8081A	ug/l														
Dibenzo(a,h)anthracene	8270C	ug/l														
Dibenzo(a,h)anthracene	8270C SIM	ug/l									0.049	U				
Dibenzofuran	8270C	ug/l									5	U				
Dibromochloromethane	8260B	ug/l														
Dibromomethane	8260B	ug/l														
Dicamba	8151A	ug/l														
Dichlorodifluoromethane	8260B	ug/l														
Dichlorprop	8151A	ug/l														
Dieldrin	8081A	ug/l														
Diethylene Glycol	8015M	mg/l									200	U				
Diethylphthalate	8270C	ug/l														
Diethylphthalate	8270C SIM	ug/l									0.11	J				
Dimethylphthalate	8270C	ug/l														
Dimethylphthalate	8270C SIM	ug/l									0.98	U				
Di-n-Butylphthalate	8270C	ug/l														
Di-n-Butylphthalate	8270C SIM	ug/l									0.19	J				
Dinitrobutyl Phenol	8151A	ug/l														
Di-N-Octyl Phthalate	8270C	ug/l														
Di-N-Octyl Phthalate	8270C SIM	ug/l									0.98	U				
EFH (C12-C14)	8015B EFH	mg/l														
EFH (C12-C14)	8015M	mg/l									0.61	U				
EFH (C15-C20)	8015B EFH	mg/l														
EFH (C15-C20)	8015M	mg/l									0.61	U				
EFH (C21-C30)	8015B EFH	mg/l														
EFH (C21-C30)	8015M	mg/l									0.61	U				
EFH (C30-C40)	8015B EFH	mg/l														
EFH (C30-C40)	8015M	mg/l									0.61	U				
EFH (C8-C11)	8015B EFH	mg/l														
EFH (C8-C11)	8015M	mg/l									0.61	U				
Endosulfan I	8081A	ug/l														
Endosulfan II	8081A	ug/l														
Endosulfan Sulfate	8081A	ug/l														
Endrin	8081A	ug/l														
Endrin Aldehyde	8081A	ug/l														
Endrin Ketone	8081A	ug/l														
Ethanol	8015B	ug/l									1000	U				
Ethylbenzene	8260B	ug/l														
Ethylene Glycol	8015M	mg/l									200	U				
Fluoranthene	8270C	ug/l														
Fluoranthene	8270C SIM	ug/l									0.049	U				
Fluorene	8270C	ug/l														
Fluorene	8270C SIM	ug/l									0.049	U				
Fluoride	300.0	mg/l									0.10	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Formaldehyde	8315A	ug/l									50	U				
Freon 113	8260B	ug/l														
Freon 113a	8260B	ug/l														
Gamma-BHC (Lindane)	8081A	ug/l														
GRO (C5-C12)	8015B GRO	ug/l														
GRO (C5-C12)	8015M	ug/l									50	U				
Heptachlor	8081A	ug/l														
Heptachlor Epoxide	8081A	ug/l														
Hexachlorobenzene	8270C	ug/l									5	U				
Hexachlorobutadiene	8260B	ug/l														
Hexachlorobutadiene	8270C	ug/l									5	U				
Hexachlorocyclopentadiene	8270C	ug/l									14	U				
Hexachloroethane	8270C	ug/l									5	U				
HMX	8330A	ug/l									2.0	U				
Indeno(1,2,3-Cd)Pyrene	8270C	ug/l														
Indeno(1,2,3-Cd)Pyrene	8270C SIM	ug/l									0.049	U				
Iron	6010B	mg/l									0.200	U				
Iron	6020	mg/l														
Isophorone	8270C	ug/l									5	U				
Isopropylbenzene	8260B	ug/l														
Isopropyltoluene	8260B	ug/l														
Lead	6020	mg/l									0.000089	J				
Lithium	6010B	mg/l									0.0200	U				
Lithium	6020	mg/l														
m,p-Xylene	8260B	ug/l														
Magnesium	6010B	mg/l									0.100	U				
Magnesium	6020	mg/l														
Manganese	6010B	mg/l									0.0050	U				
Manganese	6020	mg/l														
MCPA	8151A	ug/l														
MCPP	8151A	ug/l														
m-Dinitrobenzene	8330A	ug/l									0.60	U				
Mercury	7470A	mg/l									0.00020	U				
Methanol	8015B	ug/l									1000	U				
Methoxychlor	8081A	ug/l														
Methyl tert-Butyl Ether	8260B	ug/l														
Methylene chloride	8260B	ug/l														
Mirex	8081A	ug/l														
Molybdenum	6020	mg/l									0.00050	U				
m-Terphenyl	8015B	mg/l									0.25	U				
Naphthalene	8270C	ug/l														
Naphthalene	8270C SIM	ug/l									0.060					
N-Butylbenzene	8260B	ug/l														
Nickel	6020	mg/l									0.0020	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Nitrate	300.0	mg/l									0.10	U				
Nitrobenzene	8270C	ug/l									5	U				
Nitrobenzene	8330A	ug/l									0.60	U				
Nitroglycerin	8330A	ug/l									15	U				
Nitroglycerin	8332	ug/l														
N-Nitrosodimethylamine	1625C	ng/l	0.589	J	1.02	UJ	3.0700000000	UJ	4.5000000000	U	4.6100000000	U			3.72	
N-Nitrosodimethylamine	8270C SIM	ug/l									0.049	U				
N-Nitroso-Di-N-Propylamine	8270C	ug/l									5	U				
N-Nitrosodiphenylamine	8270C	ug/l									5	U				
N-Propylbenzene	8260B	ug/l														
OCDD	1613B	pg/l									20.0	U				
OCDF	1613B	pg/l									20.0	U				
o-Terphenyl	8015B	mg/l									0.25	U				
o-Xylene	8260B	ug/l														
Pentachlorophenol	8270C	ug/l									14	U				
Perchlorate	314.0	ug/l									2.0	U				
PETN	8330A	ug/l									18	U				
PETN	8332	ug/l														
pH	9040B	pH unit									5.5					
pH	9040C	pH unit														
Phenanthrene	8270C	ug/l														
Phenanthrene	8270C SIM	ug/l									0.049	U				
Phenol	8270C	ug/l									5	U				
Phosphorus	6010B	mg/l									0.100	U				
Phosphorus	6020	mg/l														
Potassium	6010B	mg/l									0.500	U				
Potassium	6020	mg/l														
Propylene glycol	8015M	mg/l									200	U				
p-Terphenyl	8015B	mg/l									0.25	U				
Pyrene	8270C	ug/l														
Pyrene	8270C SIM	ug/l									0.049	U				
RDX	8330A	ug/l									1.7					
sec-Butylbenzene	8260B	ug/l														
Selenium	6020	mg/l									0.0020	U				
Silver	6020	mg/l									0.00050	U				
Sodium	6010B	mg/l									1.00	U				
Sodium	6020	mg/l														
Strontium	6010B	mg/l									0.00051	J				
Strontium	6020	mg/l														
Styrene	8260B	ug/l														
tert-Butylbenzene	8260B	ug/l														
Tetrachloroethene	8260B	ug/l														
Tetralin	8270C	ug/l									5	U				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-100711		EB-SA7-SB-101011		EB-SA7-SB-101111		EB-SA7-SB-101311		EB-SA7-SB-NDMA-101311		EB-SA7-SB-101811	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/07/2011		10/10/2011		10/11/2011		10/13/2011		10/13/2011		10/18/2011	
			Sample Type		EB		EB		EB		EB		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Tetryl	8330A	ug/l									0.60	U				
Thallium	6020	mg/l									0.00050	U				
Tin	6010B	mg/l									0.0200	U				
Tin	6020	mg/l														
Titanium	6010B	mg/l									0.0100	U				
Titanium	6020	mg/l														
Toluene	8260B	ug/l														
Toxaphene	8081A	ug/l														
trans-1,2-Dichloroethene	8260B	ug/l														
trans-1,3-Dichloropropene	8260B	ug/l														
Trichloroethene	8260B	ug/l														
Trichlorofluoromethane	8260B	ug/l														
Vanadium	6020	mg/l									0.00050	U				
Vinyl Chloride	8260B	ug/l														
Zinc	6020	mg/l									0.0056	J				
Zirconium	6010B	mg/l									0.0500	U				
Zirconium	6020	mg/l														

ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit
(a) Some SVOC results had two values - one for SVOC and one for SVOC SIM. The validators used the value with the lowest detection limit for validation purposes

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
			Sample Type		EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l	5	U									1.0	U		
1,1,1-Trichloroethane	8260B	ug/l	5	U									1.0	U		
1,1,2,2-Tetrachloroethane	8260B	ug/l	5	U									1.0	U		
1,1,2-Trichloroethane	8260B	ug/l	5	U									1.0	U		
1,1-Dichloroethane	8260B	ug/l	5	U									1.0	U		
1,1-Dichloroethene	8260B	ug/l	5	U									1.0	U		
1,1-Dichloropropene	8260B	ug/l	5	U									1.0	U		
1,2,3,4,6,7,8-HpCDD	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,4,6,7,8-HpCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,4,7,8,9-HpCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,4,7,8-HxCDD	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,4,7,8-HxCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,6,7,8-HxCDD	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,6,7,8-HxCDF	1613B	pg/l	10.6	U	0.961	J									0.262	J
1,2,3,7,8,9-HxCDD	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,7,8,9-HxCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,7,8-PeCDD	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3,7,8-PeCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
1,2,3-Trichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,2,3-Trichloropropane	8260B	ug/l	5	U									2.0	U		
1,2,4-Trichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,2,4-Trichlorobenzene	8270C	ug/l	5	U	5	U							9.8	U		
1,2,4-Trichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,2,4-Trimethylbenzene	8260B	ug/l	5	U									1.0	U		
1,2-Dibromo-3-chloropropane	8260B	ug/l	5	U									2.0	U		
1,2-Dibromoethane	8260B	ug/l	5	U									1.0	U		
1,2-Dichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,2-Dichlorobenzene	8270C	ug/l	5	U	5	U							9.8	U		
1,2-Dichloroethane	8260B	ug/l	5	U									1.0	U		
1,2-Dichloropropane	8260B	ug/l	5	U									1.0	U		
1,2-Diphenylhydrazine	8270C	ug/l	5	U	5	U							9.8	U		
1,3,5-Trimethylbenzene	8260B	ug/l	5	U									1.0	U		
1,3,5-Trinitrobenzene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
1,3-Dichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,3-Dichlorobenzene	8270C	ug/l	5	U	5	U							9.8	U		
1,3-Dichloropropane	8260B	ug/l	5	U									1.0	U		
1,4-Dichlorobenzene	8260B	ug/l	5	U									1.0	U		
1,4-Dichlorobenzene	8270C	ug/l	5	U	5	U							9.8	U		
1,4-Dioxane	8260B SIM	ug/l	2.0	U									4.0	U		
1-Methylnaphthalene	8270C	ug/l											9.8	U		
1-Methylnaphthalene	8270C SIM	ug/l	0.053	U	0.050	U										
2,2-Dichloropropane	8260B	ug/l	5	U									1.0	U		
2,2-Dichlor-Propionic Acid	8151A	ug/l														
2,3,4,6,7,8-HxCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U
2,3,4,7,8-PeCDF	1613B	pg/l	10.6	U	10.6	U									9.84	U

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
			Sample Type		EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
2,3,7,8-TCDD	1613B	pg/l	2.12	U	2.12	U									1.97	U
2,3,7,8-TCDF	1613B	pg/l	2.12	U	2.12	U									1.97	U
2,4 DB	8151A	ug/l														
2,4,5-T	8151A	ug/l														
2,4,5-TP	8151A	ug/l														
2,4,5-Trichlorophenol	8270C	ug/l	5	U	5	U							9.8	U		
2,4,6-Trichlorophenol	8270C	ug/l	5	U	5	U							9.8	U		
2,4,6-Trinitrotoluene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
2,4-D	8151A	ug/l														
2,4-Diamino-6-nitrotoluene	8330A	ug/l	0.60	U			0.60	U					2.0	U		
2,4-Dichlorophenol	8270C	ug/l	5	U	5	U							9.8	U		
2,4-Dimethylphenol	8270C	ug/l	10	U	11	U							9.8	U		
2,4-Dinitrophenol	8270C	ug/l	30	U	33	U							20	U		
2,4-Dinitrotoluene	8270C	ug/l	5	U	5	U							9.8	U		
2,4-Dinitrotoluene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
2,6-Diamino-4-nitrotoluene	8330A	ug/l	0.60	U			0.60	U					2.0	U		
2,6-Dinitrotoluene	8270C	ug/l	5	U	5	U							9.8	U		
2,6-Dinitrotoluene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
2-Amino-4,6-Dinitrotoluene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
2-Butanone	8260B	ug/l	10	U									10	U		
2-butoxy-Ethanol	8270C	ug/l	50	U	55	U							9.8	U		
2-Chloroethyl Vinyl Ether	8260B	ug/l	10	U									2.0	U		
2-Chloronaphthalene	8270C	ug/l	5	U	5	U							9.8	U		
2-Chlorophenol	8270C	ug/l	5	U	5	U							9.8	U		
2-Chlorotoluene	8260B	ug/l	5	U									1.0	U		
2-Hexanone	8260B	ug/l	10	U									10	U		
2-Methylnaphthalene	8270C	ug/l											9.8	U		
2-Methylnaphthalene	8270C SIM	ug/l	0.053	U	0.050	U										
2-Methylphenol	8270C	ug/l	5	U	5	U							9.8	U		
2-Nitroaniline	8270C	ug/l	5	U	5	U							9.8	U		
2-Nitrophenol	8270C	ug/l	5	U	5	U							9.8	U		
2-Nitrotoluene	8330A	ug/l	0.60	U			0.60	U					1.0	U		
2-phenoxy-Ethanol	8270C	ug/l	50	U	55	U							9.8	U		
2-Propanol	8015B	ug/l	1000	U			1000	UJ					1000	U		
3,3`-Dichlorobenzidine	8270C	ug/l	5	U	5	U							9.8	U		
3,5-Dimethylphenol	8270C	ug/l	10	U	11	U							20	U		
3-Nitroaniline	8270C	ug/l	5	U	5	U							9.8	U		
3-Nitrotoluene	8330A	ug/l	1.2	U			1.2	U					1.0	U		
4,4'-DDD	8081A	ug/l														
4,4'-DDE	8081A	ug/l														
4,4'-DDT	8081A	ug/l														
4,6-Dinitro-2-Methylphenol	8270C	ug/l	15	U	16	U							20	U		
4-Amino-2,6-Dinitrotoluene	8330A	ug/l	0.60	U			0.71						1.0	U		
4-Bromophenyl Phenyl Ether	8270C	ug/l	5	U	5	U							9.8	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
			Sample Type		EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
4-Chloro-3-Methylphenol	8270C	ug/l	5	U	5	U							9.8	U		
4-Chloroaniline	8270C	ug/l	5	U	5	U							9.8	U		
4-Chlorophenyl Phenylether	8270C	ug/l	5	U	5	U							9.8	U		
4-Chlorotoluene	8260B	ug/l	5	U									1.0	U		
4-Methyl-2-Pentanone	8260B	ug/l	10	U									10	U		
4-Methylphenol	8270C	ug/l	5	U	5	U							9.8	U		
4-Nitroaniline	8270C	ug/l	5	U	5	U							9.8	U		
4-Nitrophenol	8270C	ug/l	30	U	33	U							20	U		
4-Nitrotoluene	8330A	ug/l	1.2	U			1.2	U					1.0	U		
Acenaphthene	8270C	ug/l											9.8	U		
Acenaphthene	8270C SIM	ug/l	0.053	U	0.050	U										
Acenaphthylene	8270C	ug/l											9.8	U		
Acenaphthylene	8270C SIM	ug/l	0.053	U	0.050	U										
Acetone	8260B	ug/l	20	U									10	U		
Aldrin	8081A	ug/l														
Alpha-BHC	8081A	ug/l														
Aluminum	6010B	mg/l	0.200	U	0.200	U										
Aluminum	6020	mg/l											0.100	U		
Aniline	8270C	ug/l	5	U	5	U							20	U		
Anthracene	8270C	ug/l											9.8	U		
Anthracene	8270C SIM	ug/l	0.053	U	0.050	U										
Antimony	6020	mg/l	0.0010	U	0.0010	U							0.00100	U		
Aroclor 1016	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1221	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1232	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1242	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1248	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1254	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1260	8082	ug/l	0.55	U	0.50	U							1.1	U		
Aroclor 1262	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 1268	8082	ug/l	0.55	U	0.51	U							1.1	U		
Aroclor 5432	8082	ug/l	0.55	U	0.51	U							2.2	U		
Aroclor 5442	8082	ug/l	0.55	U	0.51	U							2.2	U		
Aroclor 5460	8082	ug/l	0.55	U	0.51	U							2.2	U		
Arsenic	6020	mg/l	0.0020	U	0.0020	U							0.00100	U		
Barium	6020	mg/l	0.0020	U	0.0020	U							0.00100	U		
Benzene	8260B	ug/l	5	U									1.0	U		
Benzidine	8270C	ug/l	60	U	65	U							49	U		
Benzo(a)anthracene	8270C	ug/l											9.8	U		
Benzo(a)anthracene	8270C SIM	ug/l	0.053	U	0.050	U										
Benzo(a)pyrene	8270C	ug/l											9.8	U		
Benzo(a)pyrene	8270C SIM	ug/l	0.053	U	0.050	U										
Benzo(b)fluoranthene	8270C	ug/l											9.8	U		
Benzo(b)fluoranthene	8270C SIM	ug/l	0.053	U	0.050	U										

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
			Sample Type		EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Benzo(g,h,i)perylene	8270C	ug/l											9.8	U		
Benzo(g,h,i)perylene	8270C SIM	ug/l	0.053	U	0.050	U										
Benzo(k)fluoranthene	8270C	ug/l											9.8	U		
Benzo(k)fluoranthene	8270C SIM	ug/l	0.053	U	0.050	U										
Benzoic Acid	8270C	ug/l	15	U	16	U							39	U		
Benzyl Alcohol	8270C	ug/l	15	U	16	U							9.8	U		
Beryllium	6020	mg/l	0.00050	U	0.00050	U							0.00100	U		
Beta-BHC	8081A	ug/l														
Bis(2-Chloroethoxy) methane	8270C	ug/l	5	U	5	U							9.8	U		
Bis(2-Chloroethyl) ether	8270C	ug/l	5	U	5	U							9.8	U		
bis(2-Chloroisopropyl) ether	8270C	ug/l	5	U	5	U							9.8	U		
Bis(2-Ethylhexyl) phthalate	8270C	ug/l											20	U		
Bis(2-Ethylhexyl) phthalate	8270C SIM	ug/l	0.16	J	1.0	U										
Boron	6010B	mg/l	0.0500	U	0.0500	U										
Boron	6020	mg/l											0.0100	U		
Bromobenzene	8260B	ug/l	5	U									1.0	U		
Bromochloromethane	8260B	ug/l	5	U									1.0	U		
Bromodichloromethane	8260B	ug/l	5	U									1.0	U		
Bromoform	8260B	ug/l	5	U									1.0	U		
Bromomethane	8260B	ug/l	5	U									1.0	U		
Butylbenzylphthalate	8270C	ug/l											9.8	U		
Butylbenzylphthalate	8270C SIM	ug/l	1.1	UJ	1.0	U										
Cadmium	6020	mg/l	0.00050	U	0.00050	U							0.00100	U		
Calcium	6010B	mg/l	0.200	U	0.200	U										
Calcium	6020	mg/l											0.100	U		
Carbazole	8270C	ug/l	5	U	5	U							9.8	U		
Carbon tetrachloride	8260B	ug/l	5	U									1.0	U		
Chlordane	8081A	ug/l														
Chlorobenzene	8260B	ug/l	5	U									1.0	U		
Chloroethane	8260B	ug/l	5	U									1.0	U		
Chloroform	8260B	ug/l	5	U									1.0	U		
Chloromethane	8260B	ug/l	5	U									1.0	U		
Chlorotrifluoroethene	8260B	ug/l	5	U									1.0	U		
Chromium	6020	mg/l	0.0020	U	0.0020	U							0.00100	U		
Chromium VI	7199	ug/l	10.0	U	10.0	UJ							0.200 0.200	U U		
Chrysene	8270C	ug/l											9.8	U		
Chrysene	8270C SIM	ug/l	0.053	U	0.050	U										
cis-1,2-Dichloroethene	8260B	ug/l	5	U									1.0	U		
cis-1,3-Dichloropropene	8260B	ug/l	5	U									1.0	U		
Cobalt	6020	mg/l	0.00050	U	0.00050	U							0.00100	U		
Copper	6020	mg/l	0.0020	U	0.0020	U							0.000561	J		
Cyanide	9012B	mg/l	0.010	U			0.010	U								
Cyanide	9014	mg/l											0.0100	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
			Location:		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
			Sample Date:		10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
			Sample Type		EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Delta-BHC	8081A	ug/l														
Dibenzo(a,h)anthracene	8270C	ug/l											9.8	U		
Dibenzo(a,h)anthracene	8270C SIM	ug/l	0.053	U	0.050	U										
Dibenzofuran	8270C	ug/l	5	U	5	U							9.8	U		
Dibromochloromethane	8260B	ug/l	5	U									1.0	U		
Dibromomethane	8260B	ug/l	5	U									1.0	U		
Dicamba	8151A	ug/l														
Dichlorodifluoromethane	8260B	ug/l	5	U									1.0	U		
Dichlorprop	8151A	ug/l														
Dieldrin	8081A	ug/l														
Diethylene Glycol	8015M	mg/l	200	U			200	U					10	U		
Diethylphthalate	8270C	ug/l											9.8	U		
Diethylphthalate	8270C SIM	ug/l	0.19	J	0.075	J										
Dimethylphthalate	8270C	ug/l											9.8	U		
Dimethylphthalate	8270C SIM	ug/l	1.1	UJ	1.0	U										
Di-n-Butylphthalate	8270C	ug/l											9.8	U		
Di-n-Butylphthalate	8270C SIM	ug/l	0.27	J	0.28	J										
Dinitrobutyl Phenol	8151A	ug/l														
Di-N-Octyl Phthalate	8270C	ug/l											9.8	U		
Di-N-Octyl Phthalate	8270C SIM	ug/l	1.1	U	1.0	U										
EFH (C12-C14)	8015B EFH	mg/l											0.51	U		
EFH (C12-C14)	8015M	mg/l	0.61	U			0.64	U								
EFH (C12-C14)	8015M	mg/l	0.61	U			0.64	U								
EFH (C15-C20)	8015B EFH	mg/l											0.51	U		
EFH (C15-C20)	8015M	mg/l	0.61	U			0.64	U								
EFH (C21-C30)	8015B EFH	mg/l											0.51	U		
EFH (C21-C30)	8015M	mg/l	0.61	U			0.64	U								
EFH (C30-C40)	8015B EFH	mg/l											0.51	U		
EFH (C30-C40)	8015M	mg/l	0.61	U			0.64	U								
EFH (C8-C11)	8015B EFH	mg/l											0.51	U		
EFH (C8-C11)	8015M	mg/l	0.61	U			0.64	U								
Endosulfan I	8081A	ug/l														
Endosulfan II	8081A	ug/l														
Endosulfan Sulfate	8081A	ug/l														
Endrin	8081A	ug/l														
Endrin Aldehyde	8081A	ug/l														
Endrin Ketone	8081A	ug/l														
Ethanol	8015B	ug/l	1000	U			1000	UJ					1000	U		
Ethylbenzene	8260B	ug/l	5	U									1.0	U		
Ethylene Glycol	8015M	mg/l	200	UJ			200	UJ					10	U		
Fluoranthene	8270C	ug/l											9.8	U		
Fluoranthene	8270C SIM	ug/l	0.053	U	0.050	U										
Fluorene	8270C	ug/l											9.8	U		
Fluorene	8270C SIM	ug/l	0.053	U	0.050	U										
Fluoride	300.0	mg/l	0.10	U	0.10	U							0.100	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

	Sample Name:	EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
	Location:	EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
	Sample Date:	10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
	Sample Type	EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Formaldehyde	8315A	ug/l	50	U			50	U					50	U
Freon 113	8260B	ug/l	10	U							1.0	U		
Freon 113a	8260B	ug/l	5	U							1.0	U		
Gamma-BHC (Lindane)	8081A	ug/l												
GRO (C5-C12)	8015B GRO	ug/l									50	U		
GRO (C5-C12)	8015M	ug/l	50	U			50	U						
Heptachlor	8081A	ug/l												
Heptachlor Epoxide	8081A	ug/l												
Hexachlorobenzene	8270C	ug/l	5	U	5	U					9.8	U		
Hexachlorobutadiene	8260B	ug/l	5	U							1.0	U		
Hexachlorobutadiene	8270C	ug/l	5	U	5	U					9.8	U		
Hexachlorocyclopentadiene	8270C	ug/l	15	U	16	U					20	U		
Hexachloroethane	8270C	ug/l	5	U	5	U					9.8	U		
HMX	8330A	ug/l	2.0	U			2.0	U			1.0	U		
Indeno(1,2,3-Cd)Pyrene	8270C	ug/l									9.8	U		
Indeno(1,2,3-Cd)Pyrene	8270C SIM	ug/l	0.053	U	0.050	U								
Iron	6010B	mg/l	0.200	U	0.0424	J								
Iron	6020	mg/l									0.100	U		
Isophorone	8270C	ug/l	5	U	5	U					9.8	U		
Isopropylbenzene	8260B	ug/l	5	U							1.0	U		
Isopropyltoluene	8260B	ug/l	5	U							1.0	U		
Lead	6020	mg/l	0.00012	J	0.0010	U					0.00100	U		
Lithium	6010B	mg/l	0.0200	U	0.0200	U								
Lithium	6020	mg/l									0.00200	U		
m,p-Xylene	8260B	ug/l	5	U							2.0	U		
Magnesium	6010B	mg/l	0.100	U	0.100	U								
Magnesium	6020	mg/l									0.100	U		
Manganese	6010B	mg/l	0.0050	U	0.00052	J								
Manganese	6020	mg/l									0.00100	U		
MCPA	8151A	ug/l												
MCPP	8151A	ug/l												
m-Dinitrobenzene	8330A	ug/l	0.60	U			0.60	U			1.0	U		
Mercury	7470A	mg/l	0.00020	U	0.00020	U					0.000500	U		
Methanol	8015B	ug/l	1000	U			1000	UJ			1000	U		
Methoxychlor	8081A	ug/l												
Methyl tert-Butyl Ether	8260B	ug/l	5	U							0.40	J		
Methylene chloride	8260B	ug/l	5								2.8			
Mirex	8081A	ug/l												
Molybdenum	6020	mg/l	0.00050	U	0.00050	U					0.00200	U		
m-Terphenyl	8015B	mg/l	0.27	U			0.27	U					0.25	UJ
Naphthalene	8270C	ug/l									9.8	U		
Naphthalene	8270C SIM	ug/l	0.039	J	0.037	J								
N-Butylbenzene	8260B	ug/l	5	U							1.0	U		
Nickel	6020	mg/l	0.0020	U	0.0020	U					0.00100	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

	Sample Name:	EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
	Location:	EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
	Sample Date:	10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
	Sample Type	EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Nitrate	300.0	mg/l	0.10	U			0.10	U			0.443	U		
Nitrobenzene	8270C	ug/l	5	U	5	U					9.8	U		
Nitrobenzene	8330A	ug/l	0.60	U			0.60	U			1.0	U		
Nitroglycerin	8330A	ug/l	15	U			15	U						
Nitroglycerin	8332	ug/l									250	U		
N-Nitrosodimethylamine	1625C	ng/l	4.5500000000 3.6600000000	U U			2.02		1.69				1.59	J
N-Nitrosodimethylamine	8270C SIM	ug/l	0.053	U	0.050	U								
N-Nitroso-Di-N-Propylamine	8270C	ug/l	5	U	5	U					9.8	U		
N-Nitrosodiphenylamine	8270C	ug/l	5	U	5	U					9.8	U		
N-Propylbenzene	8260B	ug/l	5	U							1.0	U		
OCDD	1613B	pg/l	21.2	U	21.2	U							19.7	U
OCDF	1613B	pg/l	21.2	U	21.2	U							19.7	U
o-Terphenyl	8015B	mg/l	0.27	U			0.27	U					0.25	UJ
o-Xylene	8260B	ug/l	5	U							1.0	U		
Pentachlorophenol	8270C	ug/l	15	U	16	U					20	U		
Perchlorate	314.0	ug/l	2.0	U	2.0	U					2.00	U		
PETN	8330A	ug/l	18	U			18	U						
PETN	8332	ug/l									250	U		
pH	9040B	pH unit	5.5		5.7									
pH	9040C	pH unit									5.52			
Phenanthrene	8270C	ug/l									9.8	U		
Phenanthrene	8270C SIM	ug/l	0.053	U	0.050	U								
Phenol	8270C	ug/l	5	U	5	U					9.8	U		
Phosphorus	6010B	mg/l	0.0055	J	0.100	U								
Phosphorus	6020	mg/l									0.0500	U		
Potassium	6010B	mg/l	0.500	U	0.500	U								
Potassium	6020	mg/l									0.100	U		
Propylene glycol	8015M	mg/l	200	UJ			200	UJ			10	U		
p-Terphenyl	8015B	mg/l	0.27	U			0.27	U					0.25	UJ
Pyrene	8270C	ug/l									9.8	U		
Pyrene	8270C SIM	ug/l	0.053	U	0.050	U								
RDX	8330A	ug/l	0.99	NJ			2.1				1.0	U		
sec-Butylbenzene	8260B	ug/l	5	U							1.0	U		
Selenium	6020	mg/l	0.0020	U	0.0020	U					0.00100	U		
Silver	6020	mg/l	0.00050	U	0.00050	U					0.00100	U		
Sodium	6010B	mg/l	1.00	U	1.00	U								
Sodium	6020	mg/l									0.100	U		
Strontium	6010B	mg/l	0.0050	U	0.0050	U								
Strontium	6020	mg/l									0.00200	U		
Styrene	8260B	ug/l	5	U							1.0	U		
tert-Butylbenzene	8260B	ug/l	5	U							1.0	U		
Tetrachloroethene	8260B	ug/l	5	U							1.0	U		
Tetralin	8270C	ug/l	5	U	5	U					9.8	U		

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

	Sample Name:	EB-SA7-SB-101911		EB-SA7-SB-102611		EB-SA7-SB-102711		EB-SA7-SB-103111		EB-SA7-SB-110311S		EB-SA7-SB-110311	
	Location:	EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7		EB-SA7	
	Sample Date:	10/19/2011		10/26/2011		10/27/2011		10/31/2011		11/03/2011		11/03/2011	
	Sample Type	EB		EB		EB		EB		EB Split		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Tetryl	8330A	ug/l	0.60	U			0.60	U			1.0	U		
Thallium	6020	mg/l	0.00050	U	0.00050	U					0.00100	U		
Tin	6010B	mg/l	0.0200	U	0.0200	U								
Tin	6020	mg/l									0.00100	U		
Titanium	6010B	mg/l	0.0100	U	0.0100	U								
Titanium	6020	mg/l									0.00200	U		
Toluene	8260B	ug/l	5	U							1.0	U		
Toxaphene	8081A	ug/l												
trans-1,2-Dichloroethene	8260B	ug/l	5	U							1.0	U		
trans-1,3-Dichloropropene	8260B	ug/l	5	U							1.0	U		
Trichloroethene	8260B	ug/l	5	U							1.0	U		
Trichlorofluoromethane	8260B	ug/l	5	U							1.0	U		
Vanadium	6020	mg/l	0.00050	U	0.00050	U					0.00100	U		
Vinyl Chloride	8260B	ug/l	5	U							1.0	U		
Zinc	6020	mg/l	0.0150	U	0.0150	U					0.0200	U		
Zirconium	6010B	mg/l	0.0500	U	0.0500	U								
Zirconium	6020	mg/l									0.00500	U		

ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit
(a) Some SVOC results had two values - one for SVOC and one for SVOC SIM. The validators used the value with the lowest detection limit for validation purposes

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer		
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3,4,6,7,8-HpCDD	1613B	pg/l						
1,2,3,4,6,7,8-HpCDF	1613B	pg/l						
1,2,3,4,7,8,9-HpCDF	1613B	pg/l						
1,2,3,4,7,8-HxCDD	1613B	pg/l						
1,2,3,4,7,8-HxCDF	1613B	pg/l						
1,2,3,6,7,8-HxCDD	1613B	pg/l						
1,2,3,6,7,8-HxCDF	1613B	pg/l						
1,2,3,7,8,9-HxCDD	1613B	pg/l						
1,2,3,7,8,9-HxCDF	1613B	pg/l						
1,2,3,7,8-PeCDD	1613B	pg/l						
1,2,3,7,8-PeCDF	1613B	pg/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trichlorobenzene	8270C	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trichlorobenzene	8270C	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichlorobenzene	8270C	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,2-Diphenylhydrazine	8270C	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3,5-Trinitrobenzene	8330A	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichlorobenzene	8270C	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dichlorobenzene	8270C	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
1-Methylnaphthalene	8270C	ug/l						
1-Methylnaphthalene	8270C SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2,2-Dichlor-Propionic Acid	8151A	ug/l						
2,3,4,6,7,8-HxCDF	1613B	pg/l						
2,3,4,7,8-PeCDF	1613B	pg/l						

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
2,3,7,8-TCDD	1613B	pg/l				
2,3,7,8-TCDF	1613B	pg/l				
2,4 DB	8151A	ug/l				
2,4,5-T	8151A	ug/l				
2,4,5-TP	8151A	ug/l				
2,4,5-Trichlorophenol	8270C	ug/l				
2,4,6-Trichlorophenol	8270C	ug/l				
2,4,6-Trinitrotoluene	8330A	ug/l				
2,4-D	8151A	ug/l				
2,4-Diamino-6-nitrotoluene	8330A	ug/l				
2,4-Dichlorophenol	8270C	ug/l				
2,4-Dimethylphenol	8270C	ug/l				
2,4-Dinitrophenol	8270C	ug/l				
2,4-Dinitrotoluene	8270C	ug/l				
2,4-Dinitrotoluene	8330A	ug/l				
2,6-Diamino-4-nitrotoluene	8330A	ug/l				
2,6-Dinitrotoluene	8270C	ug/l				
2,6-Dinitrotoluene	8330A	ug/l				
2-Amino-4,6-Dinitrotoluene	8330A	ug/l				
2-Butanone	8260B	ug/l				
2-butoxy-Ethanol	8270C	ug/l				
2-Chloroethyl Vinyl Ether	8260B	ug/l				
2-Chloronaphthalene	8270C	ug/l				
2-Chlorophenol	8270C	ug/l				
2-Chlorotoluene	8260B	ug/l				
2-Hexanone	8260B	ug/l				
2-Methylnaphthalene	8270C	ug/l				
2-Methylnaphthalene	8270C SIM	ug/l				
2-Methylphenol	8270C	ug/l				
2-Nitroaniline	8270C	ug/l				
2-Nitrophenol	8270C	ug/l				
2-Nitrotoluene	8330A	ug/l				
2-phenoxy-Ethanol	8270C	ug/l				
2-Propanol	8015B	ug/l				
3,3`-Dichlorobenzidine	8270C	ug/l				
3,5-Dimethylphenol	8270C	ug/l				
3-Nitroaniline	8270C	ug/l				
3-Nitrotoluene	8330A	ug/l				
4,4'-DDD	8081A	ug/l				
4,4'-DDE	8081A	ug/l				
4,4'-DDT	8081A	ug/l				
4,6-Dinitro-2-Methylphenol	8270C	ug/l				
4-Amino-2,6-Dinitrotoluene	8330A	ug/l				
4-Bromophenyl Phenyl Ether	8270C	ug/l				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
4-Chloro-3-Methylphenol	8270C	ug/l				
4-Chloroaniline	8270C	ug/l				
4-Chlorophenyl Phenylether	8270C	ug/l				
4-Chlorotoluene	8260B	ug/l				
4-Methyl-2-Pentanone	8260B	ug/l				
4-Methylphenol	8270C	ug/l				
4-Nitroaniline	8270C	ug/l				
4-Nitrophenol	8270C	ug/l				
4-Nitrotoluene	8330A	ug/l				
Acenaphthene	8270C	ug/l				
Acenaphthene	8270C SIM	ug/l				
Acenaphthylene	8270C	ug/l				
Acenaphthylene	8270C SIM	ug/l				
Acetone	8260B	ug/l				
Aldrin	8081A	ug/l				
Alpha-BHC	8081A	ug/l				
Aluminum	6010B	mg/l				
Aluminum	6020	mg/l				
Aniline	8270C	ug/l				
Anthracene	8270C	ug/l				
Anthracene	8270C SIM	ug/l				
Antimony	6020	mg/l				
Aroclor 1016	8082	ug/l				
Aroclor 1221	8082	ug/l				
Aroclor 1232	8082	ug/l				
Aroclor 1242	8082	ug/l				
Aroclor 1248	8082	ug/l				
Aroclor 1254	8082	ug/l				
Aroclor 1260	8082	ug/l				
Aroclor 1262	8082	ug/l				
Aroclor 1268	8082	ug/l				
Aroclor 5432	8082	ug/l				
Aroclor 5442	8082	ug/l				
Aroclor 5460	8082	ug/l				
Arsenic	6020	mg/l				
Barium	6020	mg/l				
Benzene	8260B	ug/l				
Benzidine	8270C	ug/l				
Benzo(a)anthracene	8270C	ug/l				
Benzo(a)anthracene	8270C SIM	ug/l				
Benzo(a)pyrene	8270C	ug/l				
Benzo(a)pyrene	8270C SIM	ug/l				
Benzo(b)fluoranthene	8270C	ug/l				
Benzo(b)fluoranthene	8270C SIM	ug/l				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer		
Benzo(g,h,i)perylene	8270C	ug/l						
Benzo(g,h,i)perylene	8270C SIM	ug/l						
Benzo(k)fluoranthene	8270C	ug/l						
Benzo(k)fluoranthene	8270C SIM	ug/l						
Benzoic Acid	8270C	ug/l						
Benzyl Alcohol	8270C	ug/l						
Beryllium	6020	mg/l						
Beta-BHC	8081A	ug/l						
Bis(2-Chloroethoxy) methane	8270C	ug/l						
Bis(2-Chloroethyl) ether	8270C	ug/l						
bis(2-Chloroisopropyl) ether	8270C	ug/l						
Bis(2-Ethylhexyl) phthalate	8270C	ug/l						
Bis(2-Ethylhexyl) phthalate	8270C SIM	ug/l						
Boron	6010B	mg/l						
Boron	6020	mg/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Butylbenzylphthalate	8270C	ug/l						
Butylbenzylphthalate	8270C SIM	ug/l						
Butylbenzylphthalate	8270C	ug/l						
Butylbenzylphthalate	8270C SIM	ug/l						
Cadmium	6020	mg/l						
Calcium	6010B	mg/l						
Calcium	6020	mg/l						
Carbazole	8270C	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlordane	8081A	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
Chromium	6020	mg/l						
Chromium VI	7199	ug/l						
Chrysene	8270C	ug/l						
Chrysene	8270C SIM	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Cobalt	6020	mg/l						
Copper	6020	mg/l						
Cyanide	9012B	mg/l						
Cyanide	9014	mg/l						

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer		
Delta-BHC	8081A	ug/l						
Dibenzo(a,h)anthracene	8270C	ug/l						
Dibenzo(a,h)anthracene	8270C SIM	ug/l						
Dibenzofuran	8270C	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dicamba	8151A	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Dichlorprop	8151A	ug/l						
Dieldrin	8081A	ug/l						
Diethylene Glycol	8015M	mg/l						
Diethylphthalate	8270C	ug/l						
Diethylphthalate	8270C SIM	ug/l						
Dimethylphthalate	8270C	ug/l						
Dimethylphthalate	8270C SIM	ug/l						
Di-n-Butylphthalate	8270C	ug/l						
Di-n-Butylphthalate	8270C SIM	ug/l						
Dinitrobutyl Phenol	8151A	ug/l						
Di-N-Octyl Phthalate	8270C	ug/l						
Di-N-Octyl Phthalate	8270C SIM	ug/l						
EFH (C12-C14)	8015B EFH	mg/l						
EFH (C12-C14)	8015M	mg/l						
EFH (C15-C20)	8015B EFH	mg/l						
EFH (C15-C20)	8015M	mg/l						
EFH (C21-C30)	8015B EFH	mg/l						
EFH (C21-C30)	8015M	mg/l						
EFH (C30-C40)	8015B EFH	mg/l						
EFH (C30-C40)	8015M	mg/l						
EFH (C8-C11)	8015B EFH	mg/l						
EFH (C8-C11)	8015M	mg/l						
Endosulfan I	8081A	ug/l						
Endosulfan II	8081A	ug/l						
Endosulfan Sulfate	8081A	ug/l						
Endrin	8081A	ug/l						
Endrin Aldehyde	8081A	ug/l						
Endrin Ketone	8081A	ug/l						
Ethanol	8015B	ug/l						
Ethylbenzene	8260B	ug/l						
Ethylene Glycol	8015M	mg/l						
Fluoranthene	8270C	ug/l						
Fluoranthene	8270C SIM	ug/l						
Fluorene	8270C	ug/l						
Fluorene	8270C SIM	ug/l						
Fluoride	300.0	mg/l						

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
Formaldehyde	8315A	ug/l				
Freon 113	8260B	ug/l				
Freon 113a	8260B	ug/l				
Gamma-BHC (Lindane)	8081A	ug/l				
GRO (C5-C12)	8015B GRO	ug/l				
GRO (C5-C12)	8015M	ug/l				
Heptachlor	8081A	ug/l				
Heptachlor Epoxide	8081A	ug/l				
Hexachlorobenzene	8270C	ug/l				
Hexachlorobutadiene	8260B	ug/l				
Hexachlorobutadiene	8270C	ug/l				
Hexachlorocyclopentadiene	8270C	ug/l				
Hexachloroethane	8270C	ug/l				
HMX	8330A	ug/l				
Indeno(1,2,3-Cd)Pyrene	8270C	ug/l				
Indeno(1,2,3-Cd)Pyrene	8270C SIM	ug/l				
Iron	6010B	mg/l				
Iron	6020	mg/l				
Isophorone	8270C	ug/l				
Isopropylbenzene	8260B	ug/l				
Isopropyltoluene	8260B	ug/l				
Lead	6020	mg/l				
Lithium	6010B	mg/l				
Lithium	6020	mg/l				
m,p-Xylene	8260B	ug/l				
Magnesium	6010B	mg/l				
Magnesium	6020	mg/l				
Manganese	6010B	mg/l				
Manganese	6020	mg/l				
MCPA	8151A	ug/l				
MCPP	8151A	ug/l				
m-Dinitrobenzene	8330A	ug/l				
Mercury	7470A	mg/l				
Methanol	8015B	ug/l				
Methoxychlor	8081A	ug/l				
Methyl tert-Butyl Ether	8260B	ug/l				
Methylene chloride	8260B	ug/l				
Mirex	8081A	ug/l				
Molybdenum	6020	mg/l				
m-Terphenyl	8015B	mg/l				
Naphthalene	8270C	ug/l				
Naphthalene	8270C SIM	ug/l				
N-Butylbenzene	8260B	ug/l				
Nickel	6020	mg/l				

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer		
Nitrate	300.0	mg/l						
Nitrobenzene	8270C	ug/l						
Nitrobenzene	8330A	ug/l						
Nitroglycerin	8330A	ug/l						
Nitroglycerin	8332	ug/l						
N-Nitrosodimethylamine	1625C	ng/l	1.53	J	1.66	J		
N-Nitrosodimethylamine	8270C SIM	ug/l						
N-Nitroso-Di-N-Propylamine	8270C	ug/l						
N-Nitrosodiphenylamine	8270C	ug/l						
N-Propylbenzene	8260B	ug/l						
OCDD	1613B	pg/l						
OCDF	1613B	pg/l						
o-Terphenyl	8015B	mg/l						
o-Xylene	8260B	ug/l						
Pentachlorophenol	8270C	ug/l						
Perchlorate	314.0	ug/l						
PETN	8330A	ug/l						
PETN	8332	ug/l						
pH	9040B	pH unit						
pH	9040C	pH unit						
Phenanthrene	8270C	ug/l						
Phenanthrene	8270C SIM	ug/l						
Phenol	8270C	ug/l						
Phosphorus	6010B	mg/l						
Phosphorus	6020	mg/l						
Potassium	6010B	mg/l						
Potassium	6020	mg/l						
Propylene glycol	8015M	mg/l						
p-Terphenyl	8015B	mg/l						
Pyrene	8270C	ug/l						
Pyrene	8270C SIM	ug/l						
RDX	8330A	ug/l						
sec-Butylbenzene	8260B	ug/l						
Selenium	6020	mg/l						
Silver	6020	mg/l						
Sodium	6010B	mg/l						
Sodium	6020	mg/l						
Strontium	6010B	mg/l						
Strontium	6020	mg/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Tetralin	8270C	ug/l						

Table C-2 - Subarea 7 Equipment Rinsate Blank Results

			Sample Name:		EB-SA7-SB-NDMA-110311		EB-SA7-SB-110411	
			Location:		EB-SA7		EB-SA7	
			Sample Date:		11/03/2011		11/04/2011	
			Sample Type		EB		EB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer		
Tetryl	8330A	ug/l						
Thallium	6020	mg/l						
Tin	6010B	mg/l						
Tin	6020	mg/l						
Titanium	6010B	mg/l						
Titanium	6020	mg/l						
Toluene	8260B	ug/l						
Toxaphene	8081A	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vanadium	6020	mg/l						
Vinyl Chloride	8260B	ug/l						
Zinc	6020	mg/l						
Zirconium	6010B	mg/l						
Zirconium	6020	mg/l						

ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit
(a) Some SVOC results had two values - one for SVOC and one for SVOC SIM. The validators used the value with the lowest detection limit for validation purposes

Table C-3 - Subarea 7 Field Blank Results

			Sample Name:		FB-SA7-102611		FB-SA7-110111		FB-SA7-SB-093011	
			Location:		FB-SA7		FB-SA7		FB-SA7	
			Sample Date:		10/26/2011		11/01/2011		09/30/2011	
			Sample Type		FB		FB		FB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer		
1,1,1,2-Tetrachloroethane	8260B	ug/l	5	U	1.0	U				
1,1,1-Trichloroethane	8260B	ug/l	5	U	1.0	U				
1,1,2,2-Tetrachloroethane	8260B	ug/l	5	U	1.0	U				
1,1,2-Trichloroethane	8260B	ug/l	5	U	1.0	U				
1,1-Dichloroethane	8260B	ug/l	5	U	1.0	U				
1,1-Dichloroethene	8260B	ug/l	5	U	1.0	U				
1,1-Dichloropropene	8260B	ug/l	5	U	1.0	U				
1,2,3,4,6,7,8-HpCDD	1613B	pg/l	10.4	U						
1,2,3,4,6,7,8-HpCDF	1613B	pg/l	10.4	U						
1,2,3,4,7,8,9-HpCDF	1613B	pg/l	10.4	U						
1,2,3,4,7,8-HxCDD	1613B	pg/l	0.251	J						
1,2,3,4,7,8-HxCDF	1613B	pg/l	10.4	U						
1,2,3,6,7,8-HxCDD	1613B	pg/l	10.4	U						
1,2,3,6,7,8-HxCDF	1613B	pg/l	0.219	J						
1,2,3,7,8,9-HxCDD	1613B	pg/l	10.4	U						
1,2,3,7,8,9-HxCDF	1613B	pg/l	10.4	U						
1,2,3,7,8-PeCDD	1613B	pg/l	10.4	U						
1,2,3,7,8-PeCDF	1613B	pg/l	10.4	U						
1,2,3-Trichlorobenzene	8260B	ug/l	5	U	1.0	U				
1,2,3-Trichloropropane	8260B	ug/l	5	U	2.0	U				
1,2,4-Trichlorobenzene	8260B	ug/l	5	U	1.0	U				
1,2,4-Trichlorobenzene	8270C	ug/l	6	U	11	U				
1,2,4-Trimethylbenzene	8260B	ug/l	5	U	1.0	U				
1,2-Dibromo-3-chloropropane	8260B	ug/l	5	U	2.0	U				
1,2-Dibromoethane	8260B	ug/l	5	U	1.0	U				
1,2-Dichlorobenzene	8260B	ug/l	5	U	1.0	U				
1,2-Dichlorobenzene	8270C	ug/l	6	U	11	U				
1,2-Dichloroethane	8260B	ug/l	5	U	1.0	U				
1,2-Dichloropropane	8260B	ug/l	5	U	1.0	U				
1,2-Diphenylhydrazine	8270C	ug/l	6	U	11	U				
1,3,5-Trimethylbenzene	8260B	ug/l	5	U	1.0	U				
1,3,5-Trinitrobenzene	8330A	ug/l	0.60	U	1.0	U				
1,3-Dichlorobenzene	8260B	ug/l	5	U	1.0	U				
1,3-Dichlorobenzene	8270C	ug/l	6	U	11	U				
1,3-Dichloropropane	8260B	ug/l	5	U	1.0	U				
1,4-Dichlorobenzene	8260B	ug/l	5	U	1.0	U				
1,4-Dichlorobenzene	8270C	ug/l	6	U	11	U				
1,4-Dioxane	8260B SIM	ug/l	2.0	U	4.0	U				
1-Methylnaphthalene	8270C	ug/l			11	U				
1-Methylnaphthalene	8270C SIM	ug/l	0.049	U						
2,2-Dichloropropane	8260B	ug/l	5	U	1.0	U				
2,2-Dichlor-Propionic Acid	8151A	ug/l	1.4	U						
2,3,4,6,7,8-HxCDF	1613B	pg/l	10.4	U						
2,3,4,7,8-PeCDF	1613B	pg/l	10.4	U						
2,3,7,8-TCDD	1613B	pg/l	2.09	U						
2,3,7,8-TCDF	1613B	pg/l	2.09	U						
2,4 DB	8151A	ug/l	1.1	U						
2,4,5-T	8151A	ug/l	0.054	U						
2,4,5-TP	8151A	ug/l	0.054	U						
2,4,5-Trichlorophenol	8270C	ug/l	6	U	11	U				
2,4,6-Trichlorophenol	8270C	ug/l	6	U	11	U				
2,4,6-Trinitrotoluene	8330A	ug/l	0.60	U	1.0	U				
2,4-D	8151A	ug/l	0.54	U						
2,4-Diamino-6-nitrotoluene	8330A	ug/l	0.60	U	2.0	U				
2,4-Dichlorophenol	8270C	ug/l	6	U	11	U				
2,4-Dimethylphenol	8270C	ug/l	11	U	11	U				
2,4-Dinitrophenol	8270C	ug/l	33	U	22	U				
2,4-Dinitrotoluene	8270C	ug/l	6	U	11	U				
2,4-Dinitrotoluene	8330A	ug/l	0.60	U	1.0	U				
2,6-Diamino-4-nitrotoluene	8330A	ug/l	0.60	U	2.0	U				
2,6-Dinitrotoluene	8270C	ug/l	6	U	11	U				
2,6-Dinitrotoluene	8330A	ug/l	0.60	U	1.0	U				
2-Amino-4,6-Dinitrotoluene	8330A	ug/l	0.60	U	1.0	U				
2-Butanone	8260B	ug/l	10	U	10	U				
2-butoxy-Ethanol	8270C	ug/l	55	U	11	U				
2-Chloroethyl Vinyl Ether	8260B	ug/l	10	U	2.0	U				
2-Chloronaphthalene	8270C	ug/l	6	U	11	U				
2-Chlorophenol	8270C	ug/l	6	U	11	U				
2-Chlorotoluene	8260B	ug/l	5	U	1.0	U				
2-Hexanone	8260B	ug/l	10	U	10	U				
2-Methylnaphthalene	8270C	ug/l			11	U				
2-Methylnaphthalene	8270C SIM	ug/l	0.049	U						
2-Methylphenol	8270C	ug/l	6	U	11	U				
2-Nitroaniline	8270C	ug/l	6	U	11	U				
2-Nitrophenol	8270C	ug/l	6	U	11	U				
2-Nitrotoluene	8330A	ug/l	0.60	U	1.0	U				
2-phenoxy-Ethanol	8270C	ug/l	55	U	11	U				
2-Propanol	8015B	ug/l	1000	UJ	1000	U				

Table C-3 - Subarea 7 Field Blank Results

			Sample Name:		FB-SA7-102611		FB-SA7-110111		FB-SA7-SB-093011	
			Location:		FB-SA7		FB-SA7		FB-SA7	
			Sample Date:		10/26/2011		11/01/2011		09/30/2011	
			Sample Type		FB		FB		FB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer		
3,3`-Dichlorobenzidine	8270C	ug/l	6	U	11	U				
3,5-Dimethylphenol	8270C	ug/l	11	U	22	U				
3-Nitroaniline	8270C	ug/l	6	U	11	U				
3-Nitrotoluene	8330A	ug/l	1.2	U	1.0	U				
4,4'-DDD	8081A	ug/l	0.051	U						
4,4'-DDE	8081A	ug/l	0.051	U						
4,4'-DDT	8081A	ug/l	0.051	U						
4,6-Dinitro-2-Methylphenol	8270C	ug/l	17	U	22	U				
4-Amino-2,6-Dinitrotoluene	8330A	ug/l	0.60	U	1.0	U				
4-Bromophenyl Phenyl Ether	8270C	ug/l	6	U	11	U				
4-Chloro-3-Methylphenol	8270C	ug/l	6	U	11	U				
4-Chloroaniline	8270C	ug/l	6	U	11	U				
4-Chlorophenyl Phenylether	8270C	ug/l	6	U	11	U				
4-Chlorotoluene	8260B	ug/l	5	U	1.0	U				
4-Methyl-2-Pentanone	8260B	ug/l	10	U	10	U				
4-Methylphenol	8270C	ug/l	6	U	11	U				
4-Nitroaniline	8270C	ug/l	6	U	11	U				
4-Nitrophenol	8270C	ug/l	33	U	22	U				
4-Nitrotoluene	8330A	ug/l	1.2	U	1.0	U				
Acenaphthene	8270C	ug/l			11	U				
Acenaphthene	8270C SIM	ug/l	0.049	U						
Acenaphthylene	8270C	ug/l			11	U				
Acenaphthylene	8270C SIM	ug/l	0.049	U						
Acetone	8260B	ug/l	20	U	10	U				
Aldrin	8081A	ug/l	0.026	U						
Alpha-BHC	8081A	ug/l	0.026	U						
Aluminum	6010B	mg/l	0.200	U						
Aluminum	6020	mg/l			0.100	U				
Aniline	8270C	ug/l	6	U	22	U				
Anthracene	8270C	ug/l			11	U				
Anthracene	8270C SIM	ug/l	0.049	U						
Antimony	6020	mg/l	0.0010	U	0.00100	U				
Aroclor 1016	8082	ug/l	0.49	U	1.1	U				
Aroclor 1221	8082	ug/l	0.49	U	1.1	U				
Aroclor 1232	8082	ug/l	0.49	U	1.1	U				
Aroclor 1242	8082	ug/l	0.49	U	1.1	U				
Aroclor 1248	8082	ug/l	0.49	U	1.1	U				
Aroclor 1254	8082	ug/l	0.49	U	1.1	U				
Aroclor 1260	8082	ug/l	0.49	U	1.1	U				
Aroclor 1262	8082	ug/l	0.49	U	1.1	U				
Aroclor 1268	8082	ug/l	0.49	U	1.1	U				
Aroclor 5432	8082	ug/l	0.49	U	2.2	U				
Aroclor 5442	8082	ug/l	0.49	U	2.2	U				
Aroclor 5460	8082	ug/l	0.49	U	2.2	U				
Arsenic	6020	mg/l	0.0020	U	0.00100	U				
Barium	6020	mg/l	0.0020	U	0.00100	U				
Benzene	8260B	ug/l	5	U	1.0	U				
Benzidine	8270C	ug/l	66	U	54	U				
Benzo(a)anthracene	8270C	ug/l			11	U				
Benzo(a)anthracene	8270C SIM	ug/l	0.049	U						
Benzo(a)pyrene	8270C	ug/l			11	U				
Benzo(a)pyrene	8270C SIM	ug/l	0.049	U						
Benzo(b)fluoranthene	8270C	ug/l			11	U				
Benzo(b)fluoranthene	8270C SIM	ug/l	0.049	U						
Benzo(g,h,i)perylene	8270C	ug/l			11	U				
Benzo(g,h,i)perylene	8270C SIM	ug/l	0.049	U						
Benzo(k)fluoranthene	8270C	ug/l			11	U				
Benzo(k)fluoranthene	8270C SIM	ug/l	0.049	U						
Benzoic Acid	8270C	ug/l	17	U	44	U				
Benzyl Alcohol	8270C	ug/l	17	U	11	U				
Beryllium	6020	mg/l	0.00050	U	0.00100	U				
Beta-BHC	8081A	ug/l	0.026	U						
Bis(2-Chloroethoxy) methane	8270C	ug/l	6	U	11	U				
Bis(2-Chloroethyl) ether	8270C	ug/l	6	U	11	U				
bis(2-Chloroisopropyl) ether	8270C	ug/l	6	U	11	U				
Bis(2-Ethylhexyl) phthalate	8270C	ug/l			22	U				
Bis(2-Ethylhexyl) phthalate	8270C SIM	ug/l	0.98	U						
Boron	6010B	mg/l	0.148							
Boron	6020	mg/l			0.0100	U				
Bromobenzene	8260B	ug/l	5	U	1.0	U				
Bromochloromethane	8260B	ug/l	5	U	1.0	U				
Bromodichloromethane	8260B	ug/l	5	U	1.0	U				
Bromoform	8260B	ug/l	5	U	1.0	U				
Bromomethane	8260B	ug/l	5	U	1.0	U				
Butylbenzylphthalate	8270C	ug/l			11	U				
Butylbenzylphthalate	8270C SIM	ug/l	0.98	U						
Cadmium	6020	mg/l	0.00050	U	0.00100	U				
Calcium	6010B	mg/l	9.89							

Table C-3 - Subarea 7 Field Blank Results

			Sample Name:		FB-SA7-102611		FB-SA7-110111		FB-SA7-SB-093011	
			Location:		FB-SA7		FB-SA7		FB-SA7	
			Sample Date:		10/26/2011		11/01/2011		09/30/2011	
			Sample Type		FB		FB		FB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer			Concentration	Final Qualifer	Concentration	Final Qualifer
Calcium	6020	mg/l					0.100	U		
Carbazole	8270C	ug/l	6	U			11	U		
Carbon tetrachloride	8260B	ug/l	5	U			1.0	U		
Chlordane	8081A	ug/l	1.3	U						
Chlorobenzene	8260B	ug/l	5	U			1.0	U		
Chloroethane	8260B	ug/l	5	U			1.0	U		
Chloroform	8260B	ug/l	5	U			2.7			
Chloromethane	8260B	ug/l	5	U			1.0	U		
Chlorotrifluoroethene	8260B	ug/l	5	U			1.0	U		
Chromium	6020	mg/l	0.0020	U			0.00100	U		
Chromium VI	7199	ug/l	10.0	UJ			0.200	UJ		
Chrysene	8270C	ug/l					11	U		
Chrysene	8270C SIM	ug/l	0.049	U						
cis-1,2-Dichloroethene	8260B	ug/l	5	U			1.0	U		
cis-1,3-Dichloropropene	8260B	ug/l	5	U			1.0	U		
Cobalt	6020	mg/l	0.00050	U			0.00100	U		
Copper	6020	mg/l	0.0020	U			0.00100	U		
Cyanide	9012B	mg/l	0.010	U						
Cyanide	9014	mg/l					0.0100	U		
Delta-BHC	8081A	ug/l	0.026	U						
Dibenzo(a,h)anthracene	8270C	ug/l					11	U		
Dibenzo(a,h)anthracene	8270C SIM	ug/l	0.049	U						
Dibenzofuran	8270C	ug/l	6	U			11	U		
Dibromochloromethane	8260B	ug/l	5	U			1.0	U		
Dibromomethane	8260B	ug/l	5	U			1.0	U		
Dicamba	8151A	ug/l	0.32	U						
Dichlorodifluoromethane	8260B	ug/l	5	U			1.0	U		
Dichlorprop	8151A	ug/l	0.54	U						
Dieldrin	8081A	ug/l	0.051	U						
Diethylene Glycol	8015M	mg/l	200	U			10	U		
Diethylphthalate	8270C	ug/l					11	U		
Diethylphthalate	8270C SIM	ug/l	0.98	U						
Dimethylphthalate	8270C	ug/l					11	U		
Dimethylphthalate	8270C SIM	ug/l	0.98	U						
Di-n-Butylphthalate	8270C	ug/l					11	U		
Di-n-Butylphthalate	8270C SIM	ug/l	0.98	U						
Dinitrobutyl Phenol	8151A	ug/l	0.54	U						
Di-N-Octyl Phthalate	8270C	ug/l					11	U		
Di-N-Octyl Phthalate	8270C SIM	ug/l	0.083	J						
EFH (C12-C14)	8015B EFH	mg/l					0.52	U		
EFH (C12-C14)	8015M	mg/l	0.66	U						
EFH (C15-C20)	8015B EFH	mg/l					0.52	U		
EFH (C15-C20)	8015M	mg/l	0.66	U						
EFH (C21-C30)	8015B EFH	mg/l					0.52	U		
EFH (C21-C30)	8015M	mg/l	0.66	U						
EFH (C30-C40)	8015B EFH	mg/l					0.52	U		
EFH (C30-C40)	8015M	mg/l	0.66	U						
EFH (C8-C11)	8015B EFH	mg/l					0.52	U		
EFH (C8-C11)	8015M	mg/l	0.66	U						
Endosulfan I	8081A	ug/l	0.026	U						
Endosulfan II	8081A	ug/l	0.051	U						
Endosulfan Sulfate	8081A	ug/l	0.051	U						
Endrin	8081A	ug/l	0.051	U						
Endrin Aldehyde	8081A	ug/l	0.26	U						
Endrin Ketone	8081A	ug/l	0.051	U						
Ethanol	8015B	ug/l	1000	UJ			1000	U		
Ethylbenzene	8260B	ug/l	5	U			1.4			
Ethylene Glycol	8015M	mg/l	200	UJ			10	U		
Fluoranthene	8270C	ug/l					11	U		
Fluoranthene	8270C SIM	ug/l	0.049	U						
Fluorene	8270C	ug/l					11	U		
Fluorene	8270C SIM	ug/l	0.049	U						
Fluoride	300.0	mg/l	0.10	U			0.100	U		
Formaldehyde	8315A	ug/l	50	U						
Freon 113	8260B	ug/l	10	U			1.0	U		
Freon 113a	8260B	ug/l	5	U			1.0	U		
Gamma-BHC (Lindane)	8081A	ug/l	0.026	U						
GRO (C5-C12)	8015B GRO	ug/l					50	U		
GRO (C5-C12)	8015M	ug/l	50	U						
Heptachlor	8081A	ug/l	0.026	U						
Heptachlor Epoxide	8081A	ug/l	0.026	U						
Hexachlorobenzene	8270C	ug/l	6	U			11	U		
Hexachlorobutadiene	8260B	ug/l	5	U			1.0	U		
Hexachlorobutadiene	8270C	ug/l	6	U			11	U		
Hexachlorocyclopentadiene	8270C	ug/l	17	U			22	U		
Hexachloroethane	8270C	ug/l	6	U			11	U		
HMX	8330A	ug/l	2.0	U			1.0	U		
Indeno(1,2,3-Cd)Pyrene	8270C	ug/l					11	U		

Table C-3 - Subarea 7 Field Blank Results

			Sample Name:		FB-SA7-102611		FB-SA7-110111		FB-SA7-SB-093011	
			Location:		FB-SA7		FB-SA7		FB-SA7	
			Sample Date:		10/26/2011		11/01/2011		09/30/2011	
			Sample Type		FB		FB		FB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer		
Indeno(1,2,3-Cd)Pyrene	8270C SIM	ug/l	0.049	U						
Iron	6010B	mg/l	0.200	U						
Iron	6020	mg/l			0.100	U				
Isophorone	8270C	ug/l	6	U	11	U				
Isopropylbenzene	8260B	ug/l	5	U	1.0	U				
Isopropyltoluene	8260B	ug/l	5	U	1.0	U				
Lead	6020	mg/l	0.0010	U	0.00100	U				
Lithium	6010B	mg/l	0.0200	U						
Lithium	6020	mg/l			0.00200	U				
m,p-Xylene	8260B	ug/l	5	U	5.7					
Magnesium	6010B	mg/l	1.22							
Magnesium	6020	mg/l			0.100	U				
Manganese	6010B	mg/l	0.0050	U						
Manganese	6020	mg/l			0.00100	U				
MCPA	8151A	ug/l	1100	U						
MCPP	8151A	ug/l	220	U						
m-Dinitrobenzene	8330A	ug/l	0.60	U	1.0	U				
Mercury	7470A	mg/l	0.00020	U	0.000500	U				
Methanol	8015B	ug/l	1000	UJ	1000	U				
Methoxychlor	8081A	ug/l	0.26	U						
Methyl tert-Butyl Ether	8260B	ug/l	5	U	1.0	U				
Methylene chloride	8260B	ug/l	5	U	1.0	U				
Mirex	8081A	ug/l	0.64	U						
Molybdenum	6020	mg/l	0.00050	U	0.00200	U				
m-Terphenyl	8015B	mg/l	0.26	U						
Naphthalene	8270C	ug/l			11	U				
Naphthalene	8270C SIM	ug/l	0.049	U						
N-Butylbenzene	8260B	ug/l	5	U	1.0	U				
Nickel	6020	mg/l	0.0020	U	0.00100	U				
Nitrate	300.0	mg/l	0.10	U	0.443	U				
Nitrobenzene	8270C	ug/l	6	U	11	U				
Nitrobenzene	8330A	ug/l	0.60	U	1.0	U				
Nitroglycerin	8330A	ug/l	15	U						
Nitroglycerin	8332	ug/l			250	U				
N-Nitrosodimethylamine	1625C	ng/l	1.10	U			0.955	U		
N-Nitrosodimethylamine	8270C SIM	ug/l	0.049	U						
N-Nitroso-Di-N-Propylamine	8270C	ug/l	6	U	11	U				
N-Nitrosodiphenylamine	8270C	ug/l	6	U	11	U				
N-Propylbenzene	8260B	ug/l	5	U	1.0	U				
OCDD	1613B	pg/l	20.9	U						
OCDF	1613B	pg/l	20.9	U						
o-Terphenyl	8015B	mg/l	0.26	U						
o-Xylene	8260B	ug/l	5	U	2.6					
Pentachlorophenol	8270C	ug/l	17	U	22	U				
Perchlorate	314.0	ug/l	2.0	U	2.00	U				
PETN	8330A	ug/l	18	U						
PETN	8332	ug/l			250	U				
pH	9040B	pH unit	7.2							
pH	9040C	pH unit			5.77					
Phenanthrene	8270C	ug/l			11	U				
Phenanthrene	8270C SIM	ug/l	0.049	U						
Phenol	8270C	ug/l	6	U	11	U				
Phosphorus	6010B	mg/l	0.100	U						
Phosphorus	6020	mg/l			0.0500	U				
Potassium	6010B	mg/l	0.500	U						
Potassium	6020	mg/l			0.100	U				
Propylene glycol	8015M	mg/l	200	UJ	10	U				
p-Terphenyl	8015B	mg/l	0.26	U						
Pyrene	8270C	ug/l			11	U				
Pyrene	8270C SIM	ug/l	0.049	U						
RDX	8330A	ug/l	0.60	U	1.0	U				
sec-Butylbenzene	8260B	ug/l	5	U	1.0	U				
Selenium	6020	mg/l	0.0020	U	0.00100	U				
Silver	6020	mg/l	0.00050	U	0.00100	U				
Sodium	6010B	mg/l	8.30							
Sodium	6020	mg/l			0.100	U				
Strontium	6010B	mg/l	0.0018	J						
Strontium	6020	mg/l			0.00200	U				
Styrene	8260B	ug/l	5	U	1.0	U				
tert-Butylbenzene	8260B	ug/l	5	U	1.0	U				
Tetrachloroethene	8260B	ug/l	5	U	1.0	U				
Tetralin	8270C	ug/l	6	U	11	U				
Tetryl	8330A	ug/l	0.60	U	1.0	U				
Thallium	6020	mg/l	0.00050	U	0.00100	U				
Tin	6010B	mg/l	0.0200	U						
Tin	6020	mg/l			0.00100	U				
Titanium	6010B	mg/l	0.00060	J						
Titanium	6020	mg/l			0.00200	U				

Table C-3 - Subarea 7 Field Blank Results

			Sample Name:		FB-SA7-102611		FB-SA7-110111		FB-SA7-SB-093011	
			Location:		FB-SA7		FB-SA7		FB-SA7	
			Sample Date:		10/26/2011		11/01/2011		09/30/2011	
			Sample Type		FB		FB		FB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer			Concentration	Final Qualifer	Concentration	Final Qualifer
Toluene	8260B	ug/l	5	U			5.5			
Toxaphene	8081A	ug/l	7.7	U						
trans-1,2-Dichloroethene	8260B	ug/l	5	U			1.0	U		
trans-1,3-Dichloropropene	8260B	ug/l	5	U			1.0	U		
Trichloroethene	8260B	ug/l	5	U			1.0	U		
Trichlorofluoromethane	8260B	ug/l	5	U			1.0	U		
Vanadium	6020	mg/l	0.00050	U			0.00100	U		
Vinyl Chloride	8260B	ug/l	5	U			1.0	U		
Zinc	6020	mg/l	0.0150	U			0.0200	U		
Zirconium	6010B	mg/l	0.0500	U						
Zirconium	6020	mg/l					0.00500	U		

ug/L - microgram per liter

mg/L - milligram per liter

ng/L - nanogram per liter

pg/L - picogram per liter

U - Compound not detected above the reporting limit

(a) Some SVOC results had two values - one for SVOC and one for SVOC SIM. The validators used the value with the lowest detection limit for validation purposes

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-091311		TB-091411		TB-091511	
		Sample Date:	09/13/2011		09/14/2011		09/15/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l	50	U	50	U	50	U
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg						
N-Nitrosodimethylamine	1625C	ng/l						
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%						
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-091911		TB-092011		TB-092111	
		Sample Date:	09/19/2011		09/20/2011		09/21/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l	50	U	50	U	50	U
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg						
N-Nitrosodimethylamine	1625C	ng/l						
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%						
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-092211		TB-092311		TB-092611	
		Sample Date:	09/22/2011		09/23/2011		09/26/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l	50	U	50	U	50	U
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg						
N-Nitrosodimethylamine	1625C	ng/l						
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%						
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

			Sample Name:		TB-092711		TB-092911		TB-100711-AQ	
			Sample Date:		09/27/2011		09/29/2011		10/07/2011	
			Sample Type		TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer			Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l	5	U						
1,1,1-Trichloroethane	8260B	ug/l	5	U						
1,1,2,2-Tetrachloroethane	8260B	ug/l	5	U						
1,1,2-Trichloroethane	8260B	ug/l	5	U						
1,1-Dichloroethane	8260B	ug/l	5	U						
1,1-Dichloroethene	8260B	ug/l	5	U						
1,1-Dichloropropene	8260B	ug/l	5	U						
1,2,3-Trichlorobenzene	8260B	ug/l	5	U						
1,2,3-Trichloropropane	8260B	ug/l	5	U						
1,2,4-Trichlorobenzene	8260B	ug/l	5	U						
1,2,4-Trimethylbenzene	8260B	ug/l	5	U						
1,2-Dibromo-3-chloropropane	8260B	ug/l	5	U						
1,2-Dibromoethane	8260B	ug/l	5	U						
1,2-Dichlorobenzene	8260B	ug/l	5	U						
1,2-Dichloroethane	8260B	ug/l	5	U						
1,2-Dichloropropane	8260B	ug/l	5	U						
1,3,5-Trimethylbenzene	8260B	ug/l	5	U						
1,3-Dichlorobenzene	8260B	ug/l	5	U						
1,3-Dichloropropane	8260B	ug/l	5	U						
1,4-Dichlorobenzene	8260B	ug/l	5	U						
1,4-Dioxane	8260B SIM	ug/l	2.0	U						
2,2-Dichloropropane	8260B	ug/l	5	U						
2-Butanone	8260B	ug/l	10	U						
2-Chloroethyl Vinyl Ether	8260B	ug/l	10	U						
2-Chlorotoluene	8260B	ug/l	5	U						
2-Hexanone	8260B	ug/l	10	U						
4-Chlorotoluene	8260B	ug/l	5	U						
4-Methyl-2-Pentanone	8260B	ug/l	10	U						
Acetone	8260B	ug/l	20	U						
Benzene	8260B	ug/l	5	U						
Bromobenzene	8260B	ug/l	5	U						
Bromochloromethane	8260B	ug/l	5	U						
Bromodichloromethane	8260B	ug/l	5	U						
Bromoform	8260B	ug/l	5	U						
Bromomethane	8260B	ug/l	5	U						
Carbon tetrachloride	8260B	ug/l	5	U						
Chlorobenzene	8260B	ug/l	5	U						
Chloroethane	8260B	ug/l	5	U						
Chloroform	8260B	ug/l	5	U						
Chloromethane	8260B	ug/l	5	U						
Chlorotrifluoroethene	8260B	ug/l	5	U						
cis-1,2-Dichloroethene	8260B	ug/l	5	U						
cis-1,3-Dichloropropene	8260B	ug/l	5	U						
Dibromochloromethane	8260B	ug/l	5	U						
Dibromomethane	8260B	ug/l	5	U						
Dichlorodifluoromethane	8260B	ug/l	5	U						
Ethylbenzene	8260B	ug/l	5	U						
Freon 113	8260B	ug/l	10	U						
Freon 113a	8260B	ug/l	5	U						
GRO (C5-C12)	8015B GRO	ug/l								
GRO (C5-C12)	8015M	ug/l	50 50	U U			50 50	U U	50	U
Hexachlorobutadiene	8260B	ug/l	5	U						
Isopropylbenzene	8260B	ug/l	5	U						
Isopropyltoluene	8260B	ug/l	5	U						
m,p-Xylene	8260B	ug/l	5	U						
Methyl tert-Butyl Ether	8260B	ug/l	5	U						
Methylene chloride	8260B	ug/l	5	U						
N-Butylbenzene	8260B	ug/l	5	U						
N-Nitrosodimethylamine	1625C	ng/kg					33.0	U		
N-Nitrosodimethylamine	1625C	ng/l					4.12		0.975	U
N-Propylbenzene	8260B	ug/l	5	U						
o-Xylene	8260B	ug/l	5	U						
Percent Moisture	160.3M	%					0.50	U		
sec-Butylbenzene	8260B	ug/l	5	U						
Styrene	8260B	ug/l	5	U						
tert-Butylbenzene	8260B	ug/l	5	U						
Tetrachloroethene	8260B	ug/l	5	U						
Toluene	8260B	ug/l	5	U						
trans-1,2-Dichloroethene	8260B	ug/l	5	U						
trans-1,3-Dichloropropene	8260B	ug/l	5	U						
Trichloroethene	8260B	ug/l	5	U						
Trichlorofluoromethane	8260B	ug/l	5	U						
Vinyl Chloride	8260B	ug/l	5	U						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-100711-SO		TB-101011-AQ		TB-101011-SO	
		Sample Date:	10/07/2011		10/10/2011		10/10/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l			50	U		
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg	32.9	U			33.2	U
N-Nitrosodimethylamine	1625C	ng/l			1.02	U		
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%	0.50	U			0.50	U
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-101111		TB-101211		TB-101311	
		Sample Date:	10/11/2011		10/12/2011		10/13/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l	50	U	50	U	50	U
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg	33.1	U	33.3	U	33.2	U
N-Nitrosodimethylamine	1625C	ng/l	1.1600000000	UJ	1.0300000000	UJ	1.2300000000	U
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%	0.50	U	0.50	U	0.50	U
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-101411		TB-101711		TB-101811	
		Sample Date:	10/14/2011		10/17/2011		10/18/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l			50	U	50	U
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg	33.3	U	105		33.3	U
N-Nitrosodimethylamine	1625C	ng/l	3.9900000000	U	0.978	U	0.999	U
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%	0.50	U	0.50	U	0.50	U
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

			Sample Name:		TB-101911		TB-102011		TB-102611	
			Sample Date:		10/19/2011		10/20/2011		10/26/2011	
			Sample Type		TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer		
1,1,1,2-Tetrachloroethane	8260B	ug/l	5	U						
1,1,1-Trichloroethane	8260B	ug/l	5	U						
1,1,2,2-Tetrachloroethane	8260B	ug/l	5	U						
1,1,2-Trichloroethane	8260B	ug/l	5	U						
1,1-Dichloroethane	8260B	ug/l	5	U						
1,1-Dichloroethene	8260B	ug/l	5	U						
1,1-Dichloropropene	8260B	ug/l	5	U						
1,2,3-Trichlorobenzene	8260B	ug/l	5	U						
1,2,3-Trichloropropane	8260B	ug/l	5	U						
1,2,4-Trichlorobenzene	8260B	ug/l	5	U						
1,2,4-Trimethylbenzene	8260B	ug/l	5	U						
1,2-Dibromo-3-chloropropane	8260B	ug/l	5	U						
1,2-Dibromoethane	8260B	ug/l	5	U						
1,2-Dichlorobenzene	8260B	ug/l	5	U						
1,2-Dichloroethane	8260B	ug/l	5	U						
1,2-Dichloropropane	8260B	ug/l	5	U						
1,3,5-Trimethylbenzene	8260B	ug/l	5	U						
1,3-Dichlorobenzene	8260B	ug/l	5	U						
1,3-Dichloropropane	8260B	ug/l	5	U						
1,4-Dichlorobenzene	8260B	ug/l	5	U						
1,4-Dioxane	8260B SIM	ug/l	2.0	U						
2,2-Dichloropropane	8260B	ug/l	5	U						
2-Butanone	8260B	ug/l	10	U						
2-Chloroethyl Vinyl Ether	8260B	ug/l	10	U						
2-Chlorotoluene	8260B	ug/l	5	U						
2-Hexanone	8260B	ug/l	10	U						
4-Chlorotoluene	8260B	ug/l	5	U						
4-Methyl-2-Pentanone	8260B	ug/l	10	U						
Acetone	8260B	ug/l	20	U						
Benzene	8260B	ug/l	5	U						
Bromobenzene	8260B	ug/l	5	U						
Bromochloromethane	8260B	ug/l	5	U						
Bromodichloromethane	8260B	ug/l	5	U						
Bromoform	8260B	ug/l	5	U						
Bromomethane	8260B	ug/l	5	U						
Carbon tetrachloride	8260B	ug/l	5	U						
Chlorobenzene	8260B	ug/l	5	U						
Chloroethane	8260B	ug/l	5	U						
Chloroform	8260B	ug/l	5	U						
Chloromethane	8260B	ug/l	5	U						
Chlorotrifluoroethene	8260B	ug/l	5	U						
cis-1,2-Dichloroethene	8260B	ug/l	5	U						
cis-1,3-Dichloropropene	8260B	ug/l	5	U						
Dibromochloromethane	8260B	ug/l	5	U						
Dibromomethane	8260B	ug/l	5	U						
Dichlorodifluoromethane	8260B	ug/l	5	U						
Ethylbenzene	8260B	ug/l	5	U						
Freon 113	8260B	ug/l	10	U						
Freon 113a	8260B	ug/l	5	U						
GRO (C5-C12)	8015B GRO	ug/l								
GRO (C5-C12)	8015M	ug/l	50	U	50	U	50	U		
Hexachlorobutadiene	8260B	ug/l	5	U						
Isopropylbenzene	8260B	ug/l	5	U						
Isopropyltoluene	8260B	ug/l	5	U						
m,p-Xylene	8260B	ug/l	5	U						
Methyl tert-Butyl Ether	8260B	ug/l	5	U						
Methylene chloride	8260B	ug/l	5	U						
N-Butylbenzene	8260B	ug/l	5	U						
N-Nitrosodimethylamine	1625C	ng/kg	33.1	U						
N-Nitrosodimethylamine	1625C	ng/l	0.990	U						
N-Propylbenzene	8260B	ug/l	5	U						
o-Xylene	8260B	ug/l	5	U						
Percent Moisture	160.3M	%	0.50	U						
sec-Butylbenzene	8260B	ug/l	5	U						
Styrene	8260B	ug/l	5	U						
tert-Butylbenzene	8260B	ug/l	5	U						
Tetrachloroethene	8260B	ug/l	5	U						
Toluene	8260B	ug/l	5	U						
trans-1,2-Dichloroethene	8260B	ug/l	5	U						
trans-1,3-Dichloropropene	8260B	ug/l	5	U						
Trichloroethene	8260B	ug/l	5	U						
Trichlorofluoromethane	8260B	ug/l	5	U						
Vinyl Chloride	8260B	ug/l	5	U						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-102711		TB-102811		TB-110111-AQ	
		Sample Date:	10/27/2011		10/28/2011		11/01/2011	
		Sample Type	TB		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l						
GRO (C5-C12)	8015M	ug/l	50	U	50	U		
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg						
N-Nitrosodimethylamine	1625C	ng/l					0.953	U
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%						
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-110111S		TB-110111-SO		TB-110211	
		Sample Date:	11/01/2011		11/01/2011		11/02/2011	
		Sample Type	TB Split		TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l	1.0	U				
1,1,1-Trichloroethane	8260B	ug/l	1.0	U				
1,1,2,2-Tetrachloroethane	8260B	ug/l	1.0	U				
1,1,2-Trichloroethane	8260B	ug/l	1.0	U				
1,1-Dichloroethane	8260B	ug/l	1.0	U				
1,1-Dichloroethene	8260B	ug/l	1.0	U				
1,1-Dichloropropene	8260B	ug/l	1.0	U				
1,2,3-Trichlorobenzene	8260B	ug/l	1.0	U				
1,2,3-Trichloropropane	8260B	ug/l	2.0	U				
1,2,4-Trichlorobenzene	8260B	ug/l	1.0	U				
1,2,4-Trimethylbenzene	8260B	ug/l	1.0	U				
1,2-Dibromo-3-chloropropane	8260B	ug/l	2.0	U				
1,2-Dibromoethane	8260B	ug/l	1.0	U				
1,2-Dichlorobenzene	8260B	ug/l	1.0	U				
1,2-Dichloroethane	8260B	ug/l	1.0	U				
1,2-Dichloropropane	8260B	ug/l	1.0	U				
1,3,5-Trimethylbenzene	8260B	ug/l	1.0	U				
1,3-Dichlorobenzene	8260B	ug/l	1.0	U				
1,3-Dichloropropane	8260B	ug/l	1.0	U				
1,4-Dichlorobenzene	8260B	ug/l	1.0	U				
1,4-Dioxane	8260B SIM	ug/l	4.0	U				
2,2-Dichloropropane	8260B	ug/l	1.0	U				
2-Butanone	8260B	ug/l	10	U				
2-Chloroethyl Vinyl Ether	8260B	ug/l	2.0	U				
2-Chlorotoluene	8260B	ug/l	1.0	U				
2-Hexanone	8260B	ug/l	10	U				
4-Chlorotoluene	8260B	ug/l	1.0	U				
4-Methyl-2-Pentanone	8260B	ug/l	10	U				
Acetone	8260B	ug/l	10	U				
Benzene	8260B	ug/l	1.0	U				
Bromobenzene	8260B	ug/l	1.0	U				
Bromochloromethane	8260B	ug/l	1.0	U				
Bromodichloromethane	8260B	ug/l	1.0	U				
Bromoform	8260B	ug/l	1.0	U				
Bromomethane	8260B	ug/l	1.0	U				
Carbon tetrachloride	8260B	ug/l	1.0	U				
Chlorobenzene	8260B	ug/l	1.0	U				
Chloroethane	8260B	ug/l	1.0	U				
Chloroform	8260B	ug/l	1.0	U				
Chloromethane	8260B	ug/l	1.0	U				
Chlorotrifluoroethene	8260B	ug/l	1.0	U				
cis-1,2-Dichloroethene	8260B	ug/l	1.0	U				
cis-1,3-Dichloropropene	8260B	ug/l	1.0	U				
Dibromochloromethane	8260B	ug/l	1.0	U				
Dibromomethane	8260B	ug/l	1.0	U				
Dichlorodifluoromethane	8260B	ug/l	1.0	U				
Ethylbenzene	8260B	ug/l	1.0	U				
Freon 113	8260B	ug/l	1.0	U				
Freon 113a	8260B	ug/l	1.0	U				
GRO (C5-C12)	8015B GRO	ug/l	21	J			18	J
GRO (C5-C12)	8015M	ug/l						
Hexachlorobutadiene	8260B	ug/l	1.0	U				
Isopropylbenzene	8260B	ug/l	1.0	U				
Isopropyltoluene	8260B	ug/l	1.0	U				
m,p-Xylene	8260B	ug/l	2.0	U				
Methyl tert-Butyl Ether	8260B	ug/l	1.0	U				
Methylene chloride	8260B	ug/l	1.0	U				
N-Butylbenzene	8260B	ug/l	1.0	U				
N-Nitrosodimethylamine	1625C	ng/kg			33.3	U		
N-Nitrosodimethylamine	1625C	ng/l						
N-Propylbenzene	8260B	ug/l	1.0	U				
o-Xylene	8260B	ug/l	1.0	U				
Percent Moisture	160.3M	%			0.50	U		
sec-Butylbenzene	8260B	ug/l	1.0	U				
Styrene	8260B	ug/l	1.0	U				
tert-Butylbenzene	8260B	ug/l	1.0	U				
Tetrachloroethene	8260B	ug/l	1.0	U				
Toluene	8260B	ug/l	1.0	U				
trans-1,2-Dichloroethene	8260B	ug/l	1.0	U				
trans-1,3-Dichloropropene	8260B	ug/l	1.0	U				
Trichloroethene	8260B	ug/l	1.0	U				
Trichlorofluoromethane	8260B	ug/l	1.0	U				
Vinyl Chloride	8260B	ug/l	1.0	U				

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-110311-AQ		TB-110311S		TB-110311-SO	
		Sample Date:	11/03/2011		11/03/2011		11/03/2011	
		Sample Type	TB		TB Split		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l						
1,1,1-Trichloroethane	8260B	ug/l						
1,1,2,2-Tetrachloroethane	8260B	ug/l						
1,1,2-Trichloroethane	8260B	ug/l						
1,1-Dichloroethane	8260B	ug/l						
1,1-Dichloroethene	8260B	ug/l						
1,1-Dichloropropene	8260B	ug/l						
1,2,3-Trichlorobenzene	8260B	ug/l						
1,2,3-Trichloropropane	8260B	ug/l						
1,2,4-Trichlorobenzene	8260B	ug/l						
1,2,4-Trimethylbenzene	8260B	ug/l						
1,2-Dibromo-3-chloropropane	8260B	ug/l						
1,2-Dibromoethane	8260B	ug/l						
1,2-Dichlorobenzene	8260B	ug/l						
1,2-Dichloroethane	8260B	ug/l						
1,2-Dichloropropane	8260B	ug/l						
1,3,5-Trimethylbenzene	8260B	ug/l						
1,3-Dichlorobenzene	8260B	ug/l						
1,3-Dichloropropane	8260B	ug/l						
1,4-Dichlorobenzene	8260B	ug/l						
1,4-Dioxane	8260B SIM	ug/l						
2,2-Dichloropropane	8260B	ug/l						
2-Butanone	8260B	ug/l						
2-Chloroethyl Vinyl Ether	8260B	ug/l						
2-Chlorotoluene	8260B	ug/l						
2-Hexanone	8260B	ug/l						
4-Chlorotoluene	8260B	ug/l						
4-Methyl-2-Pentanone	8260B	ug/l						
Acetone	8260B	ug/l						
Benzene	8260B	ug/l						
Bromobenzene	8260B	ug/l						
Bromochloromethane	8260B	ug/l						
Bromodichloromethane	8260B	ug/l						
Bromoform	8260B	ug/l						
Bromomethane	8260B	ug/l						
Carbon tetrachloride	8260B	ug/l						
Chlorobenzene	8260B	ug/l						
Chloroethane	8260B	ug/l						
Chloroform	8260B	ug/l						
Chloromethane	8260B	ug/l						
Chlorotrifluoroethene	8260B	ug/l						
cis-1,2-Dichloroethene	8260B	ug/l						
cis-1,3-Dichloropropene	8260B	ug/l						
Dibromochloromethane	8260B	ug/l						
Dibromomethane	8260B	ug/l						
Dichlorodifluoromethane	8260B	ug/l						
Ethylbenzene	8260B	ug/l						
Freon 113	8260B	ug/l						
Freon 113a	8260B	ug/l						
GRO (C5-C12)	8015B GRO	ug/l			26	J		
GRO (C5-C12)	8015M	ug/l						
Hexachlorobutadiene	8260B	ug/l						
Isopropylbenzene	8260B	ug/l						
Isopropyltoluene	8260B	ug/l						
m,p-Xylene	8260B	ug/l						
Methyl tert-Butyl Ether	8260B	ug/l						
Methylene chloride	8260B	ug/l						
N-Butylbenzene	8260B	ug/l						
N-Nitrosodimethylamine	1625C	ng/kg					33.3	U
N-Nitrosodimethylamine	1625C	ng/l	0.955	U				
N-Propylbenzene	8260B	ug/l						
o-Xylene	8260B	ug/l						
Percent Moisture	160.3M	%					0.50	U
sec-Butylbenzene	8260B	ug/l						
Styrene	8260B	ug/l						
tert-Butylbenzene	8260B	ug/l						
Tetrachloroethene	8260B	ug/l						
Toluene	8260B	ug/l						
trans-1,2-Dichloroethene	8260B	ug/l						
trans-1,3-Dichloropropene	8260B	ug/l						
Trichloroethene	8260B	ug/l						
Trichlorofluoromethane	8260B	ug/l						
Vinyl Chloride	8260B	ug/l						

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-4 - Subarea 7 Trip Blank Results

		Sample Name:	TB-110411-AQ		TB-110411-SO	
		Sample Date:	11/04/2011		11/04/2011	
		Sample Type	TB		TB	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	ug/l				
1,1,1-Trichloroethane	8260B	ug/l				
1,1,2,2-Tetrachloroethane	8260B	ug/l				
1,1,2-Trichloroethane	8260B	ug/l				
1,1-Dichloroethane	8260B	ug/l				
1,1-Dichloroethene	8260B	ug/l				
1,1-Dichloropropene	8260B	ug/l				
1,2,3-Trichlorobenzene	8260B	ug/l				
1,2,3-Trichloropropane	8260B	ug/l				
1,2,4-Trichlorobenzene	8260B	ug/l				
1,2,4-Trimethylbenzene	8260B	ug/l				
1,2-Dibromo-3-chloropropane	8260B	ug/l				
1,2-Dibromoethane	8260B	ug/l				
1,2-Dichlorobenzene	8260B	ug/l				
1,2-Dichloroethane	8260B	ug/l				
1,2-Dichloropropane	8260B	ug/l				
1,3,5-Trimethylbenzene	8260B	ug/l				
1,3-Dichlorobenzene	8260B	ug/l				
1,3-Dichloropropane	8260B	ug/l				
1,4-Dichlorobenzene	8260B	ug/l				
1,4-Dioxane	8260B SIM	ug/l				
2,2-Dichloropropane	8260B	ug/l				
2-Butanone	8260B	ug/l				
2-Chloroethyl Vinyl Ether	8260B	ug/l				
2-Chlorotoluene	8260B	ug/l				
2-Hexanone	8260B	ug/l				
4-Chlorotoluene	8260B	ug/l				
4-Methyl-2-Pentanone	8260B	ug/l				
Acetone	8260B	ug/l				
Benzene	8260B	ug/l				
Bromobenzene	8260B	ug/l				
Bromochloromethane	8260B	ug/l				
Bromodichloromethane	8260B	ug/l				
Bromoform	8260B	ug/l				
Bromomethane	8260B	ug/l				
Carbon tetrachloride	8260B	ug/l				
Chlorobenzene	8260B	ug/l				
Chloroethane	8260B	ug/l				
Chloroform	8260B	ug/l				
Chloromethane	8260B	ug/l				
Chlorotrifluoroethene	8260B	ug/l				
cis-1,2-Dichloroethene	8260B	ug/l				
cis-1,3-Dichloropropene	8260B	ug/l				
Dibromochloromethane	8260B	ug/l				
Dibromomethane	8260B	ug/l				
Dichlorodifluoromethane	8260B	ug/l				
Ethylbenzene	8260B	ug/l				
Freon 113	8260B	ug/l				
Freon 113a	8260B	ug/l				
GRO (C5-C12)	8015B GRO	ug/l				
GRO (C5-C12)	8015M	ug/l	50	U		
Hexachlorobutadiene	8260B	ug/l				
Isopropylbenzene	8260B	ug/l				
Isopropyltoluene	8260B	ug/l				
m,p-Xylene	8260B	ug/l				
Methyl tert-Butyl Ether	8260B	ug/l				
Methylene chloride	8260B	ug/l				
N-Butylbenzene	8260B	ug/l				
N-Nitrosodimethylamine	1625C	ng/kg			33.3	U
N-Nitrosodimethylamine	1625C	ng/l	0.953	U		
N-Propylbenzene	8260B	ug/l				
o-Xylene	8260B	ug/l				
Percent Moisture	160.3M	%			0.50	U
sec-Butylbenzene	8260B	ug/l				
Styrene	8260B	ug/l				
tert-Butylbenzene	8260B	ug/l				
Tetrachloroethene	8260B	ug/l				
Toluene	8260B	ug/l				
trans-1,2-Dichloroethene	8260B	ug/l				
trans-1,3-Dichloropropene	8260B	ug/l				
Trichloroethene	8260B	ug/l				
Trichlorofluoromethane	8260B	ug/l				
Vinyl Chloride	8260B	ug/l				

ug/L - microgram per liter

U - Compound not detected above the reporting limit

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-008-SA7		SL-008-SA7		RPD	SL-042-SA7		SL-042-SA7		RPD
				Sample Name:	DUP01-SA7-QC-091511		SL-008-SA7-SS-0.0-0.5			DUP02-SA7-QC-091911		SL-042-SA7-SS-0.0-0.5		
				Sample Date	09/15/2011		09/15/2011			09/19/2011		09/19/2011		
				Start Depth:	0		0			0		0		
				End Depth:	0.5		0.5			0.5		0.5		
				Area:	SA7		SA7			SA7		SA7		
				Matrix:	SO		SO			SO		SO		
				Sample Type:	FD		N			FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit										
Inorganic	Aluminum	7429-90-5	6010B	mg/kg	12000		12600		-4.88	13600		12800		6.06
Inorganic	Aluminum	7429-90-5	6020	mg/kg										
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.216	UJ	0.409	UJ	--	0.109	J	0.133	J	-19.83
Inorganic	Arsenic	7440-38-2	6020	mg/kg	4.24	J	7.85	J	-59.72	4.36	J	4.34	J	0.46
Inorganic	Barium	7440-39-3	6020	mg/kg	96.3	J	116	J	-18.56	91.3		96.8		-5.85
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.584		0.643		-9.62	0.519	J	0.586	J	-12.13
Inorganic	Boron	7440-42-8	6010B	mg/kg	4.89	UJ	4.90	UJ	--	5.00	U	4.99	U	0.20
Inorganic	Boron	7440-42-8	6020	mg/kg										
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.209	J	0.199	J	4.90	0.276	J	0.239	J	14.37
Inorganic	Calcium	7440-70-2	6010B	mg/kg	2680		2770		-3.30	3150		2880		8.96
Inorganic	Calcium	7440-70-2	6020	mg/kg										
Inorganic	Chromium	7440-47-3	6020	mg/kg	16.5	J	18.7	J	-12.50	16.9	J	16.9	J	--
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	1.0	UJ	0.36	J	200.00	0.97	UJ	0.76	J	200.00
Inorganic	Cobalt	7440-48-4	6020	mg/kg	5.46	J	7.20	J	-27.49	6.00	J	6.11	J	-1.82
Inorganic	Copper	7440-50-8	6020	mg/kg	7.06	J	10.6	J	-40.09	9.07	J	9.21	J	-1.53
Inorganic	Cyanide	57-12-5	9012B	mg/kg	0.50	U	0.49	U	--					
Inorganic	Cyanide	57-12-5	9014	mg/kg										
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	1.0	UJ	1.4	J	200.00	1.0	UJ	1.0	UJ	--
Inorganic	Iron	7439-89-6	6010B	mg/kg	18700		18400		1.62	18600		18100		2.72
Inorganic	Iron	7439-89-6	6020	mg/kg										
Inorganic	Lead	7439-92-1	6020	mg/kg	27.3	J	17.4	J	44.30	7.34	J	7.45	J	-1.49
Inorganic	Lithium	7439-93-2	6010B	mg/kg	24.8		24.7		0.40	24.9		24.4		2.03
Inorganic	Lithium	7439-93-2	6020	mg/kg										
Inorganic	Magnesium	7439-95-4	6010B	mg/kg	3950		3860		2.30	4330		4200		3.05
Inorganic	Magnesium	7439-95-4	6020	mg/kg										
Inorganic	Manganese	7439-96-5	6010B	mg/kg	267		270		-1.12	272		274		-0.73
Inorganic	Manganese	7439-96-5	6020	mg/kg										
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.100	U	0.0996	U	--	0.100	UJ	0.0993	UJ	--
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.405	J	0.689	J	-51.92	0.471	J	0.446	J	5.45
Inorganic	Nickel	7440-02-0	6020	mg/kg	8.66		11.3		-26.45	11.3	J	11.5	J	-1.75
Inorganic	Nitrate	14797-55-8	300.0	mg/kg										
Inorganic	Percent Moisture	MOIST	160.3M	%	0.80		0.85		-6.06	0.90		0.83		8.09
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	30.2	U	30.3	U	--	30.3	U	30.3	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg										
Inorganic	pH	pH	9045D	pH unit										
Inorganic	pH	pH	9045M	pH unit	7.38		7.44		-0.81	7.14		7.13		0.14
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg	377		371		1.60	435		415		4.71
Inorganic	Phosphorus	7723-14-0	6020	mg/kg										
Inorganic	Potassium	7440-09-7	6010B	mg/kg	3430		3290		4.17	3390		3250		4.22
Inorganic	Potassium	7440-09-7	6020	mg/kg										
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.0766	J	0.101	J	-27.48	0.141	J	0.126	J	11.24
Inorganic	Silver	7440-22-4	6020	mg/kg	0.0463	J	0.0252	J	59.02	0.0304	J	0.0311	J	-2.28
Inorganic	Sodium	7440-23-5	6010B	mg/kg	70.3	J	71.5	J	-1.69	70.0	J	70.1	J	-0.14
Inorganic	Sodium	7440-23-5	6020	mg/kg										
Inorganic	Strontium	7440-24-6	6010B	mg/kg	10.9		11.7		-7.08	16.5		15.9		3.70
Inorganic	Strontium	7440-24-6	6020	mg/kg										
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.300		0.384		-24.56	0.285	J	0.287	J	-0.70
Inorganic	Tin	7440-31-5	6010B	mg/kg	9.79	U	9.79	U	--	9.99	U	9.98	U	--
Inorganic	Tin	7440-31-5	6020	mg/kg										
Inorganic	Titanium	7440-32-6	6010B	mg/kg	1150		1180		-2.58	1120		1090		2.71
Inorganic	Titanium	7440-32-6	6020	mg/kg										
Inorganic	Vanadium	7440-62-2	6020	mg/kg	31.4	J	39.7	J	-23.35	33.2	J	33.8	J	-1.79
Inorganic	Zinc	7440-66-6	6020	mg/kg	159	J	165	J	-3.70	252	J	238	J	5.71
Inorganic	Zirconium	7440-67-7	6010B	mg/kg	4.89	U	4.90	U	--	5.00	U	4.99	U	--
Inorganic	Zirconium	7440-67-7	6020	mg/kg										
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg										
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg										
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg										
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg										
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg										
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg										
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg										
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg										
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg	500	U	500	U	--					
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg										
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg										
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg										
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg	10	U	10	UJ	--					
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg	500	U	500	U	--					
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg	10	U	10	UJ	--					
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg										
Misc. Organics	HMX	2691-41-0	8330A	ug/kg										
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg										
Misc. Organics	Methanol	67-56-1	8015B	ug/kg	440	J	500	UJ	200.00					
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg	3.5	U	3.5	U	--					
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg										
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg	3.5	U	3.5	U	--					
Misc. Organics	PETN	78-11-5	8330A	ug/kg										
Misc. Organics	PETN	78-11-5	8332	ug/kg										
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg	10	U	10	UJ	--					
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg	3.5	U	3.5	U	--					
Misc. Organics	RDX	121-82-4	8330A	ug/kg										
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg										
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg	77.9	J	18.0	J	124.92	53.2		20.0	J	90.71
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg	34.9	J	2.81	J	170.19	8.58		3.08	J	94.34
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg	1.77	J	4.97	UJ	200.00	0.817	J	0.331	J	84.67
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg	1.84	J	0.306	J	142.96	0.653	J	0.250	J	89.26
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg	1.34	J	0.603	J	75.86	0.576	J	0.342	J	50.98
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg	6.04	J	0.882	J	149.03	1.66	J	0.690	J	82.55
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg	1.04	J	4.97	UJ	200.00	0.402	J	0.245	J	48.53
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg	1.85	J	0.683	J	92.14	1.19	J	0.512	J	79.67
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg	0.360	J	0.113	J	104.44	4.83	U	4.95	U	--
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg	0.549	J	0.355	J	42.92	0.517	J	4.95	UJ	200.00
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg	0.859	J	0.793	J	7.99	0.151	J	4.95	U	200.00
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg	1.75	J	4.97	UJ	200.00	0.517	J	4.95	UJ	200.00
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg	0.524	J	4.97	UJ	200.00	4.83	U	4.95	U	--
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.963	U	0.995	U	--	0.966	U	0.991	U	--
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg	0.963	UJ	0.995	UJ	--	0.0926	J	0.991	UJ	200.00
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	2.0		3.0		-40.00	4.4		3.0		37.84
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	3.0		2.9		3.39	1.7	J	0.90	J	61.54
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.3	U	3.3	U	--	3.3	UJ	3.3	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.3	U	3.3	U	--	3.3	UJ	3.3	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	8.6	J	5.0	J	52.94	3.3	UJ	3.3	U	--
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg	502	J	182	J	93.57	591		233	J	86.89
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg	37.5	J	4.92	J	153.61	19.1		6.64	J	96.81
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg	9.0	U	9.1	U	--	9.1	U	9.1	U	--
Pesticides	2,4 DB	94-82-6	8151A	ug/kg	2.4	UJ	4.4	J	200.00	5.3	J	3.1	J	52.38
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg	0.17	U	0.17	U	--	0.87		0.77	J	12.20
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg	0.17	U	0.17	U	--	0.17	U	0.17	U	--
Pesticides	2,4-D	94-75-7	8151A	ug/kg	3.6	U	3.6	U	--	3.6	U	3.6	U	--
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg	0.66	U	0.87	U	-27.45	0.42	U	0.34	U	--
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg	0.34	U	0.34	U	--	0.34	UJ	0.28	J	200.00
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg	0.89	U	0.48	U	59.85	0.70	UJ	1.1	J	200.00
Pesticides	Aldrin	309-00-2	8081A	ug/kg	0.17	U	0.17	U	--	0.17	U	0.17	U	--
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg	0.17	U	0.17	U	--	0.051	J	0.17	UJ	200.00
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg	0.17	U	0.17	U	--	0.17	U	0.17	U	--
Pesticides	Chlordane	57-74-9	8081A	ug/kg	2.3	J	3.4	UJ	200.00	2.1	J	1.4	J	40.00
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg	0.048	J	0.056	J	-15.38	0.17	U	0.17	U	--
Pesticides	Dicamba	1918-00-9	8151A	ug/kg	0.71	J	1.2	UJ	200.00	1.2	U	1.2	U	--
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
Pesticides	Dieldrin	60-57-1	8081A	ug/kg	0.34	U	0.34	R	--	0.34	U	0.34	U	--
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg	2.4	R	2.4	R	--	2.4	R	2.4	R	--
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg	0.17	U	0.17	U	--	0.17	U	0.17	U	--
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg	0.34	U	0.34	U	--	0.34	U	0.34	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg	0.34	U	0.34	U	--	0.34	U	0.34	U	--
Pesticides	Endrin	72-20-8	8081A	ug/kg	0.34	U	0.34	U	--	0.34	U	0.34	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg	0.34	U	0.50	R	--	0.34	U	0.34	U	--
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg	0.34	U	0.34	U	--	0.34	U	0.34	U	--
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	0.17	U	0.17	U	--	0.18	J	0.041	J	125.79
Pesticides	Heptachlor	76-44-8	8081A	ug/kg	0.17	U	0.17	U	--	0.17	U	0.17	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg	0.086	J	0.17	UJ	200.00	0.17	U	0.17	U	--

Table C-5 - Subarea 7 Field Duplicate Results

					Location					RPD					RPD
					Sample Name:	SL-008-SA7 DUP01-SA7-QC-091511		SL-008-SA7 SL-008-SA7-SS-0.0-0.5			SL-042-SA7 DUP02-SA7-QC-091911		SL-042-SA7 SL-042-SA7-SS-0.0-0.5		
					Sample Date	09/15/2011		09/15/2011			09/19/2011		09/19/2011		
					Start Depth:	0		0			0		0		
					End Depth:	0.5		0.5			0.5		0.5		
					Area:	SA7		SA7			SA7		SA7		
					Matrix:	SO		SO			SO		SO		
					Sample Type:	FD		N			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg		250	U	250	U	--	250	U	250	U	--
Pesticides	MCPP	93-65-2	8151A	ug/kg		250	U	250	U	--	250	U	250	U	--
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg		11	U	1.7	U	--	1.7	U	1.7	U	--
Pesticides	Mirex	2385-85-5	8081A	ug/kg		0.57	U	0.34	U	--	0.34	U	0.34	U	--
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg		12	U	29	U	--	6.7	U	6.7	U	--
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg											
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg		62	J	8.3	UJ	200.00	8.4	U	8.4	U	--
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg		1000	U	990	R	--	1000	U	1000	R	--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg											
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg											
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg		47	J	8.3	UJ	200.00	8.4	U	8.4	U	--
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg											
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg		330	U	330	U	--	340	U	340	U	--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg		500	U	500	R	--	500	U	500	U	--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg		500	U	500	U	--	500	U	500	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg											
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg		650	J	12	J	192.75	8.4	U	8.4	U	--
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg											
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg		37	J	8.3	UJ	200.00	8.4	U	8.4	U	--
Semivolatiles	Aniline	62-53-3	8270C	ug/kg		500	U	500	U	--	500	U	500	U	--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg											
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg		680	J	29	J	183.64	8.4	U	8.4	U	--
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg		3300	U	3300	UJ	--	3400	U	3400	UJ	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg											
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg		2900	J	220	J	171.79	8.4	U	8.4	U	--
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg											
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg		2800	J	240	J	168.42	8.4	U	8.4	U	--
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg											
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg		4300	J	400	J	165.96	9.6	J	5.2	J	59.46
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg				120	J	--					
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg		1100	J			--	8.4	U	8.4	U	--
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg											
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg		2300	J	170	J	172.47	8.4	U	8.4	U	--
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg		500	U	500	R	--	500	U	500	U	--
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg		500	U	500	U	--	500	U	500	U	--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg		370		370		--	340	UJ	120	J	200.00
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg											
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg											
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg		64	J	26	J	84.44	170	U	170	U	--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg											
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg		4300	J	280	J	175.55	4.7	J	2.7	J	54.05
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg											
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg		380	J	32	J	168.93	8.4	U	8.4	U	--
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg											
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg											
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg		17	J	170	UJ	200.00	170	U	170	U	--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg											
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg		170	UJ	120	J	200.00	170	U	170	U	--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg											
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg											
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg		12000	J	690	J	178.25	8.5	J	4.5	J	61.54
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg											
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg		390	J	7.7	J	192.26	8.4	U	8.4	U	--
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg		500	U	500	U	--	500	U	500	U	--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg				120	J	--					
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg		1300	J			--	8.4	U	8.4	U	--
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg											
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg		120	J	8.3	UJ	200.00	8.4	U	8.4	U	--
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg											
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg		8.3	U	8.3	U	--	8.4	U	8.4	U	--
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg		500	U	500	R	--	500	U	500	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg											
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg		9700	J	290	J	188.39	4.4	J	8.4	UJ	200.00
Semivolatiles	Phenol	108-95-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg											
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg		9900	J	490	J	181.14	6.1	J	3.7	J	48.98
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg		170	U	170	U	--	170	U	170	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg											
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg		2.4	U	2.4	U	--					
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg											
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg		5.4	J	2.3	J	80.52					
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg											
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg		34		21		47.27					
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg											
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg		50		38		27.27					
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg											
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg		2.4	U	2.4	R	--					
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg											
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg											

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-050-SA7		SL-050-SA7		RPD	SL-120-SA7		SL-120-SA7		RPD
				Sample Name:	DUP03-SA7-QC-092011		SL-050-SA7-SS-0.0-0.5			DUP04-SA7-QC-092111		SL-120-SA7-SS-0.0-0.5		
				Sample Date	09/20/2011		09/20/2011			09/21/2011		09/21/2011		
				Start Depth:	0		0			0		0		
				End Depth:	0.5		0.5			0.5		0.5		
				Area:	SA7		SA7			SA7		SA7		
				Matrix:	SO		SO			SO		SO		
				Sample Type:	FD		N			FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit										
Inorganic	Aluminum	7429-90-5	6010B	mg/kg	16500		14300		14.29	14700		15300		-4.00
Inorganic	Aluminum	7429-90-5	6020	mg/kg										
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.313	J	0.284	J	9.72	0.264	J	0.261	J	1.14
Inorganic	Arsenic	7440-38-2	6020	mg/kg	6.73	J	5.41	J	21.75	4.81	J	4.05	J	17.16
Inorganic	Barium	7440-39-3	6020	mg/kg	129	J	113	J	13.22	107		101		5.77
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.654	J	0.628	J	4.06	0.578	J	0.550	J	4.96
Inorganic	Boron	7440-42-8	6010B	mg/kg	0.997	J	1.40	J	-33.63	3.78	J	4.77	J	-23.16
Inorganic	Boron	7440-42-8	6020	mg/kg										
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.474	J	0.352	J	29.54	0.499	J	0.466	J	6.84
Inorganic	Calcium	7440-70-2	6010B	mg/kg	9990	J	8680	J	14.03	3990		4560		-13.33
Inorganic	Calcium	7440-70-2	6020	mg/kg										
Inorganic	Chromium	7440-47-3	6020	mg/kg	25.9	J	23.7	J	8.87	21.0	J	20.4	J	2.90
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	0.32	J	0.37	J	-14.49	0.37	J	1.0	UJ	200.00
Inorganic	Cobalt	7440-48-4	6020	mg/kg	8.49	J	8.24	J	2.99	6.80	J	6.02	J	12.17
Inorganic	Copper	7440-50-8	6020	mg/kg	14.8	J	13.1	J	12.19	14.4	J	13.2	J	8.70
Inorganic	Cyanide	57-12-5	9012B	mg/kg	0.49	U	0.53	U	--	0.51	UJ	0.23	J	200.00
Inorganic	Cyanide	57-12-5	9014	mg/kg										
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	2.8	J	3.2		-13.33	1.0	UJ	1.0	UJ	--
Inorganic	Iron	7439-89-6	6010B	mg/kg	24900		22700		9.24	20300		19300		5.05
Inorganic	Iron	7439-89-6	6020	mg/kg										
Inorganic	Lead	7439-92-1	6020	mg/kg	19.8	J	16.3	J	19.39	30.1	J	24.9	J	18.91
Inorganic	Lithium	7439-93-2	6010B	mg/kg	26.1		25.4		2.72	18.8		19.4		-3.14
Inorganic	Lithium	7439-93-2	6020	mg/kg										
Inorganic	Magnesium	7439-95-4	6010B	mg/kg	5480		5040		8.37	3780		4020		-6.15
Inorganic	Magnesium	7439-95-4	6020	mg/kg										
Inorganic	Manganese	7439-96-5	6010B	mg/kg	306		286		6.76	259		289		-10.95
Inorganic	Manganese	7439-96-5	6020	mg/kg										
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.0944	U	0.0997	U	--	0.0233	J	0.0266	J	-13.23
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.499	J	0.467	J	6.63	0.947	J	0.810	J	15.59
Inorganic	Nickel	7440-02-0	6020	mg/kg	20.0	J	17.4	J	13.90	16.6	J	16.4	J	1.21
Inorganic	Nitrate	14797-55-8	300.0	mg/kg	1.4	J	1.3	J	7.41					
Inorganic	Percent Moisture	MOIST	160.3M	%	1.5		1.9		-23.53	2.4		2.5		-4.08
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	30.5	U	30.6	U	--	30.7	U	30.8	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg						5.1	U	5.1	U	--
Inorganic	pH	pH	9045D	pH unit										
Inorganic	pH	pH	9045M	pH unit	8.37		8.20		2.05	5.91		5.91		--
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg	390		392		-0.51	441		445		-0.90
Inorganic	Phosphorus	7723-14-0	6020	mg/kg										
Inorganic	Potassium	7440-09-7	6010B	mg/kg	3300		3130		5.29	3810	J	3920	J	-2.85
Inorganic	Potassium	7440-09-7	6020	mg/kg										
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.148	J	0.127	J	15.27	0.161	J	0.194	J	-18.59
Inorganic	Silver	7440-22-4	6020	mg/kg	0.0672	J	0.0618	J	8.37	0.0652	J	0.0531	J	20.46
Inorganic	Sodium	7440-23-5	6010B	mg/kg	97.4	J	103		-5.59	80.4	J	84.3	J	-4.74
Inorganic	Sodium	7440-23-5	6020	mg/kg										
Inorganic	Strontium	7440-24-6	6010B	mg/kg	28.6		23.7		18.74	20.8		23.2		-10.91
Inorganic	Strontium	7440-24-6	6020	mg/kg										
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.357	J	0.347	J	2.84	0.257	J	0.282	J	-9.28
Inorganic	Tin	7440-31-5	6010B	mg/kg	9.76	U	10.1	U	--	9.95	UJ	10.3	UJ	--
Inorganic	Tin	7440-31-5	6020	mg/kg										
Inorganic	Titanium	7440-32-6	6010B	mg/kg	1190		1200		-0.84	1130		1090		3.60
Inorganic	Titanium	7440-32-6	6020	mg/kg										
Inorganic	Vanadium	7440-62-2	6020	mg/kg	48.6		45.8		5.93	40.1	J	36.9	J	8.31
Inorganic	Zinc	7440-66-6	6020	mg/kg	127		132		-3.86	176		172		2.30
Inorganic	Zirconium	7440-67-7	6010B	mg/kg	3.97	J	3.40	J	15.47	3.13	J	3.08	J	1.61
Inorganic	Zirconium	7440-67-7	6020	mg/kg										
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg	240	U	240	U	--					
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg	240	U	240	U	--					
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg	510	U	510	U	--	510	U	510	U	--
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg	10	U	10	R	--	10	U	10	U	--
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg	510	U	510	U	--	510	U	510	U	--
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg	10	U	10	UJ	--	10	U	10	U	--
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg	1500	U	1500	U	--					
Misc. Organics	HMX	2691-41-0	8330A	ug/kg	300	U	310	U	--					
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	Methanol	67-56-1	8015B	ug/kg	510	U	510	U	--	510	U	510	U	--
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg	3.6	U	3.6	U	--	3.6	U	3.6	U	--
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg	2400	U	2400	U	--					
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg										
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg	3.6	U	3.6	U	--	3.6	U	3.6	U	--
Misc. Organics	PETN	78-11-5	8330A	ug/kg	2400	U	2400	U	--					
Misc. Organics	PETN	78-11-5	8332	ug/kg										
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg	10	U	10	UJ	--	10	U	10	U	--
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg	3.6	U	3.6	U	--	3.6	U	3.6	U	--
Misc. Organics	RDX	121-82-4	8330A	ug/kg	120	U	120	U	--					
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg	120	U	120	U	--					
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg	197		153		25.14	150		179		-17.63
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg	18.9		14.9		23.67	26.8		27.5		-2.58
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg	1.55	J	1.46	J	5.98	2.64	J	2.54	J	3.86
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg	1.77	J	1.11	J	45.83	1.52	J	1.89	J	-21.70
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg	1.68	J	1.24	J	30.14	2.06	J	2.19	J	-6.12
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg	6.18		4.72	J	26.79	5.04		6.23		-21.12
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg	0.999	J	0.699	J	35.34	1.57	J	1.74	J	-10.27
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg	3.59	J	2.71	J	27.94	2.87	J	3.64	J	-23.66
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg	0.405	J	0.364	J	10.66	1.11	J	0.888	J	22.22
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg	1.00	J	0.799	J	22.35	0.940	J	0.906	J	3.68
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg	0.800	J	0.387	J	69.59	0.851	J	0.533	J	45.95
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg	1.19	J	0.941	J	23.37	1.92	J	1.99	J	-3.58
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg	1.83	J	1.39	J	27.33	1.53	J	1.82	J	-17.31
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.250	J	0.236	J	5.76	0.999	U	0.158	J	200.00
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg	0.423	J	0.404	J	4.59	0.460	J	0.789	J	-52.68
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	UJ	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.7	UJ	0.76	J	--	1.7	U	1.7	UJ	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	1.7	U	1.7	U	--	14	J	2.8	J	133.33
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	5.5		4.5		20.00	9.3	J	1.3	J	150.94
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.7	U	1.7	U	--	1.7	U	1.7	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.3	U	3.4	U	--	3.4	U	3.4	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.3	U	3.4	U	--	3.4	U	3.4	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	6.9	J	8.3		-18.42	3.4	UJ	6.1	J	200.00
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg	1800		1560		14.29	1540		1990		-25.50
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg	43.4		35.7		19.47	43.3		52.8		-19.77
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg	9.1	U	9.1	U	--	9.2	UJ	9.2	R	--
Pesticides	2,4 DB	94-82-6	8151A	ug/kg	1.7	UJ	2.2	J	200.00	1.7	UJ	1.7	U	--
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg	0.11	J	0.20	J	-58.06	0.14	J	0.69	J	-132.53
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg	0.17	U	0.17	U	--	0.17	UJ	0.087	J	200.00
Pesticides	2,4-D	94-75-7	8151A	ug/kg	1.3	J	3.6	UJ	200.00	3.7	UJ	3.7	R	--
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg	0.90	UJ	1.7	UJ	--	1.7	U	1.7	U	--
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.3	J	2.1	J	-47.06
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg	1.6	UJ	1.7	UJ	--	4.0	J	10	J	-85.71
Pesticides	Aldrin	309-00-2	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	R	--
Pesticides	Chlordane	57-74-9	8081A	ug/kg	5.8	J	12	J	-69.66	17	UJ	11	J	200.00
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Dicamba	1918-00-9	8151A	ug/kg	1.2	U	1.2	U	--	1.2	UJ	1.2	R	--
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg	1.7	U	1.7	U	--	1.7	UJ	1.7	UJ	--
Pesticides	Dieldrin	60-57-1	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	U	--
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg	2.4	R	2.4	R	--	2.5	R	2.5	R	--
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	R	--
Pesticides	Endrin	72-20-8	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	R	--
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	R	--
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg	0.35	UJ	1.7	UJ	--	1.7	U	1.7	R	--
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Heptachlor	76-44-8	8081A	ug/kg	0.17	UJ	0.85	UJ	--	0.85	U	0.85	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg	0.16	J	0.85	UJ	200.00	0.30	J	0.85	UJ	200.00

Table C-5 - Subarea 7 Field Duplicate Results

					Location:	SL-050-SA7		SL-050-SA7		RPD	SL-120-SA7		SL-120-SA7		RPD
					Sample Name:	DUP03-SA7-QC-092011		SL-050-SA7-SS-0.0-0.5			DUP04-SA7-QC-092111		SL-120-SA7-SS-0.0-0.5		
					Sample Date	09/20/2011		09/20/2011			09/21/2011		09/21/2011		
					Start Depth:	0		0			0		0		
					End Depth:	0.5		0.5			0.5		0.5		
					Area:	SA7		SA7			SA7		SA7		
					Matrix:	SO		SO			SO		SO		
					Sample Type:	FD		N			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg		250	UJ	150	J	200.00	260	UJ	260	R	--
Pesticides	MCPP	93-65-2	8151A	ug/kg		250	U	250	U	--	260	UJ	260	R	--
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg		1.7	UJ	8.5	UJ	--	8.5	U	8.5	U	--
Pesticides	Mirex	2385-85-5	8081A	ug/kg		0.73	UJ	1.7	UJ	--	1.7	U	2.2	U	--
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg		20	UJ	34	UJ	--	81	U	77	U	--
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg											
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg		17	U	8.4	U	--	34	U	34	U	--
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg		5100	U	5100	U	--	26000	U	26000	U	--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg											
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg											
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg		7.1	J	8.4	UJ	200.00	34	U	34	U	--
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg											
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg		1700	U	1700	U	--	8500	U	8500	U	--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg		140	J			--					
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg				17		--	34	U	34	U	--
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg											
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg		4.4	J	2.4	J	58.82	34	U	34	U	--
Semivolatiles	Aniline	62-53-3	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg		430	J			--					
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg				42			34	U	34	U	--
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg		17000	U	17000	U	--	85000	U	85000	U	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg		1300	J	280	J	129.11					
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg							20	J	23	J	-13.95
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg		980	J	220	J	126.67					
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg							29	J	34		-15.87
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg		1400				--					
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg				340		--	89		110		-21.11
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg		590	J	170	J	110.53					
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg							35		24	J	37.29
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg		500	J			--					
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg				170		--	19	J	25	J	-27.27
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg		2500	U	2500	U	--	7300	J	13000	UJ	200.00
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg											
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg		61	J	91	UJ	200.00	160	J	340	J	-72.00
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg											
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg		180	U	91	U	--	360	U	370	U	--
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg		340	J	90	J	116.28	4300	U	4300	U	--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg		1200	J	290	J	122.15					
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg							110		110		--
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg		160	J			--					
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg				19		--	17	J	34	UJ	200.00
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg		98	J	850	UJ	200.00	4300	U	4300	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg											
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg		180	U	91	U	--	360	U	370	U	-2.74
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg											
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg		180	U	91	U	--	360	U	370	U	-2.74
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg											
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg		180	U	91	U	--	360	U	370	U	-2.74
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg											
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg		180	U	91	U	--	360	U	370	U	-2.74
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg		3500	J	740	J	130.19					
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg							75		98		-26.59
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg		150	J			--					
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg				16			34	U	34	U	--
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg		610	J	150	J	121.05					
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg							17	J	14	J	19.35
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg											
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg		22	J	8.5	J	88.52	34	U	34	U	--
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg		338	U	339	U	--					
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg		17	U	8.4	U	--	34	U	34	U	--
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg		2500	U	2500	U	--	13000	U	13000	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg		2400	J	520	J	128.77	470	J			--
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg									57		--
Semivolatiles	Phenol	108-95-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg		2700	J	580	J	129.27					
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg							49		78		-45.67
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg		850	U	850	U	--	4300	U	4300	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg											
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg		61	U	61	U	--	310	U	310	U	--
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg											
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg		54	J	35	J	42.70	310	U	310	U	--
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg											
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg		370		230		46.67	1000		1200		-18.18
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg											
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg		1200		1000		18.18	3300		3700		-11.43
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg											
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg		61	U	61	U	--	310	U	310	U	--
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg											
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg											

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-015-SA7		SL-015-SA7		RPD	SL-102-SA7		SL-102-SA7		RPD
				Sample Name:	DUP05-SA7-QC-092211		SL-015-SA7-SS-0.0-0.5			DUP07-SA7-QC-092611		SL-102-SA7-SB-4.0-5.0		
				Sample Date	09/22/2011		09/22/2011			09/26/2011		09/26/2011		
				Start Depth:	0		0			4		4		
				End Depth:	0.5		0.5			5		5		
				Area:	SA7		SA7			SA7		SA7		
				Matrix:	SO		SO			SO		SO		
				Sample Type:	FD		N			FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit										
Inorganic	Aluminum	7429-90-5	6010B	mg/kg	16400		14600		11.61	15000		18400		-20.36
Inorganic	Aluminum	7429-90-5	6020	mg/kg										
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.106	J	0.146	J	-31.75	0.101	J	0.143	J	-34.43
Inorganic	Arsenic	7440-38-2	6020	mg/kg	4.97	J	4.72	J	5.16	5.03		5.43	J	-7.65
Inorganic	Barium	7440-39-3	6020	mg/kg	103		87.7		16.05	97.0	J	100	J	-3.05
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.590	J	0.644	J	-8.75	0.701		0.765	J	-8.73
Inorganic	Boron	7440-42-8	6010B	mg/kg	7.36		8.65		-16.11	5.75		6.49		-12.09
Inorganic	Boron	7440-42-8	6020	mg/kg										
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.191	J	0.233	J	-19.81	0.0854	J	0.0840	J	1.65
Inorganic	Calcium	7440-70-2	6010B	mg/kg	2950		2810		4.86	3920		3550		9.91
Inorganic	Calcium	7440-70-2	6020	mg/kg										
Inorganic	Chromium	7440-47-3	6020	mg/kg	19.6	J	21.5	J	-9.25	16.0		19.8		-21.23
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	0.22	J	0.98	UJ	200.00	1.1	U	1.0	U	--
Inorganic	Cobalt	7440-48-4	6020	mg/kg	6.15	J	5.90	J	4.15	5.63	J	6.22	J	-9.96
Inorganic	Copper	7440-50-8	6020	mg/kg	8.30	J	8.45	J	-1.79	6.64	J	8.32	J	-22.46
Inorganic	Cyanide	57-12-5	9012B	mg/kg	0.49	U	0.50	U	--					
Inorganic	Cyanide	57-12-5	9014	mg/kg										
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	4.0	J	4.0	J	--	2.5	J	2.4	J	4.08
Inorganic	Iron	7439-89-6	6010B	mg/kg	20300		20900		-2.91	18600		19100		-2.65
Inorganic	Iron	7439-89-6	6020	mg/kg										
Inorganic	Lead	7439-92-1	6020	mg/kg	8.16	J	9.31	J	-13.17	6.25	J	6.21	J	0.64
Inorganic	Lithium	7439-93-2	6010B	mg/kg	25.1		23.1		8.30	23.8		24.2		-1.67
Inorganic	Lithium	7439-93-2	6020	mg/kg										
Inorganic	Magnesium	7439-95-4	6010B	mg/kg	5030		4660		7.64	4210		4270		-1.42
Inorganic	Magnesium	7439-95-4	6020	mg/kg										
Inorganic	Manganese	7439-96-5	6010B	mg/kg	273		267		2.22	231		230		0.43
Inorganic	Manganese	7439-96-5	6020	mg/kg										
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.0144	J	0.0071	J	67.91	0.103	UJ	0.103	UJ	--
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.529	J	0.540	J	-2.06	0.525		0.592	J	-12.00
Inorganic	Nickel	7440-02-0	6020	mg/kg	11.3	J	11.6	J	-2.62	10.3	J	12.2	J	-16.89
Inorganic	Nitrate	14797-55-8	300.0	mg/kg						3.5		2.4		37.29
Inorganic	Percent Moisture	MOIST	160.3M	%	1.1		1.3		-16.67	5.1		4.6		10.31
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	30.3	U	30.4	U	--	31.6	U	31.4	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg										
Inorganic	pH	pH	9045D	pH unit										
Inorganic	pH	pH	9045M	pH unit	6.99		7.00		-0.14	7.81		8.19		-4.75
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg	297		303		-2.00	265		273		-2.97
Inorganic	Phosphorus	7723-14-0	6020	mg/kg										
Inorganic	Potassium	7440-09-7	6010B	mg/kg	2700	J	2460	J	9.30	2640		2780		-5.17
Inorganic	Potassium	7440-09-7	6020	mg/kg										
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.172	J	0.169	J	1.76	0.0995	J	0.133	J	-28.82
Inorganic	Silver	7440-22-4	6020	mg/kg	0.0407	J	0.0743	J	-58.43	0.0266	J	0.0211	J	23.06
Inorganic	Sodium	7440-23-5	6010B	mg/kg	96.1	J	88.2	J	8.57	107		130		-19.41
Inorganic	Sodium	7440-23-5	6020	mg/kg										
Inorganic	Strontium	7440-24-6	6010B	mg/kg	16.4		15.4		6.29	18.1		15.5		15.48
Inorganic	Strontium	7440-24-6	6020	mg/kg										
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.281	J	0.270	J	3.99	0.288		0.356	J	-21.12
Inorganic	Tin	7440-31-5	6010B	mg/kg	9.91	U	10.1	U	--	10.2	U	10.4	U	--
Inorganic	Tin	7440-31-5	6020	mg/kg										
Inorganic	Titanium	7440-32-6	6010B	mg/kg	1300		1250		3.92	1080		1160		-7.14
Inorganic	Titanium	7440-32-6	6020	mg/kg										
Inorganic	Vanadium	7440-62-2	6020	mg/kg	38.5	J	39.2	J	-1.80	34.1	J	42.3	J	-21.47
Inorganic	Zinc	7440-66-6	6020	mg/kg	60.2	J	59.8	J	0.67	66.6	J	71.1		-6.54
Inorganic	Zirconium	7440-67-7	6010B	mg/kg	3.01	J	2.73	J	9.76	0.923	J	5.19	U	200.00
Inorganic	Zirconium	7440-67-7	6020	mg/kg										
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg										
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg										
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg										
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg										
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg										
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg										
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg										
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg										
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg	510	U	510	U	--	530	U	520	U	--
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg										
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg										
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg										
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg	10	U	10	R	--	11	U	10	UJ	--
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg	510	U	510	U	--	530	U	520	U	--
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg	10	U	10	UJ	--	11	U	10	UJ	--
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg						1600	U	1600	U	--
Misc. Organics	HMX	2691-41-0	8330A	ug/kg										
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg										
Misc. Organics	Methanol	67-56-1	8015B	ug/kg	250	J	510	UJ	200.00	530	U	520	U	--
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg	3.5	U	3.5	U	--	3.7	U	3.7	U	--
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg										
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg	3.5	U	3.5	U	--	3.7	U	3.7	U	--
Misc. Organics	PETN	78-11-5	8330A	ug/kg										
Misc. Organics	PETN	78-11-5	8332	ug/kg										
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg	10	U	10	UJ	--	11	U	10	U	--
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg	3.5	U	3.5	U	--	3.7	U	3.7	U	--
Misc. Organics	RDX	121-82-4	8330A	ug/kg										
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg										
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg	8.25		8.65		-4.73	5.20	UJ	5.14	UJ	--
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg	1.38	J	1.57	J	-12.88	5.20	U	5.14	U	--
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg	0.172	J	0.163	J	5.37	5.20	UJ	5.14	UJ	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg	0.0625	J	0.0792	J	-23.57	5.20	U	5.14	U	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg	0.443	J	0.577	J	-26.27	5.20	UJ	5.14	UJ	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg	0.289	J	0.393	J	-30.50	5.20	U	5.14	U	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg	0.140	J	0.148	J	-5.56	5.20	U	5.14	U	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg	0.260	J	0.289	J	-10.56	5.20	UJ	0.142	J	200.00
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg	0.0669	J	4.83	UJ	200.00	0.0562	J	5.14	UJ	200.00
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg	4.98	UJ	4.83	UJ	--	5.20	U	5.14	U	--
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg	0.658	J	0.857	J	-26.27	5.20	U	5.14	U	--
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg	0.185	J	0.147	J	22.89	0.0346	J	5.14	U	200.00
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg	0.204	J	0.172	J	17.02	5.20	U	5.14	U	--
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.995	U	0.967	U	--	1.04	U	1.03	U	--
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg	0.0992	J	0.0680	J	37.32	1.04	U	1.03	U	--
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	1.6	J	2.0	J	-22.22	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	1.7		1.9	J	-11.11	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.7	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.3	U	3.3	U	--	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.3	U	3.3	U	--	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	2.6	J	3.7	J	-34.92	3.5	U	3.5	U	--
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg	114		113		0.88	2.39	J	5.11	J	-72.53
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg	3.21	J	3.90	J	-19.41	10.4	U	10.3	U	--
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg	9.1	U	9.1	U	--					
Pesticides	2,4 DB	94-82-6	8151A	ug/kg	5.1	U	6.8	U	--					
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg	0.17	U	0.17	U	--					
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg	0.17	U	0.17	U	--					
Pesticides	2,4-D	94-75-7	8151A	ug/kg	3.6	U	3.6	U	--					
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg	0.34	U	0.34	R	--					
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg	7.0		7.5		-6.90					
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg	0.90		0.93		-3.28					
Pesticides	Aldrin	309-00-2	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Chlordane	57-74-9	8081A	ug/kg	3.4	U	3.4	U	--					
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Dicamba	1918-00-9	8151A	ug/kg	1.2	UJ	0.69	J	200.00					
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg	1.7	U	1.7	U	--					
Pesticides	Dieldrin	60-57-1	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg	2.4	U	2.4	U	--					
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Endrin	72-20-8	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg	0.34	U	0.34	U	--					
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Heptachlor	76-44-8	8081A	ug/kg	0.17	U	0.17	U	--					
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg	0.17	U	0.17	U	--					

Table C-5 - Subarea 7 Field Duplicate Results

					Location	SL-015-SA7		SL-015-SA7		RPD	SL-102-SA7		SL-102-SA7		RPD
					Sample Name:	DUP05-SA7-QC-092211		SL-015-SA7-SS-0.0-0.5			DUP07-SA7-QC-092611		SL-102-SA7-SB-4.0-5.0		
					Sample Date	09/22/2011		09/22/2011			09/26/2011		09/26/2011		
					Start Depth:	0		0			4		4		
					End Depth:	0.5		0.5			5		5		
					Area:	SA7		SA7			SA7		SA7		
					Matrix:	SO		SO			SO		SO		
					Sample Type:	FD		N			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg		650	J	1900	J	-98.04					
Pesticides	MCPP	93-65-2	8151A	ug/kg		250	U	250	U	--					
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg		1.7	U	1.7	U	--					
Pesticides	Mirex	2385-85-5	8081A	ug/kg		0.34	U	0.34	U	--					
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg		6.7	U	6.7	U	--					
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg											
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	U	1.7	U	--
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg		990	U	1000	UJ	--	1100	U	1000	R	--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg									1700	U	--
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg											
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	U	1.7	U	--
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg									1700	U	--
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg		330	U	330	U	--	350	U	350	U	--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg											
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	1.4	J	200.00
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg											
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	1.2	J	200.00
Semivolatiles	Aniline	62-53-3	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg											
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	2.9	J	200.00
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg		3300	U	3300	R	--	3500	U	3500	UJ	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg											
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	2.9	J	200.00
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg											
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	2.9	J	200.00
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg											
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg		0.77	J	1.7	UJ	200.00	1.7	UJ	3.2	J	200.00
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg											
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.1	J	200.00
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg											
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.1	J	200.00
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg		21	J			--					
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg				8.9	J	--	19	U	19	U	--
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg											
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg		29	J	18	UJ	200.00	19	U	19	U	--
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg											
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg		0.35	J	1.7	UJ	200.00	1.7	UJ	2.9	J	200.00
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg											
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.0	J	200.00
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg											
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg		18	U	18	U	--	19	U	19	U	--
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg											
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg		18	U	18	U	--	19	U	19	U	--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg											
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg		18	U	18	U	--	19	U	19	U	--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg											
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg		18	U	18	U	--	19	U	19	U	--
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg											
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.1	J	200.00
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg											
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	2.4	J	200.00
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg											
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.0	J	200.00
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg											
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	U	1.7	U	--
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg							35.1	U	34.6	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	U	1.7	U	--
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg		500	U	500	U	--	530	U	520	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg											
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	2.9	J	200.00
Semivolatiles	Phenol	108-95-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg											
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg		1.7	U	1.7	U	--	1.7	UJ	3.0	J	200.00
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg		170	U	170	U	--	180	U	170	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg											
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg		1.2	U	1.2	U	--	1.3	U	1.3	U	--
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg											
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg		1.2	UJ	0.79	J	200.00	1.3	U	1.3	U	--
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg											
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg		3.5	J	6.8	J	-64.08	2.6	U	2.1	UJ	--
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg											
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg		11		17		-42.86	4.4	U	5.5	UJ	--
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg											
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg		1.2	U	1.2	U	--	1.3	U	1.3	U	--
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg											
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg							1.0	U	1.0	U	--

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-125-SA7		SL-125-SA7		RPD	SL-103-SA7		SL-103-SA7		RPD
				Sample Name:	DUP08-SA7-QC-092611		SL-125-SA7-SB-4.0-5.0			DUP-09-SA7-QC-092711		SL-103-SA7-SB-4.0-5.0		
				Sample Date	09/26/2011		09/26/2011			09/27/2011		09/27/2011		
				Start Depth:	4		4			4		4		
				End Depth:	5		5			5		5		
				Area:	SA7		SA7			SA7		SA7		
				Matrix:	SO		SO			SO		SO		
				Sample Type:	FD		N			FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit										
Inorganic	Aluminum	7429-90-5	6010B	mg/kg	11600		11500		0.87	14100		13700		2.88
Inorganic	Aluminum	7429-90-5	6020	mg/kg										
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.131	J	0.170	J	-25.91	0.200	UJ	0.0944	J	200.00
Inorganic	Arsenic	7440-38-2	6020	mg/kg	5.28		4.63		13.12	3.84		3.85		-0.26
Inorganic	Barium	7440-39-3	6020	mg/kg	113	J	103	J	9.26	76.0		76.5		-0.66
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.610		0.595		2.49	0.425		0.500		-16.22
Inorganic	Boron	7440-42-8	6010B	mg/kg	5.05		5.22		-3.31	6.69		6.93		-3.52
Inorganic	Boron	7440-42-8	6020	mg/kg										
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.128	J	0.124	J	3.17	0.0950	J	0.0906	J	4.74
Inorganic	Calcium	7440-70-2	6010B	mg/kg	2570		3440		-28.95	4210	J	5170	J	-20.47
Inorganic	Calcium	7440-70-2	6020	mg/kg										
Inorganic	Chromium	7440-47-3	6020	mg/kg	20.7		17.6		16.19	14.4		15.1		-4.75
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	0.37	J	1.0	UJ	200.00	1.0	U	1.0	U	--
Inorganic	Cobalt	7440-48-4	6020	mg/kg	7.32	J	5.98	J	20.15	4.59		4.75		-3.43
Inorganic	Copper	7440-50-8	6020	mg/kg	9.30	J	8.11	J	13.67	7.00		7.14		-1.98
Inorganic	Cyanide	57-12-5	9012B	mg/kg										
Inorganic	Cyanide	57-12-5	9014	mg/kg										
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	1.7	J	1.6	J	6.06	2.4	J	3.7	J	-42.62
Inorganic	Iron	7439-89-6	6010B	mg/kg	18500		18500		--	18700		18300		2.16
Inorganic	Iron	7439-89-6	6020	mg/kg										
Inorganic	Lead	7439-92-1	6020	mg/kg	6.44	J	5.24	J	20.55	4.51		4.80		-6.23
Inorganic	Lithium	7439-93-2	6010B	mg/kg	24.6		25.2		-2.41	24.0		23.5		2.11
Inorganic	Lithium	7439-93-2	6020	mg/kg										
Inorganic	Magnesium	7439-95-4	6010B	mg/kg	4400		4360		0.91	4320		4200		2.82
Inorganic	Magnesium	7439-95-4	6020	mg/kg										
Inorganic	Manganese	7439-96-5	6010B	mg/kg	248		276		-10.69	255		259		-1.56
Inorganic	Manganese	7439-96-5	6020	mg/kg										
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.0998	U	0.0962	U	--	0.101	UJ	0.101	UJ	--
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.613		0.430		35.09	0.445		0.615		-32.08
Inorganic	Nickel	7440-02-0	6020	mg/kg	14.2	J	11.9	J	17.62	9.02		9.34		-3.49
Inorganic	Nitrate	14797-55-8	300.0	mg/kg						1.6	UJ	1.7	J	200.00
Inorganic	Percent Moisture	MOIST	160.3M	%	3.0		2.0		40.00	3.9		4.6		-16.47
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	30.9	U	30.6	U	--	31.2	U	31.4	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg										
Inorganic	pH	pH	9045D	pH unit										
Inorganic	pH	pH	9045M	pH unit	7.75		7.64		1.43	8.32		8.37		-0.60
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg	360		326		9.91	378		356		5.99
Inorganic	Phosphorus	7723-14-0	6020	mg/kg										
Inorganic	Potassium	7440-09-7	6010B	mg/kg	2640		2720		-2.99	2720		2670		1.86
Inorganic	Potassium	7440-09-7	6020	mg/kg										
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.127	J	0.171	J	-29.53	0.139	J	0.160	J	-14.05
Inorganic	Silver	7440-22-4	6020	mg/kg	0.0356	J	0.0200	J	56.12	0.100	UJ	0.0234	J	200.00
Inorganic	Sodium	7440-23-5	6010B	mg/kg	68.3	J	65.5	J	4.19	81.8	J	103		-22.94
Inorganic	Sodium	7440-23-5	6020	mg/kg										
Inorganic	Strontium	7440-24-6	6010B	mg/kg	11.2		11.5		-2.64	17.9	J	26.2	J	-37.64
Inorganic	Strontium	7440-24-6	6020	mg/kg										
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.349		0.318		9.30	0.258		0.240		7.23
Inorganic	Tin	7440-31-5	6010B	mg/kg	10.0	U	9.81	U	--	9.91	U	10.3	U	--
Inorganic	Tin	7440-31-5	6020	mg/kg										
Inorganic	Titanium	7440-32-6	6010B	mg/kg	1030		1040		-0.97	1140		1050		8.22
Inorganic	Titanium	7440-32-6	6020	mg/kg										
Inorganic	Vanadium	7440-62-2	6020	mg/kg	42.5	J	36.3	J	15.74	31.5		30.5		3.23
Inorganic	Zinc	7440-66-6	6020	mg/kg	89.8	J	73.9	J	19.43	50.8		52.9		-4.05
Inorganic	Zirconium	7440-67-7	6010B	mg/kg	1.04	J	1.22	J	-15.93	1.13	J	1.38	J	-19.92
Inorganic	Zirconium	7440-67-7	6020	mg/kg										
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg										
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg										
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg										
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg										
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg										
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg										
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg										
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg										
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg						520	U	520	U	--
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg										
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg										
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg										
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg						10	U	10	UJ	--
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg						520	U	520	U	--
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg						10	U	10	UJ	--
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg						1600	U	1600	U	--
Misc. Organics	HMX	2691-41-0	8330A	ug/kg										
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg										
Misc. Organics	Methanol	67-56-1	8015B	ug/kg						520	U	520	U	--
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg						3.6	U	3.7	U	--
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg										
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg										
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg						3.6	U	3.7	U	--
Misc. Organics	PETN	78-11-5	8330A	ug/kg										
Misc. Organics	PETN	78-11-5	8332	ug/kg										
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg						10	U	10	UJ	--
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg						3.6	U	3.7	U	--
Misc. Organics	RDX	121-82-4	8330A	ug/kg										
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg										
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg	2.58	J	1.27	J	68.05	15.1		11.8		24.54
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg	5.06	UJ	4.97	UJ	--	1.41	J	5.03	U	200.00
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg	5.06	UJ	4.97	UJ	--	5.08	UJ	5.03	UJ	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg	0.0705	J	4.97	UJ	200.00	0.0890	J	0.0855	J	4.01
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg	0.279	J	4.97	UJ	200.00	5.08	U	5.03	U	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg	5.06	U	4.97	U	--	0.399	J	0.353	J	12.23
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg	5.06	UJ	4.97	UJ	--	5.08	U	5.03	U	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg	0.132	J	0.0831	J	45.47	0.272	J	0.218	J	22.04
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg	0.0855	J	0.0347	J	84.53	5.08	U	5.03	U	--
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg	5.06	UJ	0.288	J	200.00	0.0313	J	0.0312	J	0.32
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg	5.06	UJ	4.97	UJ	--	5.08	U	5.03	U	--
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg	0.0411	J	0.0294	J	33.19	5.08	U	5.03	U	--
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg	5.06	U	4.97	U	--	5.08	U	5.03	U	--
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.01	U	0.995	U	--	0.0238	J	1.01	UJ	200.00
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg	1.01	U	0.995	U	--	1.02	UJ	0.0315	J	200.00
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	1.8	UJ	0.92	J	200.00	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	1.8	U	1.7	U	--	1.8	UJ	0.47	J	200.00
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.8	U	1.7	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.4	U	3.4	U	--	3.4	U	3.5	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.4	U	3.4	U	--	3.4	U	3.5	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	3.4	U	3.4	U	--	3.4	U	3.5	U	--
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg	22.4	J	11.5	J	64.31	150		117	J	24.72
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg	1.19	J	9.95	UJ	200.00	3.19	J	2.22	J	35.86
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg										
Pesticides	2,4 DB	94-82-6	8151A	ug/kg										
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg										
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg										
Pesticides	2,4-D	94-75-7	8151A	ug/kg										
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg										
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg										
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg										
Pesticides	Aldrin	309-00-2	8081A	ug/kg										
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg										
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg										
Pesticides	Chlordane	57-74-9	8081A	ug/kg										
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg										
Pesticides	Dicamba	1918-00-9	8151A	ug/kg										
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg										
Pesticides	Dieldrin	60-57-1	8081A	ug/kg										
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg										
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg										
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg										
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg										
Pesticides	Endrin	72-20-8	8081A	ug/kg										
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg										
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg										
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg										
Pesticides	Heptachlor	76-44-8	8081A	ug/kg										
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg										

Table C-5 - Subarea 7 Field Duplicate Results

					Location	SL-125-SA7		SL-125-SA7		RPD	SL-103-SA7		SL-103-SA7		RPD
					Sample Name:	DUP08-SA7-QC-092611		SL-125-SA7-SB-4.0-5.0			DUP-09-SA7-QC-092711		SL-103-SA7-SB-4.0-5.0		
					Sample Date	09/26/2011		09/26/2011			09/27/2011		09/27/2011		
					Start Depth:	4		4			4		4		
					End Depth:	5		5			5		5		
					Area:	SA7		SA7			SA7		SA7		
					Matrix:	SO		SO			SO		SO		
					Sample Type:	FD		N			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg											
Pesticides	MCPP	93-65-2	8151A	ug/kg											
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg											
Pesticides	Mirex	2385-85-5	8081A	ug/kg											
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg											
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg											
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg	1000	U	1000	R	--	1000	U	1000	U	--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg	1700	U			--	1700	U	1700	U	--
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg											
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg	1700	U			--	1700	U	1700	U	--
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg	340	U	330	UJ	--	350	U	340	U	--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg	170	U	170	R	--	170	U	170	U	--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg	520	U	500	U	--	520	U	520	U	--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg	170	U	170	UJ	--	170	U	170	U	--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg	520	U	500	U	--	520	U	520	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg											
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg											
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Aniline	62-53-3	8270C	ug/kg	520	U	500	R	--	520	U	520	U	--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg											
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg	3400	U	3300	R	--	3500	U	3400	UJ	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg											
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg	1.4	J	7.6	J	-137.78	0.76	J	1.7	UJ	200.00
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg											
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg	2.5	J	15	J	-142.86	1.0	J	1.7	UJ	200.00
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg											
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg	3.3	J	51	J	-175.69	2.4		2.1		13.33
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg			51	J	--					
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg	0.92	J			--	1.0	J	1.7	UJ	200.00
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg											
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg	1.5	J	17	UJ	200.00	1.7	U	1.7	U	--
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg	520	U	500	R	--	520	U	520	R	--
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg	520	U	500	U	--	520	U	520	U	--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg	170	U	170	R	--	170	U	170	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg			330	U	--					
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg	19	U			--	19	UJ	55	J	200.00
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg			170	U	--					
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg	19	U			--	19	U	19	U	--
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg			52	J	--					
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg	1.8				--	1.5	J	0.48	J	103.03
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg											
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg	1.7	UJ	9.0	J	200.00	1.7	U	1.7	U	--
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg			170	U	--					
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg	19	U			--	19	U	19	U	--
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg			170	U	--					
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg	19	U			--	19	U	19	U	--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg			170	U	--	35	J			--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg	19	U			--			19	U	--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg			170	U	--					
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg	19	U			--	19	U	19	U	--
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg											
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg	0.74	J	17	UJ	200.00	1.0	J	1.7	UJ	200.00
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg											
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg	520	U	500	U	--	520	U	520	U	--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg											
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg	0.87	J	17	UJ	200.00	1.7	U	1.7	U	--
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg											
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg						34.7	U	349	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg	520	U	500	U	--	520	U	520	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg											
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg	1.7	U	17	U	--	1.7	U	1.7	U	--
Semivolatiles	Phenol	108-95-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg											
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg	1.0	J	10	J	-163.64	1.5	J	1.7	UJ	200.00
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg	170	U	170	U	--	170	U	170	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg											
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg						6.2	U	1.3	U	130.67
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg											
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg						6.2	UJ	0.60	J	200.00
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg											
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg						17	J	8.7	J	64.59
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg											
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg						60	J	24	J	85.71
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg											
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg						6.2	U	1.3	U	200.00
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg											
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg						1	U	1.1	U	-9.52

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-089-SA7		SL-089-SA7		RPD	SL-175-SA7		SL-175-SA7		RPD
				Sample Name:	DUP09-SA7-QC-101311		SL-089-SA7-SB-3.5-4.5			DUP-01-SA7-QC-110111		SL-175-SA7-SB-4.0-5.0		
				Sample Date	10/13/2011		10/13/2011			11/01/2011		11/01/2011		
				Start Depth:	3.5		3.5			4		4		
				End Depth:	4.5		4.5			5		5		
				Area:	SA7		SA7			SA7		SA7		
				Matrix:	SO		SO			SO		SO		
				Sample Type:	FD		N			FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit										
Inorganic	Aluminum	7429-90-5	6010B	mg/kg	13800		14200		-2.86					
Inorganic	Aluminum	7429-90-5	6020	mg/kg						10600		12500		-16.45
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.218	UJ	0.153	J	200.00	0.139	J	0.146	J	-4.91
Inorganic	Arsenic	7440-38-2	6020	mg/kg	4.70		4.29		9.12	4.67		5.39		-14.31
Inorganic	Barium	7440-39-3	6020	mg/kg	100	J	96.4	J	3.67	60.0		66.1		-9.67
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.650		0.548		17.03	0.486		0.549		-12.17
Inorganic	Boron	7440-42-8	6010B	mg/kg	5.44	U	5.45	U	--					
Inorganic	Boron	7440-42-8	6020	mg/kg						5.18	U	5.09	U	--
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.0996	J	0.0810	J	20.60	0.119		0.123		-3.31
Inorganic	Calcium	7440-70-2	6010B	mg/kg	3810		3860		-1.30					
Inorganic	Calcium	7440-70-2	6020	mg/kg						2270		2360		-3.89
Inorganic	Chromium	7440-47-3	6020	mg/kg	22.6	J	19.6	J	14.22	15.3	J	15.8	J	-3.22
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	1.1	U	1.1	U	--	1.05	U	1.05	U	--
Inorganic	Cobalt	7440-48-4	6020	mg/kg	7.69	J	6.53	J	16.32	4.28	J	4.02	J	6.27
Inorganic	Copper	7440-50-8	6020	mg/kg	10.7	J	9.47	J	12.20	4.91	J	5.13	J	-4.38
Inorganic	Cyanide	57-12-5	9012B	mg/kg	0.56	U	0.56	U	--					
Inorganic	Cyanide	57-12-5	9014	mg/kg						0.523	U	0.524	U	--
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	2.3	J	2.5	J	-8.33	2.24		2.18		2.71
Inorganic	Iron	7439-89-6	6010B	mg/kg	22600	J	22900	J	-1.32					
Inorganic	Iron	7439-89-6	6020	mg/kg						15200		16200		-6.37
Inorganic	Lead	7439-92-1	6020	mg/kg	6.46	J	5.14	J	22.76	4.34		5.06		-15.32
Inorganic	Lithium	7439-93-2	6010B	mg/kg	28.7		31.3		-8.67					
Inorganic	Lithium	7439-93-2	6020	mg/kg						20.3		19.8		2.49
Inorganic	Magnesium	7439-95-4	6010B	mg/kg	6610		6880		-4.00					
Inorganic	Magnesium	7439-95-4	6020	mg/kg						3300		3350		-1.50
Inorganic	Manganese	7439-96-5	6010B	mg/kg	320		340		-6.06					
Inorganic	Manganese	7439-96-5	6020	mg/kg						223		218		2.27
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.111	UJ	0.107	UJ	--	0.104	U	0.105	U	--
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.383		0.301		23.98	0.432		0.499		-14.39
Inorganic	Nickel	7440-02-0	6020	mg/kg	14.9	J	13.1	J	12.86	7.92	J	7.73	J	2.43
Inorganic	Nitrate	14797-55-8	300.0	mg/kg	4.3		4.3		--					
Inorganic	Percent Moisture	MOIST	160.3M	%	10.8		11.8		-8.85			3.9		
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	33.6	U	34.0	U	--	20.9	U	21.0	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg										
Inorganic	pH	pH	9045D	pH unit						8.15		8.07		0.99
Inorganic	pH	pH	9045M	pH unit	7.83		7.86		-0.38					
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg	447		493		-9.79					
Inorganic	Phosphorus	7723-14-0	6020	mg/kg						280	J	280	J	--
Inorganic	Potassium	7440-09-7	6010B	mg/kg	2440	J	2680	J	-9.38					
Inorganic	Potassium	7440-09-7	6020	mg/kg						2500	J	2430	J	2.84
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.191	J	0.184	J	3.73	0.414	U	0.407	U	--
Inorganic	Silver	7440-22-4	6020	mg/kg	0.0387	J	0.0383	J	1.04	0.104	U	0.102	U	--
Inorganic	Sodium	7440-23-5	6010B	mg/kg	116		134		-14.40					
Inorganic	Sodium	7440-23-5	6020	mg/kg						55.0	J	58.6	J	-6.34
Inorganic	Strontium	7440-24-6	6010B	mg/kg	13.3		14.3		-7.25					
Inorganic	Strontium	7440-24-6	6020	mg/kg						11.3		13.4		-17.00
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.301		0.277		8.30	0.253	U	0.255	U	--
Inorganic	Tin	7440-31-5	6010B	mg/kg	10.9	U	10.9	U	--					
Inorganic	Tin	7440-31-5	6020	mg/kg						10.4	U	10.2	U	--
Inorganic	Titanium	7440-32-6	6010B	mg/kg	1300		1370		-5.24					
Inorganic	Titanium	7440-32-6	6020	mg/kg						875		892		-1.92
Inorganic	Vanadium	7440-62-2	6020	mg/kg	45.1	J	38.8	J	15.02	22.4		25.0		-10.97
Inorganic	Zinc	7440-66-6	6020	mg/kg	68.3		62.3		9.19	48.0		55.4		-14.31
Inorganic	Zirconium	7440-67-7	6010B	mg/kg	0.813	J	1.02	J	-22.59					
Inorganic	Zirconium	7440-67-7	6020	mg/kg						5.18	UJ	5.09	UJ	--
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg	270	U	270	U	--					
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg	270	U	270	U	--					
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg	560	U	570	U	--	520	U	520	U	--
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg	11	U	11	UJ	--	16	U	16	U	--
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg	560	U	570	U	--	520	U	520	U	--
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg	11	U	11	U	--	10	U	10	U	--
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg	1700	U	1700	U	--					
Misc. Organics	HMX	2691-41-0	8330A	ug/kg	340	U	340	U	--					
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	Methanol	67-56-1	8015B	ug/kg	560	U	570	U	--	520	U	520	U	--
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg	3.9	U	4.0	U	--			3.6	U	--
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg	2700	U	2700	U	--					
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg										
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg	3.9	U	4.0	U	--			3.6	U	--
Misc. Organics	PETN	78-11-5	8330A	ug/kg	2700	U	2700	U	--					
Misc. Organics	PETN	78-11-5	8332	ug/kg										
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg	11	U	11	U	--	10	U	10	U	--
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg	3.9	U	4.0	U	--			3.6	U	--
Misc. Organics	RDX	121-82-4	8330A	ug/kg	130	U	140	U	--					
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg	130	U	140	U	--					
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg	4.45	J	4.64	J	-4.18			9.35		--
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg	0.789	J	0.936	J	-17.04			5.19	U	--
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg	5.59	U	5.60	U	--			5.19	U	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg	5.59	U	5.60	U	--			0.156	J	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg	0.244	J	0.328	J	-29.37			5.19	U	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg	5.59	U	0.253	J	200.00			0.475	J	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg	5.59	U	5.60	U	--			5.19	U	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg	5.59	U	5.60	U	--			0.454	J	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg	5.59	UJ	5.60	UJ	--			5.19	U	--
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg	5.59	UJ	5.60	UJ	--			5.19	U	--
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg	5.59	U	5.60	U	--			0.272	J	--
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg	5.59	U	5.60	U	--			5.19	U	--
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg	5.59	U	5.60	U	--			5.19	U	--
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.0366	J	1.12	UJ	200.00			0.0899	J	--
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg	0.0570	J	0.0780	J	-31.11			0.0745	J	--
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.9	UJ	1.9	UJ	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.9	UJ	1.9	UJ	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.9	UJ	1.9	UJ	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	1.5	J	1.9	UJ	200.00	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	0.90	J	1.9	UJ	200.00	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.7	U	3.7	U	--	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.7	U	3.7	U	--	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	14	J	3.7	UJ	200.00	3.5	U	3.5	U	--
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg	39.5		44.4		-11.68			98.4		--
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg	2.24	J	2.37	J	-5.64			1.92	J	--
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg										
Pesticides	2,4 DB	94-82-6	8151A	ug/kg										
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg										
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg										
Pesticides	2,4-D	94-75-7	8151A	ug/kg										
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg										
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg										
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg										
Pesticides	Aldrin	309-00-2	8081A	ug/kg										
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg										
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg										
Pesticides	Chlordane	57-74-9	8081A	ug/kg										
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg										
Pesticides	Dicamba	1918-00-9	8151A	ug/kg										
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg										
Pesticides	Dieldrin	60-57-1	8081A	ug/kg										
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg										
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg										
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg										
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg										
Pesticides	Endrin	72-20-8	8081A	ug/kg										
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg										
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg										
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg										
Pesticides	Heptachlor	76-44-8	8081A	ug/kg										
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg										

Table C-5 - Subarea 7 Field Duplicate Results

					Location	SL-089-SA7		SL-089-SA7		RPD	SL-175-SA7		SL-175-SA7		RPD
					Sample Name:	DUP09-SA7-QC-101311		SL-089-SA7-SB-3.5-4.5			DUP-01-SA7-QC-110111		SL-175-SA7-SB-4.0-5.0		
					Sample Date	10/13/2011		10/13/2011			11/01/2011		11/01/2011		
					Start Depth:	3.5		3.5			4		4		
					End Depth:	4.5		4.5			5		5		
					Area:	SA7		SA7			SA7		SA7		
					Matrix:	SO		SO			SO		SO		
					Sample Type:	FD		N			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg											
Pesticides	MCPP	93-65-2	8151A	ug/kg											
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg											
Pesticides	Mirex	2385-85-5	8081A	ug/kg											
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg											
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg						170	U	180	U	--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg	1100	U	1100	U	--	350	U	350	U	--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg						170	U	180	U	--
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg						170	U	180	U	--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg						170	U	180	U	--
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg	370	U	370	U	--	170	U	180	U	--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg	180	U	190	R	--	170	U	180	U	--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg	550	U	560	U	--	350	U	350	U	--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg	550	U	560	U	--	350	U	350	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	Aniline	62-53-3	8270C	ug/kg	550	U	560	U	--	350	U	350	U	--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg	3700	U	3700	U	--	1000	U	1000	U	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg	8.7	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg	14	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg	18	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg	9.0	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg	6.6	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg	550	U	560	U	--	700	U	700	U	--
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg	550	U	560	U	--	170	U	180	U	--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg			28	J	--	170	U	180	U	--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg	28	J			--	16	J	18	UJ	200.00
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg	20	U	20	U	--	17	U	18	U	--
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg	10	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg	2.2	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg	20	U	20	U	--	17	U	18	U	--
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg	20	U	20	U	--	17	U	18	U	--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg	20	U	20	U	--	17	U	18	U	--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg	20	U	20	U	--	17	U	18	U	--
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg	8.7	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg	550	U	560	U	--	700	U	700	U	--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg	8.3	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg	36.9	U	37.5	U	--					
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg	1.9	U	1.9	U	--	1.8	U	1.8	U	--
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg	550	U	560	U	--	350	U	350	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg	1.0	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Phenol	108-95-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg						170	U	180	U	--
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg	8.9	J	1.9	UJ	200.00	1.8	U	1.8	U	--
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg	180	U	190	U	--	170	U	180	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg						1.0	U	1.0	U	--
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	1.3	U	1.4	U	--					
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg						1.0	U	1.0	U	--
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	0.63	J	0.59	J	6.56					
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg						0.99	J	2.2	J	-75.86
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	2.3		2.5		-8.33					
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg						0.70	J	1.9	J	-92.31
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	6.4		6.2	J	3.17					
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg						1.1	J	0.64	J	52.87
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	1.3	UJ	0.58	J	200.00					
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg						1.1	U			--
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg	1.1	UJ	0.3	J	200.00					

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-5 - Subarea 7 Field Duplicate Results

				Location	SL-048-SA7		SL-048-SA7		RPD
				Sample Name:	DUP02-SA7-QC-110211		SL-048-SA7-SB-9.0-10.0		
				Sample Date	11/02/2011		11/02/2011		
				Start Depth:	9		9		
				End Depth:	10		10		
				Area:	SA7		SA7		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Inorganic	Aluminum	7429-90-5	6010B	mg/kg					
Inorganic	Aluminum	7429-90-5	6020	mg/kg	9950	J	10800	J	-8.19
Inorganic	Antimony	7440-36-0	6020	mg/kg	0.137	J	0.145	J	-5.67
Inorganic	Arsenic	7440-38-2	6020	mg/kg	2.92		2.87		1.73
Inorganic	Barium	7440-39-3	6020	mg/kg	75.3		85.2		-12.34
Inorganic	Beryllium	7440-41-7	6020	mg/kg	0.454		0.442		2.68
Inorganic	Boron	7440-42-8	6010B	mg/kg					
Inorganic	Boron	7440-42-8	6020	mg/kg	5.17	U	5.14	U	--
Inorganic	Cadmium	7440-43-9	6020	mg/kg	0.119	J	0.205	J	-53.09
Inorganic	Calcium	7440-70-2	6010B	mg/kg					
Inorganic	Calcium	7440-70-2	6020	mg/kg	1940	J	1970	J	-1.53
Inorganic	Chromium	7440-47-3	6020	mg/kg	14.5		14.6		-0.69
Inorganic	Chromium VI	18540-29-9	7199	mg/kg	1.06	U	1.05	U	--
Inorganic	Cobalt	7440-48-4	6020	mg/kg	3.77		3.99		-5.67
Inorganic	Copper	7440-50-8	6020	mg/kg	4.25	J	6.95	J	-48.21
Inorganic	Cyanide	57-12-5	9012B	mg/kg					
Inorganic	Cyanide	57-12-5	9014	mg/kg	0.530	U	0.527	U	--
Inorganic	Fluoride	16984-48-8	300.0	mg/kg	2.08		1.77		16.10
Inorganic	Iron	7439-89-6	6010B	mg/kg					
Inorganic	Iron	7439-89-6	6020	mg/kg	15600		18600		-17.54
Inorganic	Lead	7439-92-1	6020	mg/kg	3.83		3.70		3.45
Inorganic	Lithium	7439-93-2	6010B	mg/kg					
Inorganic	Lithium	7439-93-2	6020	mg/kg	21.4		23.6		-9.78
Inorganic	Magnesium	7439-95-4	6010B	mg/kg					
Inorganic	Magnesium	7439-95-4	6020	mg/kg	3240	J	4130	J	-24.15
Inorganic	Manganese	7439-96-5	6010B	mg/kg					
Inorganic	Manganese	7439-96-5	6020	mg/kg	191		299		-44.08
Inorganic	Mercury	7439-97-6	7471A	mg/kg	0.105	U	0.105	U	--
Inorganic	Molybdenum	7439-98-7	6020	mg/kg	0.373		0.454		-19.59
Inorganic	Nickel	7440-02-0	6020	mg/kg	7.41	J	8.98	J	-19.16
Inorganic	Nitrate	14797-55-8	300.0	mg/kg	1.20	J	1.31	J	-8.76
Inorganic	Percent Moisture	MOIST	160.3M	%			5.2		
Inorganic	Perchlorate	14797-73-0	314.0	ug/kg	21.2	U	21.1	U	--
Inorganic	Perchlorate	14797-73-0	6850	ug/kg					
Inorganic	pH	pH	9045D	pH unit	7.65		7.71		-0.78
Inorganic	pH	pH	9045M	pH unit					
Inorganic	Phosphorus	7723-14-0	6010B	mg/kg					
Inorganic	Phosphorus	7723-14-0	6020	mg/kg	244	J	391	J	-46.30
Inorganic	Potassium	7440-09-7	6010B	mg/kg					
Inorganic	Potassium	7440-09-7	6020	mg/kg	2200	J	3330	J	-40.87
Inorganic	Selenium	7782-49-2	6020	mg/kg	0.414	U	0.411	U	--
Inorganic	Silver	7440-22-4	6020	mg/kg	0.103	U	0.103	U	--
Inorganic	Sodium	7440-23-5	6010B	mg/kg					
Inorganic	Sodium	7440-23-5	6020	mg/kg	72.4	J	91.9	J	-23.74
Inorganic	Strontium	7440-24-6	6010B	mg/kg					
Inorganic	Strontium	7440-24-6	6020	mg/kg	12.7		14.0		-9.74
Inorganic	Thallium	7440-28-0	6020	mg/kg	0.215	U	0.219		200.00
Inorganic	Tin	7440-31-5	6010B	mg/kg					
Inorganic	Tin	7440-31-5	6020	mg/kg	10.3	U	10.3	U	--
Inorganic	Titanium	7440-32-6	6010B	mg/kg					
Inorganic	Titanium	7440-32-6	6020	mg/kg	901		957		-6.03
Inorganic	Vanadium	7440-62-2	6020	mg/kg	23.2	J	25.8	J	-10.61
Inorganic	Zinc	7440-66-6	6020	mg/kg	46.7		54.4		-15.23
Inorganic	Zirconium	7440-67-7	6010B	mg/kg					
Inorganic	Zirconium	7440-67-7	6020	mg/kg	5.17	UJ	5.14	UJ	--
Misc. Organics	1,3,5-Trinitrobenzene	99-35-4	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2,4,6-Trinitrotoluene	118-96-7	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2,4-Diamino-6-nitrotoluene	6629-29-4	8330A	ug/kg	200	U	200	U	--
Misc. Organics	2,4-Dinitrotoluene	121-14-2	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2,6-Diamino-4-nitrotoluene	59229-75-3	8330A	ug/kg	200	U	200	U	--
Misc. Organics	2,6-Dinitrotoluene	606-20-2	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2-Amino-4,6-Dinitrotoluene	35572-78-2	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2-Nitrotoluene	88-72-2	8330A	ug/kg	99	U	99	U	--
Misc. Organics	2-Propanol	67-63-0	8015B	ug/kg	530	U	530	U	--
Misc. Organics	3-Nitrotoluene	99-08-1	8330A	ug/kg	99	U	99	U	--
Misc. Organics	4-Amino-2,6-Dinitrotoluene	19406-51-0	8330A	ug/kg	99	U	99	U	--
Misc. Organics	4-Nitrotoluene	99-99-0	8330A	ug/kg	99	U	99	U	--
Misc. Organics	Diethylene Glycol	111-46-6	8015M	mg/kg	16	U	16	U	--
Misc. Organics	Ethanol	64-17-5	8015B	ug/kg	530	U	530	U	--
Misc. Organics	Ethylene Glycol	107-21-1	8015M	mg/kg	11	U	11	U	--
Misc. Organics	Formaldehyde	50-00-0	8315A	ug/kg			1600	U	--
Misc. Organics	HMX	2691-41-0	8330A	ug/kg	99	U	99	U	--
Misc. Organics	m-Dinitrobenzene	99-65-0	8330A	ug/kg	99	U	99	U	--
Misc. Organics	Methanol	67-56-1	8015B	ug/kg	530	U	530	U	--
Misc. Organics	m-Terphenyl	92-06-8	8015B	mg/kg			3.7	U	--
Misc. Organics	Nitrobenzene	98-95-3	8330A	ug/kg	99	U	99	U	--
Misc. Organics	Nitroglycerin	55-63-0	8330A	ug/kg					
Misc. Organics	Nitroglycerin	55-63-0	8332	ug/kg	990	U	990	U	--
Misc. Organics	o-Terphenyl	84-15-1	8015B	mg/kg			3.7	U	--
Misc. Organics	PETN	78-11-5	8330A	ug/kg					
Misc. Organics	PETN	78-11-5	8332	ug/kg	990	U	990	U	--
Misc. Organics	Propylene glycol	57-55-6	8015M	mg/kg	11	U	11	U	--
Misc. Organics	p-Terphenyl	92-94-4	8015B	mg/kg			3.7	U	--
Misc. Organics	RDX	121-82-4	8330A	ug/kg	99	U	99	U	--
Misc. Organics	Tetryl	479-45-8	8330A	ug/kg	99	U	99	U	--
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	ng/kg			2.79	J	--
PCBs and Dioxins	1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDD	39227-28-6	1613B	ng/kg			0.0366	J	--
PCBs and Dioxins	1,2,3,4,7,8-HxCDF	70648-26-9	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDD	57653-85-7	1613B	ng/kg			0.118	J	--
PCBs and Dioxins	1,2,3,6,7,8-HxCDF	57117-44-9	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDD	19408-74-3	1613B	ng/kg			0.140	J	--
PCBs and Dioxins	1,2,3,7,8,9-HxCDF	72918-21-9	1613B	ng/kg			0.167	J	--
PCBs and Dioxins	1,2,3,7,8-PeCDD	40321-76-4	1613B	ng/kg			0.0414	J	--
PCBs and Dioxins	1,2,3,7,8-PeCDF	57117-41-6	1613B	ng/kg			0.0987	J	--
PCBs and Dioxins	2,3,4,6,7,8-HxCDF	60851-34-5	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	2,3,4,7,8-PeCDF	57117-31-4	1613B	ng/kg			5.13	U	--
PCBs and Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg			1.03	U	--
PCBs and Dioxins	2,3,7,8-TCDF	51207-31-9	1613B	ng/kg			1.03	U	--
PCBs and Dioxins	Aroclor 1016	12674-11-2	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1221	11104-28-2	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1232	11141-16-5	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1242	53469-21-9	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1248	12672-29-6	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1254	11097-69-1	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1260	11096-82-5	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1262	37324-23-5	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 1268	11100-14-4	8082	ug/kg	1.8	U	1.8	U	--
PCBs and Dioxins	Aroclor 5432	63496-31-1	8082	ug/kg	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5442	12642-23-8	8082	ug/kg	3.5	U	3.5	U	--
PCBs and Dioxins	Aroclor 5460	11126-42-4	8082	ug/kg	3.5	U	3.5	U	--
PCBs and Dioxins	OCDD	3268-87-9	1613B	ng/kg			33.4		--
PCBs and Dioxins	OCDF	39001-02-0	1613B	ng/kg			0.735	J	--
Pesticides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	ug/kg					
Pesticides	2,4 DB	94-82-6	8151A	ug/kg					
Pesticides	2,4,5-T	93-76-5	8151A	ug/kg					
Pesticides	2,4,5-TP	93-72-1	8151A	ug/kg					
Pesticides	2,4-D	94-75-7	8151A	ug/kg					
Pesticides	4,4'-DDD	72-54-8	8081A	ug/kg					
Pesticides	4,4'-DDE	72-55-9	8081A	ug/kg					
Pesticides	4,4'-DDT	50-29-3	8081A	ug/kg					
Pesticides	Aldrin	309-00-2	8081A	ug/kg					
Pesticides	Alpha-BHC	319-84-6	8081A	ug/kg					
Pesticides	Beta-BHC	319-85-7	8081A	ug/kg					
Pesticides	Chlordane	57-74-9	8081A	ug/kg					
Pesticides	Delta-BHC	319-86-8	8081A	ug/kg					
Pesticides	Dicamba	1918-00-9	8151A	ug/kg					
Pesticides	Dichlorprop	120-36-5	8151A	ug/kg					
Pesticides	Dieldrin	60-57-1	8081A	ug/kg					
Pesticides	Dinitrobutyl Phenol	88-85-7	8151A	ug/kg					
Pesticides	Endosulfan I	959-98-8	8081A	ug/kg					
Pesticides	Endosulfan II	33213-65-9	8081A	ug/kg					
Pesticides	Endosulfan Sulfate	1031-07-8	8081A	ug/kg					
Pesticides	Endrin	72-20-8	8081A	ug/kg					
Pesticides	Endrin Aldehyde	7421-93-4	8081A	ug/kg					
Pesticides	Endrin Ketone	53494-70-5	8081A	ug/kg					
Pesticides	Gamma-BHC (Lindane)	58-89-9	8081A	ug/kg					
Pesticides	Heptachlor	76-44-8	8081A	ug/kg					
Pesticides	Heptachlor Epoxide	1024-57-3	8081A	ug/kg					

Table C-5 - Subarea 7 Field Duplicate Results

					Location			SL-048-SA7		SL-048-SA7		RPD
					Sample Name:			DUP02-SA7-QC-110211		SL-048-SA7-SB-9.0-10.0		
					Sample Date			11/02/2011		11/02/2011		
					Start Depth:			9		9		
					End Depth:			10		10		
					Area:			SA7		SA7		
					Matrix:			SO		SO		
					Sample Type:			FD		N		
Pesticides	MCPA	94-74-6	8151A	ug/kg								
Pesticides	MCPP	93-65-2	8151A	ug/kg								
Pesticides	Methoxychlor	72-43-5	8081A	ug/kg								
Pesticides	Mirex	2385-85-5	8081A	ug/kg								
Pesticides	Toxaphene	8001-35-2	8081A	ug/kg								
Semivolatiles	1,2,4-Trichlorobenzene	120-82-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1,2-Dichlorobenzene	95-50-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1,2-Diphenylhydrazine	122-66-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1,3-Dichlorobenzene	541-73-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1,4-Dichlorobenzene	106-46-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C	ug/kg	180	U		180	U			--
Semivolatiles	1-Methylnaphthalene	90-12-0	8270C SIM	ug/kg	1.3	J		1.8	UJ			200.00
Semivolatiles	2,4,5-Trichlorophenol	95-95-4	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2,4,6-Trichlorophenol	88-06-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2,4-Dichlorophenol	120-83-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2,4-Dimethylphenol	105-67-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2,4-Dinitrophenol	51-28-5	8270C	ug/kg	350	U		350	U			--
Semivolatiles	2,4-Dinitrotoluene	121-14-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2,6-Dinitrotoluene	606-20-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-butoxy-Ethanol	111-76-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Chloronaphthalene	91-58-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Chlorophenol	95-57-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Methylnaphthalene	91-57-6	8270C SIM	ug/kg	1.4	J		1.8	UJ			200.00
Semivolatiles	2-Methylphenol	95-48-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Nitroaniline	88-74-4	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-Nitrophenol	88-75-5	8270C	ug/kg	180	U		180	U			--
Semivolatiles	2-phenoxy-Ethanol	122-99-6	8270C	ug/kg	180	U		180	U			--
Semivolatiles	3,3`-Dichlorobenzidine	91-94-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	3,5-Dimethylphenol	108-68-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	3-Nitroaniline	99-09-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4,6-Dinitro-2-Methylphenol	534-52-1	8270C	ug/kg	350	U		350	U			--
Semivolatiles	4-Bromophenyl Phenyl Ether	101-55-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Chloro-3-Methylphenol	59-50-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Chloroaniline	106-47-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Chlorophenyl Phenylether	7005-72-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Methylphenol	106-44-5	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Nitroaniline	100-01-6	8270C	ug/kg	180	U		180	U			--
Semivolatiles	4-Nitrophenol	100-02-7	8270C	ug/kg	350	U		350	U			--
Semivolatiles	Acenaphthene	83-32-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Acenaphthene	83-32-9	8270C SIM	ug/kg	1.2	J		1.8	UJ			200.00
Semivolatiles	Acenaphthylene	208-96-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Acenaphthylene	208-96-8	8270C SIM	ug/kg	1.2	J		1.8	UJ			200.00
Semivolatiles	Aniline	62-53-3	8270C	ug/kg	350	U		350	U			--
Semivolatiles	Anthracene	120-12-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Anthracene	120-12-7	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzidine	92-87-5	8270C	ug/kg	1100	U		1100	UJ			--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Benzo(a)anthracene	56-55-3	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Benzo(a)pyrene	50-32-8	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Benzo(b)fluoranthene	205-99-2	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Benzo(g,h,i)perylene	191-24-2	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Benzo(k)fluoranthene	207-08-9	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Benzoic Acid	65-85-0	8270C	ug/kg	710	U		700	U			--
Semivolatiles	Benzyl Alcohol	100-51-6	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Bis(2-Chloroethoxy) methane	111-91-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Bis(2-Chloroethyl) ether	111-44-4	8270C	ug/kg	180	U		180	U			--
Semivolatiles	bis(2-Chloroisopropyl) ether	39638-32-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Bis(2-Ethylhexyl) phthalate	117-81-7	8270C SIM	ug/kg	22	J		18	UJ			200.00
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Butylbenzylphthalate	85-68-7	8270C SIM	ug/kg	18	U		18	U			--
Semivolatiles	Carbazole	86-74-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Chrysene	218-01-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Chrysene	218-01-9	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Dibenzo(a,h)anthracene	53-70-3	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Dibenzofuran	132-64-9	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Diethylphthalate	84-66-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Diethylphthalate	84-66-2	8270C SIM	ug/kg	18	U		18	U			--
Semivolatiles	Dimethylphthalate	131-11-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Dimethylphthalate	131-11-3	8270C SIM	ug/kg	18	U		18	U			--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Di-n-Butylphthalate	84-74-2	8270C SIM	ug/kg	18	U		18	U			--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Di-N-Octyl Phthalate	117-84-0	8270C SIM	ug/kg	18	U		18	U			--
Semivolatiles	Fluoranthene	206-44-0	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Fluoranthene	206-44-0	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Fluorene	86-73-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Fluorene	86-73-7	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Hexachlorobenzene	118-74-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Hexachlorobutadiene	87-68-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Hexachlorocyclopentadiene	77-47-4	8270C	ug/kg	710	U		700	U			--
Semivolatiles	Hexachloroethane	67-72-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Indeno(1,2,3-Cd)Pyrene	193-39-5	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Isophorone	78-59-1	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Naphthalene	91-20-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Naphthalene	91-20-3	8270C SIM	ug/kg	1.7	J		1.8	UJ			200.00
Semivolatiles	Nitrobenzene	98-95-3	8270C	ug/kg	180	U		180	U			--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	1625C	ng/kg				352	U			--
Semivolatiles	N-Nitrosodimethylamine	62-75-9	8270C SIM	ug/kg	1.9	J		1.8	UJ			200.00
Semivolatiles	N-Nitroso-Di-N-Propylamine	621-64-7	8270C	ug/kg	180	U		180	U			--
Semivolatiles	N-Nitrosodiphenylamine	86-30-6	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Pentachlorophenol	87-86-5	8270C	ug/kg	350	U		350	U			--
Semivolatiles	Phenanthrene	85-01-8	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Phenanthrene	85-01-8	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Phenol	108-95-2	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Pyrene	129-00-0	8270C	ug/kg	180	U		180	U			--
Semivolatiles	Pyrene	129-00-0	8270C SIM	ug/kg	1.8	U		1.8	U			--
Semivolatiles	Tetralin	119-64-2	8270C	ug/kg	180	U		180	U			--
Volatiles	EFH (C12-C14)	PHCC12C14	8015B EFH	mg/kg	1.1	U		1.1	U			--
Volatiles	EFH (C12-C14)	PHCC12C14	8015M	mg/kg								
Volatiles	EFH (C15-C20)	PHCC15C20	8015B EFH	mg/kg	1.1	U		1.1	U			--
Volatiles	EFH (C15-C20)	PHCC15C20	8015M	mg/kg								
Volatiles	EFH (C21-C30)	PHCC21C30	8015B EFH	mg/kg	1.6			1.1				37.04
Volatiles	EFH (C21-C30)	PHCC21C30	8015M	mg/kg								
Volatiles	EFH (C30-C40)	PHCC30C40	8015B EFH	mg/kg	1.0	J		0.78	J			24.72
Volatiles	EFH (C30-C40)	PHCC30C40	8015M	mg/kg								
Volatiles	EFH (C8-C11)	PHCC8C11	8015B EFH	mg/kg	1.2	J		0.59	J			68.16
Volatiles	EFH (C8-C11)	PHCC8C11	8015M	mg/kg								
Volatiles	GRO (C5-C12)	GROC5C12	8015B GRO	mg/kg	0.77	J						--
Volatiles	GRO (C5-C12)	GROC5C12	8015M	mg/kg								

ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results

Table C-6 Summary of Data Completeness Following Data Validation – Subarea 7

	Number of Analyte Detections Without Qualifiers	Number of Estimated Results	Number of Rejected Results	Number of Nondetect Results	Number of Estimated Nondetect Results	Total Analytes Detect and Nondetect	Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected
Dioxins	666	2010		1667	26	4269	100
NDMA		3		78		81	100
Formaldehyde		8		73		81	100
Cyanide	2	3	1	127		133	99.25
Fluoride, Nitrate	106	137		37	62	342	100
Hexavalent Chromium	20	120		133	3	276	100
Mercury	2	78		173	4	257	100
Metals – 6010B	2317	566		446	3	3332	100
Metals – 6020	1109	3063	3	114	89	4378	99.93
Perchlorate-314				257		257	100
Perchlorate-6850		2		33		35	100
Alcohols, terphenyls	26	51		1145	17	1239	100
Energetics				844	2	846	100
Total Petroleum Hydrocarbons, glycols	330	121	12	1057	37	1557	99.23
PCBs/PCTs	220	172		2605	87	3084	100
Pesticides	117	176	34	1870	218	2415	98.6
Herbicides	62	51	88	944	5	1150	92.4
Semivolatiles	97	303	27	13017	69	13501	99.8
Semivolatiles SIM	841	621	2	4312	44	5832	99.96
Volatiles	1	6		188	6	201	100
Volatiles SIM				3		3	100
Completeness Total for All Subarea 7 Samples Collected and Judged Valid							**99.62**

SAMPLE DELIVERY GROUP

11K007

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	3550B	8015B EFH	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	3550B	8082	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	3550B	8270C	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	3550B	8270C SIM	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	7471A	7471A	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	300.0	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	314.0	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	6020	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	8015B	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	8015M	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	8330A	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	8332	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03	N	GEN PREP	9014	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03R	N	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-4.0-5.0	K008-03T	N	GEN PREP	6020	IV
31-Oct-2011	SL-120-SA7-SB-4.5	K008-02	N	5035	8015B GRO	IV
31-Oct-2011	SL-120-SA7-SB-4.5	K008-02	N	5035	8260B	IV
31-Oct-2011	SL-120-SA7-SB-4.5	K008-02	N	5035	8260B SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.5	K008-04	N	5035	8015B GRO	IV
31-Oct-2011	SL-120-SA7-SB-9.5	K008-04	N	5035	8260B	IV
31-Oct-2011	SL-120-SA7-SB-9.5	K008-04	N	5035	8260B SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.5MS	K008-04M	MS	5035	8015B GRO	IV
31-Oct-2011	SL-120-SA7-SB-9.5MS	K008-04M	MS	5035	8260B	IV
31-Oct-2011	SL-120-SA7-SB-9.5MS	K008-04M	MS	5035	8260B SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.5MSD	K008-04S	MSD	5035	8015B GRO	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	SL-120-SA7-SB-9.5MSD	K008-04S	MSD	5035	8260B	IV
31-Oct-2011	SL-120-SA7-SB-9.5MSD	K008-04S	MSD	5035	8260B SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	3550B	8015B EFH	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	3550B	8082	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	3550B	8270C	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	3550B	8270C SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	7471A	7471A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	300.0	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	314.0	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	8015B	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	8015M	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	8330A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	8332	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05	N	GEN PREP	9014	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05G	MS	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05G1	MS	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05H	MSD	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05H1	MSD	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	3550B	8015B EFH	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	3550B	8082	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	3550B	8270C	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	3550B	8270C SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	7471A	7471A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	300.0	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	314.0	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	6020	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	8015B	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	8015M	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	8330A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	8332	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M	MS	GEN PREP	9014	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MS	K008-05M1	MS	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05R	N	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	3550B	8015B EFH	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	3550B	8082	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	3550B	8270C	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	3550B	8270C SIM	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	7471A	7471A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	300.0	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	314.0	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	6020	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	8015B	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	8015M	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	8330A	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	8332	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S	MSD	GEN PREP	9014	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0MSD	K008-05S1	MSD	GEN PREP	7199	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05T	N	GEN PREP	6020	IV
31-Oct-2011	SL-120-SA7-SB-9.0-10.0	K008-05W	N	GEN PREP	6020	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	3550B	8015B EFH	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	3550B	8082	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	3550B	8270C	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	3550B	8270C SIM	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	7471A	7471A	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	300.0	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	314.0	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	6020	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	7199	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	8015B	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	8015M	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07	N	GEN PREP	9014	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07R	N	GEN PREP	7199	IV
31-Oct-2011	SL-121-SA7-SB-4.0-5.0	K008-07T	N	GEN PREP	6020	IV
31-Oct-2011	SL-121-SA7-SB-4.5	K008-06	N	5035	8015B GRO	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	3550B	8015B EFH	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	3550B	8082	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	3550B	8270C	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	3550B	8270C SIM	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	7471A	7471A	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	300.0	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	314.0	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	6020	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	7199	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	8015B	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	8015M	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09	N	GEN PREP	9014	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09R	N	GEN PREP	7199	IV
31-Oct-2011	SL-121-SA7-SB-9.0-10.0	K008-09T	N	GEN PREP	6020	IV
31-Oct-2011	SL-121-SA7-SB-9.5	K008-08	N	5035	8015B GRO	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	3550B	8082	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	3550B	8270C	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	3550B	8270C SIM	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	7471A	7471A	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	GEN PREP	300.0	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	GEN PREP	314.0	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	GEN PREP	6020	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01	N	GEN PREP	7199	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01R	N	GEN PREP	7199	IV
31-Oct-2011	SL-001-SA7-SB-4.0-5.0	K008-01T	N	GEN PREP	6020	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	3550B	8015B EFH	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	3550B	8082	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	3550B	8270C	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	3550B	8270C SIM	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	7471A	7471A	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	300.0	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	314.0	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	6020	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	7199	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	8015B	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	8015M	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16	N	GEN PREP	9014	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16R	N	GEN PREP	7199	IV
01-Nov-2011	SL-175-SA7-SB-4.0-5.0	K008-16T	N	GEN PREP	6020	IV
01-Nov-2011	SL-175-SA7-SB-4.5	K008-15	N	5035	8015B GRO	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	3550B	8015B EFH	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	3550B	8082	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	3550B	8270C	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	3550B	8270C SIM	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	5035	8015B GRO	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	7471A	7471A	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	300.0	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	314.0	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	6020	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	7199	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	8015B	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	8015M	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20	FD	GEN PREP	9014	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20R	FD	GEN PREP	7199	IV
01-Nov-2011	DUP-01-SA7-QC-110111	K008-20T	FD	GEN PREP	6020	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	3550B	8015B EFH	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	3550B	8082	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	3550B	8270C	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	3550B	8270C SIM	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	7471A	7471A	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	300.0	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	314.0	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	6020	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	7199	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	8015B	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	8015M	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18	N	GEN PREP	9014	IV
01-Nov-2011	SL-175-SA7-SB-9.0-10.0	K008-18R	N	GEN PREP	7199	IV
01-Nov-2011	SL-175-SA7-SB-9.5	K008-17	N	5035	8015B GRO	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	3520C	8015B EFH	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	3520C	8082	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	3520C	8270C	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	5030B	8260B	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	5030B	8260B SIM	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	7470A	7470A	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	300.0	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	314.0	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	7199	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	8015B	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	8015M	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	8330A	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	8332	IV
01-Nov-2011	FB-SA7-110111	K007-01	FB	GEN PREP	9014	IV
01-Nov-2011	FB-SA7-110111	K007-01R	FB	5030B	8015B GRO	IV
01-Nov-2011	FB-SA7-110111	K007-01W	FB	GEN PREP	6020	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	3550B	8015B EFH	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	3550B	8082	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	3550B	8270C	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	3550B	8270C SIM	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	7471A	7471A	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	300.0	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	314.0	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	6020	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	6850	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	7199	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	8015B	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	8015M	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11	N	GEN PREP	9014	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11R	N	GEN PREP	7199	IV
01-Nov-2011	SL-123-SA7-SB-4.0-5.0	K008-11T	N	GEN PREP	6020	IV
01-Nov-2011	SL-123-SA7-SB-4.5	K008-10	N	5035	8015B GRO	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	3550B	8015B EFH	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	3550B	8082	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	3550B	8270C	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	3550B	8270C SIM	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	7471A	7471A	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	300.0	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	314.0	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	6020	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	7199	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	8015B	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	8015M	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13	N	GEN PREP	9014	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13R	N	GEN PREP	7199	IV
01-Nov-2011	SL-123-SA7-SB-9.0-10.0	K008-13T	N	GEN PREP	6020	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Nov-2011	SL-123-SA7-SB-9.5	K008-12	N	5035	8015B GRO	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	3550B	8082	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	3550B	8270C	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	3550B	8270C SIM	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	7471A	7471A	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	GEN PREP	300.0	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	GEN PREP	314.0	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	GEN PREP	6020	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14	N	GEN PREP	7199	IV
01-Nov-2011	SL-160-SA7-SB-0.0-1.0	K008-14R	N	GEN PREP	7199	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	3550B	8082	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	3550B	8270C	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	3550B	8270C SIM	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	7471A	7471A	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	GEN PREP	300.0	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	GEN PREP	314.0	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	GEN PREP	6020	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19	N	GEN PREP	7199	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19R	N	GEN PREP	7199	IV
01-Nov-2011	SL-185-SA7-SB-3.0-4.0	K008-19T	N	GEN PREP	6020	IV
01-Nov-2011	TB-110111	K008-21	TB	5030B	8260B	IV
01-Nov-2011	TB-110111	K008-21	TB	5030B	8260B SIM	IV
01-Nov-2011	TB-110111	K008-21R	TB	5030B	8015B GRO	IV
02-Nov-2011	TB-110211	K021-07R	TB	5030B	8015B GRO	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	3550B	8015B EFH	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	3550B	8082	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	3550B	8270C	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	3550B	8270C SIM	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	7471A	7471A	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	300.0	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	314.0	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	6850	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	8015B	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	8015M	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	8330A	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	8332	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02	N	GEN PREP	9014	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02R	N	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-4.0-5.0	K021-02T	N	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-4.5	K021-01	N	5035	8015B GRO	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	3550B	8015B EFH	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	3550B	8082	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	5035	8015B GRO	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	7471A	7471A	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	300.0	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	314.0	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	7199	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	8015B	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	8015M	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	8330A	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	8332	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06	FD	GEN PREP	9014	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06R	FD	GEN PREP	7199	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06T	FD	GEN PREP	6020	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06W	FD	3550B	8270C	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06W	FD	3550B	8270C SIM	IV
02-Nov-2011	DUP02-SA7-QC-110211	K021-06W	FD	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	3550B	8015B EFH	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	3550B	8082	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	3550B	8270C	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	3550B	8270C SIM	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	7471A	7471A	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	300.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	314.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	8015B	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	8015M	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	8330A	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	8332	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04	N	GEN PREP	9014	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04G	MS	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04G1	MS	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04H	MSD	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04H1	MSD	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	3550B	8015B EFH	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	3550B	8082	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	3550B	8270C	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	3550B	8270C SIM	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	7471A	7471A	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	300.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	314.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	8015B	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	8015M	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	8330A	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	8332	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M	MS	GEN PREP	9014	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MS	K021-04M1	MS	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04R	N	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	3550B	8015B EFH	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	3550B	8082	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	3550B	8270C	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	3550B	8270C SIM	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	7471A	7471A	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	300.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	314.0	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	8015B	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	8015M	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	8330A	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	8332	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S	MSD	GEN PREP	9014	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0MSD	K021-04S1	MSD	GEN PREP	7199	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04T	N	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-9.0-10.0	K021-04W	N	GEN PREP	6020	IV
02-Nov-2011	SL-048-SA7-SB-9.5	K021-03	N	5035	8015B GRO	IV
02-Nov-2011	SL-048-SA7-SB-9.5MS	K021-03M	MS	5035	8015B GRO	IV
02-Nov-2011	SL-048-SA7-SB-9.5MSD	K021-03S	MSD	5035	8015B GRO	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	3550B	8082	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	7471A	7471A	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	GEN PREP	300.0	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	GEN PREP	314.0	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	GEN PREP	6020	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05	N	GEN PREP	7199	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05R	N	GEN PREP	7199	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05T	N	GEN PREP	6020	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05W	N	3550B	8270C	IV
02-Nov-2011	SL-161-SA7-SB-4.0-5.0	K021-05W	N	3550B	8270C SIM	IV
03-Nov-2011	TB-110311	K036-11	TB	5030B	8015B GRO	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	3550B	8015B EFH	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	3550B	8082	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	3550B	8270C	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	3550B	8270C SIM	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	7471A	7471A	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	GEN PREP	300.0	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	GEN PREP	314.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	GEN PREP	7199	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02	N	GEN PREP	8015B	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02R	N	GEN PREP	7199	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02T	N	GEN PREP	6020	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02W	N	GEN PREP	6020	IV
03-Nov-2011	SL-108-SA7-SB-2.9-3.9	K036-02W	N	GEN PREP	8015M	IV
03-Nov-2011	SL-108-SA7-SB-3.3	K036-01	N	5035	8015B GRO	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	3550B	8015B EFH	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	3550B	8082	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	3550B	8270C	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	3550B	8270C SIM	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	7471A	7471A	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	GEN PREP	300.0	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	GEN PREP	314.0	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	GEN PREP	7199	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	GEN PREP	8015B	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04	N	GEN PREP	8015M	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04R	N	GEN PREP	7199	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04T	N	GEN PREP	6020	IV
03-Nov-2011	SL-128-SA7-SB-4.0-5.0	K036-04W	N	GEN PREP	6020	IV
03-Nov-2011	SL-128-SA7-SB-4.5	K036-03	N	5035	8015B GRO	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	3550B	8015B EFH	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	3550B	8082	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	3550B	8270C	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	3550B	8270C SIM	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	7471A	7471A	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	GEN PREP	300.0	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	GEN PREP	314.0	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	GEN PREP	7199	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	GEN PREP	8015B	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06	N	GEN PREP	8015M	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06R	N	GEN PREP	7199	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06T	N	GEN PREP	6020	IV
03-Nov-2011	SL-128-SA7-SB-9.0-10.0	K036-06W	N	GEN PREP	6020	IV
03-Nov-2011	SL-128-SA7-SB-9.5	K036-05	N	5035	8015B GRO	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	3550B	8015B EFH	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	3550B	8082	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	3550B	8270C	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	3550B	8270C SIM	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	7471A	7471A	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	GEN PREP	300.0	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	GEN PREP	314.0	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	GEN PREP	7199	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	GEN PREP	8015B	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08	N	GEN PREP	8015M	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08R	N	GEN PREP	7199	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08T	N	GEN PREP	6020	IV
03-Nov-2011	SL-171-SA7-SB-4.0-5.0	K036-08W	N	GEN PREP	6020	IV
03-Nov-2011	SL-171-SA7-SB-4.5	K036-07	N	5035	8015B GRO	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	3550B	8015B EFH	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	3550B	8082	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	3550B	8270C	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	3550B	8270C SIM	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	7471A	7471A	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	GEN PREP	300.0	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	GEN PREP	314.0	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	GEN PREP	7199	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	GEN PREP	8015B	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10	N	GEN PREP	8015M	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10R	N	GEN PREP	7199	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10T	N	GEN PREP	6020	IV
03-Nov-2011	SL-171-SA7-SB-9.0-10.0	K036-10W	N	GEN PREP	6020	IV
03-Nov-2011	SL-171-SA7-SB-9.5	K036-09	N	5035	8015B GRO	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	3520C	8015B EFH	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	3520C	8082	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	3520C	8270C	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	5030B	8015B GRO	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	5030B	8260B	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	5030B	8260B SIM	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	7470A	7470A	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	300.0	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	314.0	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	7199	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	8015B	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	8015M	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	8330A	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	8332	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01	EB	GEN PREP	9014	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	EB-SA7-SB-110311	K037-01R	EB	GEN PREP	7199	IV
03-Nov-2011	EB-SA7-SB-110311	K037-01W	EB	GEN PREP	6020	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: DUP02-SA7-QC-110211 *Collected:* 11/2/2011 9:28:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.20	J	0.795	MDL	1.59	PQL	MG/KG	J	Z

Sample ID: SL-001-SA7-SB-4.0-5.0 *Collected:* 10/31/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.679	J	0.534	MDL	1.07	PQL	MG/KG	J	Z

Sample ID: SL-048-SA7-SB-4.0-5.0 *Collected:* 11/2/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.16	J	0.795	MDL	1.59	PQL	MG/KG	J	Z

Sample ID: SL-048-SA7-SB-9.0-10.0 *Collected:* 11/2/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.31	J	0.790	MDL	1.58	PQL	MG/KG	J	Z

Sample ID: SL-108-SA7-SB-2.9-3.9 *Collected:* 11/3/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.12	J	0.776	MDL	1.55	PQL	MG/KG	J	Z

Sample ID: SL-171-SA7-SB-4.0-5.0 *Collected:* 11/3/2011 1:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.13	J	0.788	MDL	1.58	PQL	MG/KG	J	Z

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB-SA7-SB-110311 *Collected:* 11/3/2011 3:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.000561	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **DUP-01-SA7-QC-110111** ***Collected:*** **11/1/2011 8:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.990**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ANTIMONY	0.139	J	0.104	MDL	0.207	PQL	MG/KG	J	Z, Q
CHROMIUM	15.3		0.207	MDL	0.414	PQL	MG/KG	J	Q
COBALT	4.28		0.0518	MDL	0.104	PQL	MG/KG	J	Q
COPPER	4.91		0.207	MDL	0.414	PQL	MG/KG	J	Q
NICKEL	7.92		0.207	MDL	0.414	PQL	MG/KG	J	Q
PHOSPHORUS	280		6.21	MDL	12.4	PQL	MG/KG	J	Q
POTASSIUM	2500		31.1	MDL	62.1	PQL	MG/KG	J	Q, A
SODIUM	55.0	J	51.8	MDL	104	PQL	MG/KG	J	Z, Q
THALLIUM	0.253		0.0518	MDL	0.104	PQL	MG/KG	U	B
Zirconium	5.18	U	2.59	MDL	5.18	PQL	MG/KG	UJ	Q

Sample ID: **DUP02-SA7-QC-110211** ***Collected:*** **11/2/2011 9:28:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ALUMINUM	9950		12.4	MDL	24.8	PQL	MG/KG	J	Q, A
ANTIMONY	0.137	J	0.103	MDL	0.207	PQL	MG/KG	J	Z
CADMIUM	0.119		0.0517	MDL	0.103	PQL	MG/KG	J	FD
CALCIUM	1940		10.3	MDL	20.7	PQL	MG/KG	J	A
COPPER	4.25		0.207	MDL	0.414	PQL	MG/KG	J	Q
MAGNESIUM	3240		5.17	MDL	10.3	PQL	MG/KG	J	Q, A
NICKEL	7.41		0.207	MDL	0.414	PQL	MG/KG	J	Q
PHOSPHORUS	244		6.21	MDL	12.4	PQL	MG/KG	J	Q
POTASSIUM	2200		31.0	MDL	62.1	PQL	MG/KG	J	Q, A
SODIUM	72.4	J	51.7	MDL	103	PQL	MG/KG	J	Z
THALLIUM	0.215		0.0517	MDL	0.103	PQL	MG/KG	U	B
VANADIUM	23.2		0.0517	MDL	0.103	PQL	MG/KG	J	Q, A
Zirconium	5.17	U	2.59	MDL	5.17	PQL	MG/KG	UJ	Q

Sample ID: **SL-001-SA7-SB-4.0-5.0** ***Collected:*** **10/31/2011 3:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.966**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ANTIMONY	0.261		0.103	MDL	0.206	PQL	MG/KG	J	Q
CHROMIUM	19.5		0.206	MDL	0.413	PQL	MG/KG	J	Q
COBALT	7.65		0.0516	MDL	0.103	PQL	MG/KG	J	Q
COPPER	8.15		0.206	MDL	0.413	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-001-SA7-SB-4.0-5.0** ***Collected:*** **10/31/2011 3:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.966**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
NICKEL	13.2		0.206	MDL	0.413	PQL	MG/KG	J	Q
PHOSPHORUS	422		6.19	MDL	12.4	PQL	MG/KG	J	Q
POTASSIUM	2490		31.0	MDL	61.9	PQL	MG/KG	J	Q, A
SODIUM	68.8	J	51.6	MDL	103	PQL	MG/KG	J	Z, Q
Zirconium	5.16	U	2.58	MDL	5.16	PQL	MG/KG	UJ	Q

Sample ID: **SL-048-SA7-SB-4.0-5.0** ***Collected:*** **11/2/2011 9:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ALUMINUM	10500		12.5	MDL	25.1	PQL	MG/KG	J	Q, A
ANTIMONY	0.145	J	0.104	MDL	0.209	PQL	MG/KG	J	Z
CALCIUM	1900		10.4	MDL	20.9	PQL	MG/KG	J	A
COPPER	4.27		0.209	MDL	0.418	PQL	MG/KG	J	Q
MAGNESIUM	3430		5.22	MDL	10.4	PQL	MG/KG	J	Q, A
NICKEL	7.18		0.209	MDL	0.418	PQL	MG/KG	J	Q
PHOSPHORUS	231		6.27	MDL	12.5	PQL	MG/KG	J	Q
POTASSIUM	2210		31.3	MDL	62.7	PQL	MG/KG	J	Q, A
SODIUM	70.2	J	52.2	MDL	104	PQL	MG/KG	J	Z
VANADIUM	23.8		0.0522	MDL	0.104	PQL	MG/KG	J	Q, A
Zirconium	5.22	U	2.61	MDL	5.22	PQL	MG/KG	UJ	Q

Sample ID: **SL-048-SA7-SB-9.0-10.0** ***Collected:*** **11/2/2011 10:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ALUMINUM	10800		12.3	MDL	24.7	PQL	MG/KG	J	Q, A
ANTIMONY	0.145	J	0.103	MDL	0.206	PQL	MG/KG	J	Z
CADMIUM	0.205		0.0514	MDL	0.103	PQL	MG/KG	J	FD
CALCIUM	1970		10.3	MDL	20.6	PQL	MG/KG	J	A
COPPER	6.95		0.206	MDL	0.411	PQL	MG/KG	J	Q
MAGNESIUM	4130		5.14	MDL	10.3	PQL	MG/KG	J	Q, A
NICKEL	8.98		0.206	MDL	0.411	PQL	MG/KG	J	Q
PHOSPHORUS	391		6.17	MDL	12.3	PQL	MG/KG	J	Q
POTASSIUM	3330		30.9	MDL	61.7	PQL	MG/KG	J	Q, A
SODIUM	91.9	J	51.4	MDL	103	PQL	MG/KG	J	Z
VANADIUM	25.8		0.0514	MDL	0.103	PQL	MG/KG	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-048-SA7-SB-9.0-10.0** ***Collected:*** **11/2/2011 10:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	5.14	U	2.57	MDL	5.14	PQL	MG/KG	UJ	Q

Sample ID: **SL-108-SA7-SB-2.9-3.9** ***Collected:*** **11/3/2011 9:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.957**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10100		11.9	MDL	23.8	PQL	MG/KG	J	Q, A
ANTIMONY	0.159	J	0.0990	MDL	0.198	PQL	MG/KG	J	Z
CALCIUM	3540		9.90	MDL	19.8	PQL	MG/KG	J	A
COPPER	5.29		0.198	MDL	0.396	PQL	MG/KG	J	Q
MAGNESIUM	3750		4.95	MDL	9.90	PQL	MG/KG	J	Q, A
NICKEL	7.26		0.198	MDL	0.396	PQL	MG/KG	J	Q
PHOSPHORUS	321		5.94	MDL	11.9	PQL	MG/KG	J	Q
POTASSIUM	2620		29.7	MDL	59.4	PQL	MG/KG	J	Q, A
SODIUM	62.9	J	49.5	MDL	99.0	PQL	MG/KG	J	Z
THALLIUM	0.230		0.0495	MDL	0.0990	PQL	MG/KG	U	B
VANADIUM	25.2		0.0495	MDL	0.0990	PQL	MG/KG	J	Q, A
Zirconium	4.95	U	2.47	MDL	4.95	PQL	MG/KG	UJ	Q

Sample ID: **SL-120-SA7-SB-4.0-5.0** ***Collected:*** **10/31/2011 9:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.207		0.102	MDL	0.205	PQL	MG/KG	J	Q
BORON	3.63	J	2.56	MDL	5.12	PQL	MG/KG	J	Z
CHROMIUM	15.9		0.205	MDL	0.410	PQL	MG/KG	J	Q
COBALT	4.24		0.0512	MDL	0.102	PQL	MG/KG	J	Q
COPPER	5.84		0.205	MDL	0.410	PQL	MG/KG	J	Q
NICKEL	8.13		0.205	MDL	0.410	PQL	MG/KG	J	Q
PHOSPHORUS	239		6.14	MDL	12.3	PQL	MG/KG	J	Q
POTASSIUM	1910		30.7	MDL	61.4	PQL	MG/KG	J	Q, A
SODIUM	71.7	J	51.2	MDL	102	PQL	MG/KG	J	Z, Q
THALLIUM	0.221		0.0512	MDL	0.102	PQL	MG/KG	U	B
Zirconium	5.12	U	2.56	MDL	5.12	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-120-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 10:40:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **9.85**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	33.9		2.23	MDL	4.46	PQL	MG/KG	J	Q
COBALT	9.57		0.558	MDL	1.12	PQL	MG/KG	J	Q
COPPER	17.6		2.23	MDL	4.46	PQL	MG/KG	J	Q
NICKEL	20.0		2.23	MDL	4.46	PQL	MG/KG	J	Q

Sample ID: **SL-120-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 10:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.277		0.112	MDL	0.223	PQL	MG/KG	J	Q
PHOSPHORUS	371		6.69	MDL	13.4	PQL	MG/KG	J	Q
POTASSIUM	3460		33.5	MDL	66.9	PQL	MG/KG	J	Q, A
SODIUM	276		55.8	MDL	112	PQL	MG/KG	J	Q
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

Sample ID: **SL-121-SA7-SB-4.0-5.0** ***Collected:*** **10/31/2011 11:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.190	J	0.106	MDL	0.212	PQL	MG/KG	J	Z, Q
CHROMIUM	17.0		0.212	MDL	0.424	PQL	MG/KG	J	Q
COBALT	4.71		0.0530	MDL	0.106	PQL	MG/KG	J	Q
COPPER	6.62		0.212	MDL	0.424	PQL	MG/KG	J	Q
NICKEL	8.49		0.212	MDL	0.424	PQL	MG/KG	J	Q
PHOSPHORUS	194		6.35	MDL	12.7	PQL	MG/KG	J	Q
POTASSIUM	2230		31.8	MDL	63.5	PQL	MG/KG	J	Q, A
SODIUM	72.2	J	53.0	MDL	106	PQL	MG/KG	J	Z, Q
THALLIUM	0.255		0.0530	MDL	0.106	PQL	MG/KG	U	B
Zirconium	5.30	U	2.65	MDL	5.30	PQL	MG/KG	UJ	Q

Sample ID: **SL-121-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 12:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.263		0.113	MDL	0.226	PQL	MG/KG	J	Q
BORON	4.78	J	2.82	MDL	5.65	PQL	MG/KG	J	Z
CHROMIUM	25.6		0.226	MDL	0.452	PQL	MG/KG	J	Q
COBALT	8.94		0.0565	MDL	0.113	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-121-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 12:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	12.9		0.226	MDL	0.452	PQL	MG/KG	J	Q
NICKEL	16.2		0.226	MDL	0.452	PQL	MG/KG	J	Q
PHOSPHORUS	276		6.78	MDL	13.6	PQL	MG/KG	J	Q
POTASSIUM	3720		33.9	MDL	67.8	PQL	MG/KG	J	Q, A
SODIUM	294		56.5	MDL	113	PQL	MG/KG	J	Q
Zirconium	3.58	J	2.82	MDL	5.65	PQL	MG/KG	J	Z, Q

Sample ID: **SL-123-SA7-SB-4.0-5.0** ***Collected:*** **11/1/2011 10:56:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.948**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.200	J	0.101	MDL	0.202	PQL	MG/KG	J	Z, Q
BORON	2.80	J	2.52	MDL	5.04	PQL	MG/KG	J	Z
CHROMIUM	16.2		0.202	MDL	0.403	PQL	MG/KG	J	Q
COBALT	5.56		0.0504	MDL	0.101	PQL	MG/KG	J	Q
COPPER	6.93		0.202	MDL	0.403	PQL	MG/KG	J	Q
NICKEL	10.1		0.202	MDL	0.403	PQL	MG/KG	J	Q
PHOSPHORUS	296		6.05	MDL	12.1	PQL	MG/KG	J	Q
POTASSIUM	2370		30.3	MDL	60.5	PQL	MG/KG	J	Q, A
SODIUM	66.7	J	50.4	MDL	101	PQL	MG/KG	J	Z, Q
THALLIUM	0.232		0.0504	MDL	0.101	PQL	MG/KG	U	B
Zirconium	5.04	U	2.52	MDL	5.04	PQL	MG/KG	UJ	Q

Sample ID: **SL-123-SA7-SB-9.0-10.0** ***Collected:*** **11/1/2011 11:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.990**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.282		0.112	MDL	0.224	PQL	MG/KG	J	Q
CHROMIUM	22.9		0.224	MDL	0.448	PQL	MG/KG	J	Q
COBALT	7.82		0.0560	MDL	0.112	PQL	MG/KG	J	Q
COPPER	9.87		0.224	MDL	0.448	PQL	MG/KG	J	Q
NICKEL	13.4		0.224	MDL	0.448	PQL	MG/KG	J	Q
PHOSPHORUS	216		6.72	MDL	13.4	PQL	MG/KG	J	Q
POTASSIUM	2290		33.6	MDL	67.2	PQL	MG/KG	J	Q, A
SODIUM	239		56.0	MDL	112	PQL	MG/KG	J	Q
Zirconium	3.85	J	2.80	MDL	5.60	PQL	MG/KG	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: **SL-128-SA7-SB-4.0-5.0** ***Collected:*** **11/3/2011 10:05:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000		12.8	MDL	25.6	PQL	MG/KG	J	Q, A
ANTIMONY	0.187	J	0.107	MDL	0.213	PQL	MG/KG	J	Z
CALCIUM	4210		10.7	MDL	21.3	PQL	MG/KG	J	A
COPPER	399		0.213	MDL	0.427	PQL	MG/KG	J	Q
MAGNESIUM	3580		5.33	MDL	10.7	PQL	MG/KG	J	Q, A
NICKEL	7.80		0.213	MDL	0.427	PQL	MG/KG	J	Q
PHOSPHORUS	331		6.40	MDL	12.8	PQL	MG/KG	J	Q
POTASSIUM	2400		32.0	MDL	64.0	PQL	MG/KG	J	Q, A
THALLIUM	0.223		0.0533	MDL	0.107	PQL	MG/KG	U	B
VANADIUM	26.9		0.0533	MDL	0.107	PQL	MG/KG	J	Q, A
Zirconium	5.33	U	2.67	MDL	5.33	PQL	MG/KG	UJ	Q

Sample ID: **SL-128-SA7-SB-9.0-10.0** ***Collected:*** **11/3/2011 10:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	9470		12.6	MDL	25.3	PQL	MG/KG	J	Q, A
ANTIMONY	0.143	J	0.105	MDL	0.211	PQL	MG/KG	J	Z
CALCIUM	3720		10.5	MDL	21.1	PQL	MG/KG	J	A
COPPER	5.34		0.211	MDL	0.421	PQL	MG/KG	J	Q
MAGNESIUM	3590		5.26	MDL	10.5	PQL	MG/KG	J	Q, A
NICKEL	7.08		0.211	MDL	0.421	PQL	MG/KG	J	Q
PHOSPHORUS	328		6.32	MDL	12.6	PQL	MG/KG	J	Q
POTASSIUM	2490		31.6	MDL	63.2	PQL	MG/KG	J	Q, A
THALLIUM	0.210		0.0526	MDL	0.105	PQL	MG/KG	U	B
VANADIUM	23.9		0.0526	MDL	0.105	PQL	MG/KG	J	Q, A
Zirconium	5.26	U	2.63	MDL	5.26	PQL	MG/KG	UJ	Q

Sample ID: **SL-160-SA7-SB-0.0-1.0** ***Collected:*** **11/1/2011 2:03:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.160	J	0.102	MDL	0.203	PQL	MG/KG	J	Z, Q
CHROMIUM	9.98		0.203	MDL	0.407	PQL	MG/KG	J	Q
COBALT	3.34		0.0508	MDL	0.102	PQL	MG/KG	J	Q
COPPER	5.17		0.203	MDL	0.407	PQL	MG/KG	J	Q
NICKEL	6.28		0.203	MDL	0.407	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-160-SA7-SB-0.0-1.0** ***Collected:*** **11/1/2011 2:03:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	313		6.10	MDL	12.2	PQL	MG/KG	J	Q
POTASSIUM	2510		30.5	MDL	61.0	PQL	MG/KG	J	Q, A
SODIUM	102	U	50.8	MDL	102	PQL	MG/KG	UJ	Q
THALLIUM	0.167		0.0508	MDL	0.102	PQL	MG/KG	U	B
Zirconium	5.08	U	2.54	MDL	5.08	PQL	MG/KG	UJ	Q

Sample ID: **SL-161-SA7-SB-4.0-5.0** ***Collected:*** **11/2/2011 1:20:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.943**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10900		12.0	MDL	23.9	PQL	MG/KG	J	Q, A
CALCIUM	3090		9.98	MDL	20.0	PQL	MG/KG	J	A
COPPER	7.23		0.200	MDL	0.399	PQL	MG/KG	J	Q
MAGNESIUM	5560		4.99	MDL	9.98	PQL	MG/KG	J	Q, A
NICKEL	11.0		0.200	MDL	0.399	PQL	MG/KG	J	Q
PHOSPHORUS	443		5.99	MDL	12.0	PQL	MG/KG	J	Q
POTASSIUM	1690		29.9	MDL	59.9	PQL	MG/KG	J	Q, A
SELENIUM	0.204	J	0.200	MDL	0.399	PQL	MG/KG	J	Z
THALLIUM	0.252		0.0499	MDL	0.0998	PQL	MG/KG	U	B
VANADIUM	36.7		0.0499	MDL	0.0998	PQL	MG/KG	J	Q, A
Zirconium	4.99	U	2.49	MDL	4.99	PQL	MG/KG	UJ	Q

Sample ID: **SL-171-SA7-SB-4.0-5.0** ***Collected:*** **11/3/2011 1:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.939**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8850		11.8	MDL	23.7	PQL	MG/KG	J	Q, A
CALCIUM	4520		9.86	MDL	19.7	PQL	MG/KG	J	A
COPPER	6.32		0.197	MDL	0.395	PQL	MG/KG	J	Q
MAGNESIUM	3260		4.93	MDL	9.86	PQL	MG/KG	J	Q, A
NICKEL	6.85		0.197	MDL	0.395	PQL	MG/KG	J	Q
PHOSPHORUS	408		5.92	MDL	11.8	PQL	MG/KG	J	Q
POTASSIUM	2150		29.6	MDL	59.2	PQL	MG/KG	J	Q, A
THALLIUM	0.178		0.0493	MDL	0.0986	PQL	MG/KG	U	B
VANADIUM	23.6		0.0493	MDL	0.0986	PQL	MG/KG	J	Q, A
Zirconium	4.93	U	2.47	MDL	4.93	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-171-SA7-SB-9.0-10.0** ***Collected:*** **11/3/2011 2:05:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.966**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10000		12.3	MDL	24.5	PQL	MG/KG	J	Q, A
CALCIUM	5050		10.2	MDL	20.4	PQL	MG/KG	J	A
COPPER	8.55		0.204	MDL	0.408	PQL	MG/KG	J	Q
MAGNESIUM	3630		5.11	MDL	10.2	PQL	MG/KG	J	Q, A
NICKEL	8.06		0.204	MDL	0.408	PQL	MG/KG	J	Q
PHOSPHORUS	295		6.13	MDL	12.3	PQL	MG/KG	J	Q
POTASSIUM	2470		30.6	MDL	61.3	PQL	MG/KG	J	Q, A
THALLIUM	0.223		0.0511	MDL	0.102	PQL	MG/KG	U	B
VANADIUM	25.5		0.0511	MDL	0.102	PQL	MG/KG	J	Q, A
Zirconium	5.11	U	2.55	MDL	5.11	PQL	MG/KG	UJ	Q

Sample ID: **SL-175-SA7-SB-4.0-5.0** ***Collected:*** **11/1/2011 8:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.146	J	0.102	MDL	0.204	PQL	MG/KG	J	Z, Q
CHROMIUM	15.8		0.204	MDL	0.407	PQL	MG/KG	J	Q
COBALT	4.02		0.0509	MDL	0.102	PQL	MG/KG	J	Q
COPPER	5.13		0.204	MDL	0.407	PQL	MG/KG	J	Q
NICKEL	7.73		0.204	MDL	0.407	PQL	MG/KG	J	Q
PHOSPHORUS	280		6.11	MDL	12.2	PQL	MG/KG	J	Q
POTASSIUM	2430		30.5	MDL	61.1	PQL	MG/KG	J	Q, A
SODIUM	58.6	J	50.9	MDL	102	PQL	MG/KG	J	Z, Q
THALLIUM	0.255		0.0509	MDL	0.102	PQL	MG/KG	U	B
Zirconium	5.09	U	2.54	MDL	5.09	PQL	MG/KG	UJ	Q

Sample ID: **SL-175-SA7-SB-9.0-10.0** ***Collected:*** **11/1/2011 9:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.935**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.233		0.111	MDL	0.223	PQL	MG/KG	J	Q
CHROMIUM	24.5		0.223	MDL	0.445	PQL	MG/KG	J	Q
COBALT	7.08		0.0557	MDL	0.111	PQL	MG/KG	J	Q
COPPER	12.5		0.223	MDL	0.445	PQL	MG/KG	J	Q
NICKEL	14.1		0.223	MDL	0.445	PQL	MG/KG	J	Q
PHOSPHORUS	415		6.68	MDL	13.4	PQL	MG/KG	J	Q
POTASSIUM	3620		33.4	MDL	66.8	PQL	MG/KG	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-175-SA7-SB-9.0-10.0** ***Collected:*** **11/1/2011 9:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.935**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	217		55.7	MDL	111	PQL	MG/KG	J	Q
Zirconium	5.57	U	2.78	MDL	5.57	PQL	MG/KG	UJ	Q

Sample ID: **SL-185-SA7-SB-3.0-4.0** ***Collected:*** **11/1/2011 2:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.174	J	0.101	MDL	0.202	PQL	MG/KG	J	Z, Q
CHROMIUM	15.2		0.202	MDL	0.405	PQL	MG/KG	J	Q
COBALT	5.28		0.0506	MDL	0.101	PQL	MG/KG	J	Q
COPPER	4.39		0.202	MDL	0.405	PQL	MG/KG	J	Q
NICKEL	7.99		0.202	MDL	0.405	PQL	MG/KG	J	Q
PHOSPHORUS	271		6.07	MDL	12.1	PQL	MG/KG	J	Q
POTASSIUM	2480		30.4	MDL	60.7	PQL	MG/KG	J	Q, A
SODIUM	142		50.6	MDL	101	PQL	MG/KG	J	Q
THALLIUM	0.236		0.0506	MDL	0.101	PQL	MG/KG	U	B
Zirconium	5.06	U	2.53	MDL	5.06	PQL	MG/KG	UJ	Q

Method Category: METALS

Method: 7199 **Matrix: AQ**

Sample ID: **FB-SA7-110111** ***Collected:*** **11/1/2011 10:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.200	U	0.100	MDL	0.200	PQL	UG/L	UJ	H

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: **SL-121-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 12:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1.01**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0602	J	0.0579	MDL	0.116	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: **SVOA**

Method: **8015B EFH** ***Matrix:*** **SO**

Sample ID: **DUP-01-SA7-QC-110111** ***Collected:*** **11/1/2011 8:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	0.99	J	0.52	MDL	1.0	PQL	MG/KG	J	Z, FD
EFH(C30-C40)	0.70	J	0.52	MDL	1.0	PQL	MG/KG	J	Z, FD
EFH(C8-C11)	1.1		0.52	MDL	1.0	PQL	MG/KG	J	FD
TOTAL EFH(C8-C40)	2.8		0.52	MDL	1.0	PQL	MG/KG	J	FD

Sample ID: **DUP02-SA7-QC-110211** ***Collected:*** **11/2/2011 9:28:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	1.0	J	0.53	MDL	1.1	PQL	MG/KG	J	Z
EFH(C8-C11)	1.2		0.53	MDL	1.1	PQL	MG/KG	J	FD

Sample ID: **SL-048-SA7-SB-4.0-5.0** ***Collected:*** **11/2/2011 9:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	1.0	J	0.53	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-048-SA7-SB-9.0-10.0** ***Collected:*** **11/2/2011 10:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	0.78	J	0.53	MDL	1.1	PQL	MG/KG	J	Z
EFH(C8-C11)	0.59	J	0.53	MDL	1.1	PQL	MG/KG	J	Z, FD

Sample ID: **SL-108-SA7-SB-2.9-3.9** ***Collected:*** **11/3/2011 9:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.75	J	0.52	MDL	1.0	PQL	MG/KG	J	Z

Sample ID: **SL-120-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 10:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.64	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-121-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 12:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.70	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-123-SA7-SB-4.0-5.0 **Collected: 11/1/2011 10:56:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.60	J	0.53	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: SL-123-SA7-SB-9.0-10.0 **Collected: 11/1/2011 11:25:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	0.92	J	0.57	MDL	1.1	PQL	MG/KG	J	Z
EFH(C8-C11)	0.83	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: SL-128-SA7-SB-9.0-10.0 **Collected: 11/3/2011 10:35:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.70	J	0.54	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: SL-171-SA7-SB-4.0-5.0 **Collected: 11/3/2011 1:25:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.73	J	0.53	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: SL-171-SA7-SB-9.0-10.0 **Collected: 11/3/2011 2:05:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.67	J	0.53	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: SL-175-SA7-SB-4.0-5.0 **Collected: 11/1/2011 8:45:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	2.2		0.52	MDL	1.0	PQL	MG/KG	J	FD
EFH(C30-C40)	1.9		0.52	MDL	1.0	PQL	MG/KG	J	FD
EFH(C8-C11)	0.64	J	0.52	MDL	1.0	PQL	MG/KG	J	Z, FD
TOTAL EFH(C8-C40)	4.7		0.52	MDL	1.0	PQL	MG/KG	J	FD

Sample ID: SL-175-SA7-SB-9.0-10.0 **Collected: 11/1/2011 9:30:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	1.1	J	0.60	MDL	1.2	PQL	MG/KG	J	Z
EFH(C8-C11)	0.69	J	0.60	MDL	1.2	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA
Method: 8015B EFH **Matrix: SO**

Method Category: SVOA
Method: 8082 **Matrix: SO**

Sample ID: **SL-128-SA7-SB-9.0-10.0** ***Collected:*** **11/3/2011 10:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.6	J	1.8	MDL	3.5	PQL	UG/KG	J	Z

Sample ID: **SL-160-SA7-SB-0.0-1.0** ***Collected:*** **11/1/2011 2:03:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.2	J	1.8	MDL	3.4	PQL	UG/KG	J	Z

Sample ID: **SL-171-SA7-SB-4.0-5.0** ***Collected:*** **11/3/2011 1:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.1	J	1.8	MDL	3.5	PQL	UG/KG	J	Z

Method Category: SVOA
Method: 8270C **Matrix: SO**

Sample ID: **SL-048-SA7-SB-9.0-10.0** ***Collected:*** **11/2/2011 10:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1100	U	530	MDL	1100	PQL	UG/KG	UJ	Q

Sample ID: **SL-120-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 10:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1100	U	570	MDL	1100	PQL	UG/KG	UJ	Q

Method Category: SVOA
Method: 8270C SIM **Matrix: SO**

Sample ID: **DUP-01-SA7-QC-110111** ***Collected:*** **11/1/2011 8:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	8.8	MDL	17	PQL	UG/KG	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: **DUP02-SA7-QC-110211** ***Collected:*** **11/2/2011 9:28:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.3	J	0.90	MDL	1.8	PQL	UG/KG	J	Z, FD
2-METHYLNAPHTHALENE	1.4	J	0.90	MDL	1.8	PQL	UG/KG	J	Z, FD
ACENAPHTHENE	1.2	J	0.90	MDL	1.8	PQL	UG/KG	J	Z, FD
ACENAPHTHYLENE	1.2	J	0.90	MDL	1.8	PQL	UG/KG	J	Z, FD
BIS(2-ETHYLHEXYL)PHTHALATE	22		8.9	MDL	18	PQL	UG/KG	J	FD
NAPHTHALENE	1.7	J	0.90	MDL	1.8	PQL	UG/KG	J	Z, FD
N-NITROSODIMETHYLAMINE	1.9		0.90	MDL	1.8	PQL	UG/KG	J	FD

Sample ID: **SL-048-SA7-SB-9.0-10.0** ***Collected:*** **11/2/2011 10:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD
2-METHYLNAPHTHALENE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD
ACENAPHTHENE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD
ACENAPHTHYLENE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD
BIS(2-ETHYLHEXYL)PHTHALATE	18	U	8.9	MDL	18	PQL	UG/KG	UJ	FD
NAPHTHALENE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD
N-NITROSODIMETHYLAMINE	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	FD

Sample ID: **SL-108-SA7-SB-2.9-3.9** ***Collected:*** **11/3/2011 9:15:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	1.6	J	0.88	MDL	1.8	PQL	UG/KG	J	Z
CHRYSENE	1.6	J	0.88	MDL	1.8	PQL	UG/KG	J	Z

Sample ID: **SL-120-SA7-SB-9.0-10.0** ***Collected:*** **10/31/2011 10:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	18	J	9.5	MDL	19	PQL	UG/KG	J	Z

Sample ID: **SL-123-SA7-SB-9.0-10.0** ***Collected:*** **11/1/2011 11:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.7	J	0.96	MDL	1.9	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-128-SA7-SB-9.0-10.0 **Collected: 11/3/2011 10:35:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.2	J	0.91	MDL	1.8	PQL	UG/KG	J	Z
FLUORANTHENE	1.5	J	0.91	MDL	1.8	PQL	UG/KG	J	Z

Sample ID: SL-160-SA7-SB-0.0-1.0 **Collected: 11/1/2011 2:03:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	8.7	MDL	17	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	0.88	MDL	1.8	PQL	UG/KG	J	Z

Sample ID: SL-171-SA7-SB-4.0-5.0 **Collected: 11/3/2011 1:25:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	14	J	8.8	MDL	18	PQL	UG/KG	J	Z
Butylbenzylphthalate	16	J	8.8	MDL	18	PQL	UG/KG	J	Z
PHENANTHRENE	1.3	J	0.89	MDL	1.8	PQL	UG/KG	J	Z

Sample ID: SL-175-SA7-SB-4.0-5.0 **Collected: 11/1/2011 8:45:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	18	U	8.8	MDL	18	PQL	UG/KG	UJ	FD

Sample ID: SL-185-SA7-SB-3.0-4.0 **Collected: 11/1/2011 2:30:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	8.7	MDL	17	PQL	UG/KG	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: FB-SA7-110111 **Collected: 11/1/2011 10:45:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	47	J	10	MDL	50	PQL	UG/L	U	T

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-110111 **Collected: 11/1/2011 2:30:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	21	J	10	MDL	50	PQL	UG/L	J	Z

Sample ID: TB-110211 **Collected: 11/2/2011 8:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	18	J	10	MDL	50	PQL	UG/L	J	Z

Sample ID: TB-110311 **Collected: 11/3/2011 8:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	26	J	10	MDL	50	PQL	UG/L	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: SO**

Sample ID: DUP02-SA7-QC-110211 **Collected: 11/2/2011 9:28:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	0.77	J	0.53	MDL	1.1	PQL	MG/KG	J	Z, FD

Sample ID: SL-048-SA7-SB-9.5 **Collected: 11/2/2011 10:05:00** **Analysis Type: RES** **Dilution: 1.01**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	1.1	U	0.54	MDL	1.1	PQL	MG/KG	UJ	FD

Sample ID: SL-120-SA7-SB-9.5 **Collected: 10/31/2011 10:35:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	0.68	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Method Category: VOA

Method: 8260B ***Matrix:*** AQ

Sample ID: EB-SA7-SB-110311 ***Collected:*** 11/3/2011 3:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYL TERT-BUTYL ETHER (MTBE)	0.40	J	0.20	MDL	1.0	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: Prep11K007R **eQAPP Name: CDM_SSFL_111101**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
FD	Field Duplicate Precision
H	Sampling to Analysis Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

11K007

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 11K007
EDD Filename: 11K007R

Laboratory: EMXT
eQAPP Name: CDM_SSFL_111101

Method: 7199 **Preparation Method: GEN PREP**
Matrix: AQ

Sample ID	*Type*	*Actual*	*Criteria*	*Units*	*Flag*
FB-SA7-110111 (RES)	Sampling To Analysis	24.25	24.00	HOURS	J (all detects) UJ (all non-detects)

Trip Blank Outlier Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: **8015B GRO**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-110111(RES)	11/1/2011 2:30:00 PM	GASOLINE RANGE ORGANICS (C5-C12)	21 UG/L	DUP-01-SA7-QC-110111 FB-SA7-110111 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-4.5 SL-123-SA7-SB-9.0-10.0 SL-123-SA7-SB-9.5 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-4.5 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-9.5 SL-185-SA7-SB-3.0-4.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
FB-SA7-110111(RES)	GASOLINE RANGE ORGANICS (C5-C12)	47 UG/L	50U UG/L

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA7-SB-9.0-10.0MSD (TOT) (DUP-01-SA7-QC-110111 SL -001-SA7-SB-4.0-5.0 SL -120-SA7-SB-4.0-5.0 SL -120-SA7-SB-9.0-10.0 SL -121-SA7-SB-4.0-5.0 SL -121-SA7-SB-9.0-10.0 SL -123-SA7-SB-4.0-5.0 SL -123-SA7-SB-9.0-10.0 SL -160-SA7-SB-0.0-1.0 SL -175-SA7-SB-4.0-5.0 SL -175-SA7-SB-9.0-10.0 SL -185-SA7-SB-3.0-4.0)	BARIUM	-	137	75.00-125.00	-	BARIUM	No Qual, >4x
SL-120-SA7-SB-9.0-10.0MS (TOT) **SL-120-SA7-SB-9.0-10.0MSD (TOT)** (DUP-01-SA7-QC-110111 SL -001-SA7-SB-4.0-5.0 SL -120-SA7-SB-4.0-5.0 SL -120-SA7-SB-9.0-10.0 SL -121-SA7-SB-4.0-5.0 SL -121-SA7-SB-9.0-10.0 SL -123-SA7-SB-4.0-5.0 SL -123-SA7-SB-9.0-10.0 SL -160-SA7-SB-0.0-1.0 SL -175-SA7-SB-4.0-5.0 SL -175-SA7-SB-9.0-10.0 SL -185-SA7-SB-3.0-4.0)	ALUMINUM CALCIUM CHROMIUM IRON MAGNESIUM MANGANESE TITANIUM VANADIUM	-423 -321 23 -307 -82 -606 -920 -9	-393 -329 24 180 -68 -621 -821 -5	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - - - -	ALUMINUM CALCIUM CHROMIUM IRON MAGNESIUM MANGANESE TITANIUM VANADIUM	J(all detects) UJ(all non-detects) Al, Ca, Cr, Fe, Mg, Mn, Ti, V, No Qual, >4x Cr Post Spike = 94%
SL-120-SA7-SB-9.0-10.0MS (TOT) **SL-120-SA7-SB-9.0-10.0MSD (TOT)** (DUP-01-SA7-QC-110111 SL -001-SA7-SB-4.0-5.0 SL -120-SA7-SB-4.0-5.0 SL -120-SA7-SB-9.0-10.0 SL -121-SA7-SB-4.0-5.0 SL -121-SA7-SB-9.0-10.0 SL -123-SA7-SB-4.0-5.0 SL -123-SA7-SB-9.0-10.0 SL -160-SA7-SB-0.0-1.0 SL -175-SA7-SB-4.0-5.0 SL -175-SA7-SB-9.0-10.0 SL -185-SA7-SB-3.0-4.0)	ANTIMONY COBALT COPPER NICKEL PHOSPHORUS POTASSIUM SODIUM Zirconium	72 64 36 38 64 73 73 52	73 63 37 39 62 68 74 54	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - - - -	ANTIMONY COBALT COPPER NICKEL PHOSPHORUS POTASSIUM SODIUM Zirconium	J(all detects) UJ(all non-detects)
SL-048-SA7-SB-9.0-10.0MS (TOT) **SL-048-SA7-SB-9.0-10.0MSD (TOT)** (DUP02-SA7-QC-110211 SL -048-SA7-SB-4.0-5.0 SL -048-SA7-SB-9.0-10.0 SL -108-SA7-SB-2.9-3.9 SL -128-SA7-SB-4.0-5.0 SL -128-SA7-SB-9.0-10.0 SL -161-SA7-SB-4.0-5.0 SL -171-SA7-SB-4.0-5.0 SL -171-SA7-SB-9.0-10.0)	ALUMINUM IRON MANGANESE TITANIUM	34 -109 -240 -1040	-8 -168 -296 -1400	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM IRON MANGANESE TITANIUM	No Qual, >4x

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-048-SA7-SB-9.0-10.0MS	COPPER	70	66	75.00-125.00	-	COPPER	J(all detects) UJ(all non-detects)
(TOT)	MAGNESIUM	57	49	75.00-125.00	-	MAGNESIUM	
SL-048-SA7-SB-9.0-10.0MSD	NICKEL	-	72	75.00-125.00	-	NICKEL	
(TOT)	PHOSPHORUS	50	49	75.00-125.00	-	PHOSPHORUS	
(DUP02-SA7-QC-110211	POTASSIUM	-	67	75.00-125.00	-	POTASSIUM	
SL-048-SA7-SB-4.0-5.0	VANADIUM	-	66	75.00-125.00	-	VANADIUM	
SL-048-SA7-SB-9.0-10.0	Zirconium	42	37	75.00-125.00	-	Zirconium	
SL-108-SA7-SB-2.9-3.9							
SL-128-SA7-SB-4.0-5.0							
SL-128-SA7-SB-9.0-10.0							
SL-161-SA7-SB-4.0-5.0							
SL-171-SA7-SB-4.0-5.0							
SL-171-SA7-SB-9.0-10.0)							

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA7-SB-9.0-10.0MS SL-120-SA7-SB-9.0-10.0MSD (SL-120-SA7-SB-9.0-10.0)	BENZIDINE	9	8	10.00-150.00	-	BENZIDINE	J(all detects) UJ(all non-detects)
SL-048-SA7-SB-9.0-10.0MS SL-048-SA7-SB-9.0-10.0MSD (SL-048-SA7-SB-9.0-10.0)	BENZIDINE	8	8	10.00-150.00	-	BENZIDINE	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 300.0
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
FLUORIDE	2.18	2.24	3	50.00	No Qualifiers Applied

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
FLUORIDE	1.77	2.08	16	50.00	No Qualifiers Applied
Nitrate-NO3	1.31	1.20	9	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-175-SA7-SB-4.0-5.0 (TOT)	DUP-01-SA7-QC-110111 (TOT)			
ALUMINUM	12500	10600	16	50.00	
ANTIMONY	0.146	0.139	5	50.00	
ARSENIC	5.39	4.67	14	50.00	
BARIUM	66.1	60.0	10	50.00	
BERYLLIUM	0.549	0.486	12	50.00	
CADMIUM	0.123	0.119	3	50.00	
CALCIUM	2360	2270	4	50.00	
CHROMIUM	15.8	15.3	3	50.00	
COBALT	4.02	4.28	6	50.00	
COPPER	5.13	4.91	4	50.00	
IRON	16200	15200	6	50.00	
LEAD	5.06	4.34	15	50.00	
LITHIUM	19.8	20.3	2	50.00	No Qualifiers Applied
MAGNESIUM	3350	3300	2	50.00	
MANGANESE	218	223	2	50.00	
MOLYBDENUM	0.499	0.432	14	50.00	
NICKEL	7.73	7.92	2	50.00	
PHOSPHORUS	280	280	0	50.00	
POTASSIUM	2430	2500	3	50.00	
SODIUM	58.6	55.0	6	50.00	
STRONTIUM	13.4	11.3	17	50.00	
THALLIUM	0.255	0.253	1	50.00	
TITANIUM	892	875	2	50.00	
VANADIUM	25.0	22.4	11	50.00	
ZINC	55.4	48.0	14	50.00	

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-048-SA7-SB-9.0-10.0 (TOT)	DUP02-SA7-QC-110211 (TOT)			

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

Analyte	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111	Sample RPD	eQAPP RPD	Flag
ALUMINUM	10800	9950	8	50.00	No Qualifiers Applied
ANTIMONY	0.145	0.137	6	50.00	
ARSENIC	2.87	2.92	2	50.00	
BARIUM	85.2	75.3	12	50.00	
BERYLLIUM	0.442	0.454	3	50.00	
CALCIUM	1970	1940	2	50.00	
CHROMIUM	14.6	14.5	1	50.00	
COBALT	3.99	3.77	6	50.00	
COPPER	6.95	4.25	48	50.00	
IRON	18600	15600	18	50.00	
LEAD	3.70	3.83	3	50.00	
LITHIUM	23.6	21.4	10	50.00	
MAGNESIUM	4130	3240	24	50.00	
MANGANESE	299	191	44	50.00	
MOLYBDENUM	0.454	0.373	20	50.00	
NICKEL	8.98	7.41	19	50.00	
PHOSPHORUS	391	244	46	50.00	
POTASSIUM	3330	2200	41	50.00	
SODIUM	91.9	72.4	24	50.00	
STRONTIUM	14.0	12.7	10	50.00	
THALLIUM	0.219	0.215	2	50.00	
TITANIUM	957	901	6	50.00	
VANADIUM	25.8	23.2	11	50.00	
ZINC	54.4	46.7	15	50.00	
CADMIUM	0.205	0.119	53	50.00	J(all detects)

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG) SL-175-SA7-SB-4.0-5.0	Concentration (MG/KG) DUP-01-SA7-QC-110111	Sample RPD	eQAPP RPD	Flag
EFH(C21-C30)	2.2	0.99	76	50.00	J(all detects)
EFH(C30-C40)	1.9	0.70	92	50.00	
EFH(C8-C11)	0.64	1.1	53	50.00	
TOTAL EFH(C8-C40)	4.7	2.8	51	50.00	

Analyte	Concentration (MG/KG) SL-048-SA7-SB-9.0-10.0	Concentration (MG/KG) DUP02-SA7-QC-110211	Sample RPD	eQAPP RPD	Flag
EFH(C21-C30)	1.1	1.6	37	50.00	No Qualifiers Applied
EFH(C30-C40)	0.78	1.0	25	50.00	
TOTAL EFH(C8-C40)	2.5	3.8	41	50.00	
EFH(C8-C11)	0.59	1.2	68	50.00	J(all detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG) SL-175-SA7-SB-4.0-5.0	Concentration (UG/KG) DUP-01-SA7-QC-110111	Sample RPD	eQAPP RPD	Flag
BIS(2-ETHYLHEXYL)PHTHALATE	18 U	16	200	50.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (UG/KG) SL-048-SA7-SB-9.0-10.0	Concentration (UG/KG) DUP02-SA7-QC-110211	Sample RPD	eQAPP RPD	Flag

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 8270C SIM *Matrix: SO*					
1-METHYLNAPHTHALENE	1.8 U	1.3	200	50.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	1.8 U	1.4	200	50.00	
ACENAPHTHENE	1.8 U	1.2	200	50.00	
ACENAPHTHYLENE	1.8 U	1.2	200	50.00	
BIS(2-ETHYLHEXYL)PHTHALATE	18 U	22	200	50.00	
NAPHTHALENE	1.8 U	1.7	200	50.00	
N-NITROSODIMETHYLAMINE	1.8 U	1.9	200	50.00	

Method: 9045D *Matrix: SO*					
	Concentration (PH UNIT)				
Analyte	**SL-175-SA7-SB-4.0-5.0**	**DUP-01-SA7-QC-110111**	*Sample RPD*	*eQAPP RPD*	*Flag*
PH	8.07	8.15	1		No Qualifiers Applied

	Concentration (PH UNIT)				
Analyte	**SL-048-SA7-SB-9.0-10.0**	**DUP02-SA7-QC-110211**	*Sample RPD*	*eQAPP RPD*	*Flag*
PH	7.71	7.65	1		No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007R **eQAPP Name: CDM_SSFL_111101**

Method: 8015B GRO
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-048-SA7-SB-9.5	DUP02-SA7-QC-110211			
GASOLINE RANGE ORGANICS (C5-C12)	1.1 U	0.77	200	50.00	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA7-SB-110311	COPPER	J	0.000561	0.00100	PQL	MG/L	J (all detects)

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB-SA7-110111	GASOLINE RANGE ORGANICS (C5-C12)	J	47	50	PQL	UG/L	J (all detects)
TB-110111	GASOLINE RANGE ORGANICS (C5-C12)	J	21	50	PQL	UG/L	J (all detects)
TB-110211	GASOLINE RANGE ORGANICS (C5-C12)	J	18	50	PQL	UG/L	J (all detects)
TB-110311	GASOLINE RANGE ORGANICS (C5-C12)	J	26	50	PQL	UG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA7-SB-110311	METHYL TERT-BUTYL ETHER (MTBE)	J	0.40	1.0	PQL	UG/L	J (all detects)

Method: 300.0
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP02-SA7-QC-110211	Nitrate-NO3	J	1.20	1.59	PQL	MG/KG	J (all detects)
SL-001-SA7-SB-4.0-5.0	FLUORIDE	J	0.679	1.07	PQL	MG/KG	J (all detects)
SL-048-SA7-SB-4.0-5.0	Nitrate-NO3	J	1.16	1.59	PQL	MG/KG	J (all detects)
SL-048-SA7-SB-9.0-10.0	Nitrate-NO3	J	1.31	1.58	PQL	MG/KG	J (all detects)
SL-108-SA7-SB-2.9-3.9	Nitrate-NO3	J	1.12	1.55	PQL	MG/KG	J (all detects)
SL-171-SA7-SB-4.0-5.0	Nitrate-NO3	J	1.13	1.58	PQL	MG/KG	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-01-SA7-QC-110111	ANTIMONY	J	0.139	0.207	PQL	MG/KG	
	LITHIUM	J	19.7	20.7	PQL	MG/KG	J (all detects)
	SODIUM	J	55.0	104	PQL	MG/KG	

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP02-SA7-QC-110211	ANTIMONY	J	0.137	0.207	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.05	4.14	PQL	MG/KG	
	BERYLLIUM	J	0.543	1.03	PQL	MG/KG	
	SODIUM	J	72.4	103	PQL	MG/KG	
SL-001-SA7-SB-4.0-5.0	BERYLLIUM	J	0.774	1.03	PQL	MG/KG	J (all detects)
	SODIUM	J	68.8	103	PQL	MG/KG	
SL-048-SA7-SB-4.0-5.0	ANTIMONY	J	0.145	0.209	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.15	4.18	PQL	MG/KG	
	SODIUM	J	70.2	104	PQL	MG/KG	
SL-048-SA7-SB-9.0-10.0	ANTIMONY	J	0.145	0.206	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.45	4.11	PQL	MG/KG	
	MOLYBDENUM	J	0.551	1.03	PQL	MG/KG	
	SODIUM	J	91.9	103	PQL	MG/KG	
SL-108-SA7-SB-2.9-3.9	ANTIMONY	J	0.159	0.198	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.77	3.96	PQL	MG/KG	
	BERYLLIUM	J	0.524	0.990	PQL	MG/KG	
	SODIUM	J	62.9	99.0	PQL	MG/KG	
SL-120-SA7-SB-4.0-5.0	ARSENIC	J	4.00	4.10	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.651	1.02	PQL	MG/KG	
	BORON	J	3.63	5.12	PQL	MG/KG	
	LITHIUM	J	17.6	20.5	PQL	MG/KG	
	MOLYBDENUM	J	0.657	1.02	PQL	MG/KG	
	SODIUM	J	71.7	102	PQL	MG/KG	
SL-120-SA7-SB-9.0-10.0	BERYLLIUM	J	0.873	1.12	PQL	MG/KG	J (all detects)
	LITHIUM	J	21.4	22.3	PQL	MG/KG	
	MOLYBDENUM	J	0.686	1.12	PQL	MG/KG	
SL-121-SA7-SB-4.0-5.0	ANTIMONY	J	0.190	0.212	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.683	1.06	PQL	MG/KG	
	LITHIUM	J	17.7	21.2	PQL	MG/KG	
	MOLYBDENUM	J	0.673	1.06	PQL	MG/KG	
	SODIUM	J	72.2	106	PQL	MG/KG	
SL-121-SA7-SB-9.0-10.0	BERYLLIUM	J	0.910	1.13	PQL	MG/KG	J (all detects)
	BORON	J	4.78	5.65	PQL	MG/KG	
	CADMIUM	J	0.596	1.13	PQL	MG/KG	
	LITHIUM	J	21.9	22.6	PQL	MG/KG	
	Zirconium	J	3.58	5.65	PQL	MG/KG	
SL-123-SA7-SB-4.0-5.0	ANTIMONY	J	0.200	0.202	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.93	4.03	PQL	MG/KG	
	BERYLLIUM	J	0.594	1.01	PQL	MG/KG	
	BORON	J	2.80	5.04	PQL	MG/KG	
	SODIUM	J	66.7	101	PQL	MG/KG	
SL-123-SA7-SB-9.0-10.0	BERYLLIUM	J	0.827	1.12	PQL	MG/KG	J (all detects)
	LITHIUM	J	21.3	22.4	PQL	MG/KG	
	Zirconium	J	3.85	5.60	PQL	MG/KG	
SL-128-SA7-SB-4.0-5.0	ANTIMONY	J	0.187	0.213	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.87	4.27	PQL	MG/KG	
	BERYLLIUM	J	0.554	1.07	PQL	MG/KG	
	LITHIUM	J	19.9	21.3	PQL	MG/KG	
	MOLYBDENUM	J	0.560	1.07	PQL	MG/KG	
SL-128-SA7-SB-9.0-10.0	ANTIMONY	J	0.143	0.211	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.16	4.21	PQL	MG/KG	

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-160-SA7-SB-0.0-1.0	ANTIMONY	J	0.160	0.203	PQL	MG/KG	J (all detects)
SL-161-SA7-SB-4.0-5.0	BERYLLIUM	J	0.597	0.998	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.689	0.998	PQL	MG/KG	
	SELENIUM	J	0.204	0.399	PQL	MG/KG	
SL-171-SA7-SB-4.0-5.0	ARSENIC	J	3.27	3.95	PQL	MG/KG	J (all detects)
	LITHIUM	J	17.4	19.7	PQL	MG/KG	
	MOLYBDENUM	J	0.550	0.986	PQL	MG/KG	
SL-171-SA7-SB-9.0-10.0	ARSENIC	J	3.81	4.08	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.542	1.02	PQL	MG/KG	
SL-175-SA7-SB-4.0-5.0	ANTIMONY	J	0.146	0.204	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.588	1.02	PQL	MG/KG	
	LITHIUM	J	19.6	20.4	PQL	MG/KG	
	MOLYBDENUM	J	0.516	1.02	PQL	MG/KG	
	SODIUM	J	58.6	102	PQL	MG/KG	
SL-185-SA7-SB-3.0-4.0	ANTIMONY	J	0.174	0.202	PQL	MG/KG	J (all detects)
	ARSENIC	J	3.80	4.05	PQL	MG/KG	
	BERYLLIUM	J	0.535	1.01	PQL	MG/KG	
	MOLYBDENUM	J	0.532	1.01	PQL	MG/KG	

Method: 7471A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-121-SA7-SB-9.0-10.0	MERCURY	J	0.0602	0.116	PQL	MG/KG	J (all detects)

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-01-SA7-QC-110111	EFH(C21-C30)	J	0.99	1.0	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	0.70	1.0	PQL	MG/KG	
DUP02-SA7-QC-110211	EFH(C30-C40)	J	1.0	1.1	PQL	MG/KG	J (all detects)
SL-048-SA7-SB-4.0-5.0	EFH(C8-C11)	J	1.0	1.1	PQL	MG/KG	J (all detects)
SL-048-SA7-SB-9.0-10.0	EFH(C30-C40)	J	0.78	1.1	PQL	MG/KG	J (all detects)
	EFH(C8-C11)	J	0.59	1.1	PQL	MG/KG	
SL-108-SA7-SB-2.9-3.9	EFH(C8-C11)	J	0.75	1.0	PQL	MG/KG	J (all detects)
SL-120-SA7-SB-9.0-10.0	EFH(C8-C11)	J	0.64	1.1	PQL	MG/KG	J (all detects)
SL-121-SA7-SB-9.0-10.0	EFH(C8-C11)	J	0.70	1.1	PQL	MG/KG	J (all detects)
SL-123-SA7-SB-4.0-5.0	EFH(C8-C11)	J	0.60	1.1	PQL	MG/KG	J (all detects)
SL-123-SA7-SB-9.0-10.0	EFH(C21-C30)	J	0.92	1.1	PQL	MG/KG	J (all detects)
	EFH(C8-C11)	J	0.83	1.1	PQL	MG/KG	
SL-128-SA7-SB-9.0-10.0	EFH(C8-C11)	J	0.70	1.1	PQL	MG/KG	J (all detects)

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-171-SA7-SB-4.0-5.0	EFH(C8-C11)	J	0.73	1.1	PQL	MG/KG	J (all detects)
SL-171-SA7-SB-9.0-10.0	EFH(C8-C11)	J	0.67	1.1	PQL	MG/KG	J (all detects)
SL-175-SA7-SB-4.0-5.0	EFH(C8-C11)	J	0.64	1.0	PQL	MG/KG	J (all detects)
SL-175-SA7-SB-9.0-10.0	EFH(C21-C30) EFH(C8-C11)	J J	1.1 0.69	1.2 1.2	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8015B GRO
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP02-SA7-QC-110211	GASOLINE RANGE ORGANICS (C5-C12)	J	0.77	1.1	PQL	MG/KG	J (all detects)
SL-120-SA7-SB-9.5	GASOLINE RANGE ORGANICS (C5-C12)	J	0.68	1.1	PQL	MG/KG	J (all detects)

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-128-SA7-SB-9.0-10.0	Aroclor 5460	J	2.6	3.5	PQL	UG/KG	J (all detects)
SL-160-SA7-SB-0.0-1.0	Aroclor 5460	J	2.2	3.4	PQL	UG/KG	J (all detects)
SL-171-SA7-SB-4.0-5.0	Aroclor 5460	J	3.1	3.5	PQL	UG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-01-SA7-QC-110111	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	17	PQL	UG/KG	J (all detects)
DUP02-SA7-QC-110211	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE ACENAPHTHYLENE NAPHTHALENE	J J J J J	1.3 1.4 1.2 1.2 1.7	1.8 1.8 1.8 1.8 1.8	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-108-SA7-SB-2.9-3.9	BENZO(G,H,I)PERYLENE CHRYSENE	J J	1.6 1.6	1.8 1.8	PQL PQL	UG/KG UG/KG	J (all detects)
SL-120-SA7-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	19	PQL	UG/KG	J (all detects)
SL-123-SA7-SB-9.0-10.0	NAPHTHALENE	J	1.7	1.9	PQL	UG/KG	J (all detects)
SL-128-SA7-SB-9.0-10.0	CHRYSENE FLUORANTHENE	J J	1.2 1.5	1.8 1.8	PQL PQL	UG/KG UG/KG	J (all detects)
SL-160-SA7-SB-0.0-1.0	BIS(2-ETHYLHEXYL)PHTHALATE INDENO(1,2,3-CD)PYRENE	J J	16 1.6	17 1.8	PQL PQL	UG/KG UG/KG	J (all detects)

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11K007 **Laboratory: EMXT**

EDD Filename: 11K007 **eQAPP Name: CDM_SSFL_111101**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-171-SA7-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	14	18	PQL	UG/KG	
	Butylbenzylphthalate	J	16	18	PQL	UG/KG	J (all detects)
	PHENANTHRENE	J	1.3	1.8	PQL	UG/KG	
SL-185-SA7-SB-3.0-4.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	13	17	PQL	UG/KG	J (all detects)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Volatiles

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.5
SL-120-SA7-SB-9.5
TB-110111
EB-SA7-SB-110311
SL-120-SA7-SB-9.5MS
SL-120-SA7-SB-9.5MSD

Introduction

This data review covers 4 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a Laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK1S	11/3/11	Methylene chloride	2.2 ug/Kg	All soil samples in SDG 11K007

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

Sample TB-110111 was identified as a trip blank. No volatile contaminants were found.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No volatile contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-SA7-SB-110311	11/3/11	Methyl-tert-butyl ether Ethylbenzene	0.40 ug/L 2.8 ug/L	No associated samples in this SDG

Sample FB-SA7-110111 was identified as a field blank. No volatile contaminants were found with the following exceptions:

Field Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-SA7-110111	11/1/11	Chloroform Ethylbenzene m,p-Xylenes o-Xylene Toluene	2.7 ug/L 1.4 ug/L 5.7 ug/L 2.6 ug/L 5.5 ug/L	No associated samples in this SDG

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.5 SL-120-SA7-SB-9.5 TB-110111 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 2/21/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 – 11/03/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	FB = 1 * TB = 4 EB = 5

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
* ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
soil + water

1	FB-SA7-110111	W	11	MBLK1W	21		31	
2	SL-120-SA7-SB-4.5	S	12	MBLK1S	22		32	
3	SL-120-SA7-SB-9.5	S	13	MBLK2S	23		33	
4	TB-110111	W	14		24		34	
5	EB-SA7-SB-110311	W	15		25		35	
6	SL-120-SA7-SB-9.5MS	S	16		26		36	
7	SL-120-SA7-SB-9.5MSD	S	17		27		37	
8			18		28		38	
9			19		29		39	
10			20		30		40	

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples	✓			
Was an LCS analyzed for this SDG?				

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 27103A/c

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 11/03/11
Conc. units: ug/kg Associated Samples: All soils (ND)

Compound	Blank ID	Sample Identification								
	MBLK15									
E	2.2									
CRQL										

Blank analysis date:
Conc. units: Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 27103 A/R

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** NA

Sampling date: 11/01/11

Field blank type: (circle one) Field Blank / Rinsate / Other: FB Associated Samples: none

Compound	Blank ID	Sample Identification								
	1									
K	2.7									
EE	1.4									
RRR	5.7									
SSS	2.6									
CC	5.5									
CRQL										

Blank units: ug/L **Associated sample units:** NA

Sampling date: 11/3/11

Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: none

Compound	Blank ID	Sample Identification								
	5									
LL	0.40									
EE	2.8									
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 27103 A1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V001J31	10/31/11	C (1st internal standard)	0.515	0.515	0.461	0.461	7.36	7.36
			V (2nd internal standard)	1.714	1.714	1.767	1.767	3.77	3.77
			JJJ (3rd internal standard)	1.581	1.581	1.561	1.561	2.0	2.0
			(4th internal standard)	50	50				
2	V003K02	11/2/11	C (1st internal standard)	0.276	0.276	0.281	0.281	2.84	2.84
			V (2nd internal standard)	1.344	1.344	1.391	1.391	10.66	10.66
			JJJ (3rd internal standard)	1.364	1.364	1.391	1.391	8.81	8.81
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKV203	11/8/11	C (1st internal standard)	0.461	0.414	0.414	10.2	10.2
			V (2nd internal standard)	1.767	1.589	1.589	10.1	10.1
			JJJ (3rd internal standard)	1.561	1.499	1.499	4.0	4.0
			(4th internal standard)					
2	RKB033	11/3/11	C (1st internal standard)	0.281	0.269	0.269	4.3	4.3
			V (2nd internal standard)	1.391	1.351	1.351	2.9	2.9
			JJJ (3rd internal standard)	1.391	1.478	1.478	6.3	6.3
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

VALIDATION FINDINGS WORKSHEET

Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	10	9.94	99.4	99.4	0
1,2-Dichloroethane-d4	↓	9.55	95.5	95.5	↓
Toluene-d8		10.3	103	103	
Bromofluorobenzene		10.8	108	109	

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 27103A1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 6 & 7

Compound	Spike Added (ng/kg)		Sample Concentration (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	58.9	75.9	ND	61.9	74.4	105	105	98	98	7	7
Trichloroethene				63.9	78.0	108	108	103	103	5	5
Benzene				62.2	77.5	106	106	102	102	4	4
Toluene				63.5	77.8	108	108	102	102	6	6
Chlorobenzene				63.6	76.9	108	108	101	101	7	7

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: MBLK1S (LCS/D)

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	50.0	50.0	46.7	52.0	93	93	104	104	11	11
Trichloroethene	↓	↓	48.7	54.7	97	97	109	109	12	12
Benzene			48.7	53.4	97	91	107	107	9	9
Toluene			48.6	54.2	97	97	108	108	11	11
Chlorobenzene			49.8	54.5	100	100	109	109	9	9

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A/2

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, K:

Conc. = $\frac{(353308)(10)(\quad)}{(2066666)(0.636)(\quad)}$

=

2.7 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: 1,4-Dioxane

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.5
SL-120-SA7-SB-9.5
TB-110111
EB-SA7-SB-110311
SL-120-SA7-SB-9.5MS
SL-120-SA7-SB-9.5MSD

Introduction

This data review covers 4 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for 1,4-Dioxane.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for 1,4-Dioxane.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-dioxane was found in the method blanks.

Sample TB-110111 was identified as a trip blank. No 1,4-dioxane was found.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No 1,4-dioxane was found.

Sample FB-SA7-110111 was identified as a field blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.5 SL-120-SA7-SB-9.5 TB-110111 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A1b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/21/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: F
2nd Reviewer: A

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8260B-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 – 11/03/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	NP	FB = 1 TB = 4 EB = 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil + water

1 1	FB-SA7-110111 W	11 1	MBLK1W	21		31	
2	SL-120-SA7-SB-4.5	12 2	MBLK2W	22		32	
3	SL-120-SA7-SB-9.5	13 3	MBLK3	23		33	
4 1	TB-110111 W	14 3	MBLK23	24		34	
5 2	EB-SA7-SB-110311 W	15		25		35	
6	SL-120-SA7-SB-9.5MS	16		26		36	
7	SL-120-SA7-SB-9.5MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DC #: 27103A16

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: A

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 27103A1b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (20 std)	Recalculated RRF (20 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V0FSK03	11/3/11	1,4-Dioxane (1st internal standard)	1.168	1.168	1.231	1.231	13.19	13.19
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)	(200)	(200)				
2	V0FSJ31	10/31/11	↓ (1st internal standard)	1.163	1.163	1.145	1.145	7.02	7.02
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A16

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: CN

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKY099	11/4/11	1,4-Dioxane (1st internal standard)	1.231	1.127	1.127	8.4	8.4
			(2nd internal standard)					
	RKY230	11/9/11	↓ (3rd internal standard)	↓	1.097	1.097	10.9	10.9
			(4th internal standard)					
2	RKY073	11/3/11	↓ (1st internal standard)	1.145	1.308	1.308	14.2	14.2
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

VALIDATION FINDINGS WORKSHEET

Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 3

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	20	18.05	90.3	90.25	0
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 27103A1b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 6 & 7

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,4- Dioxane ~~1,1-Dichloroethene~~	238	247	ND	310	251	110	110	102	102	4	8
Trichloroethene											
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A1b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: MB ID SOIL

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										
1,4-Dioxane	200	200	241	229	121	121	115	115	5	5

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A1h

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. _____ , _____:

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

= ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-001-SA7-SB-4.0-5.0
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-160-SA7-SB-0.0-1.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
SL-185-SA7-SB-3.0-4.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
SL-161-SA7-SB-4.0-5.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 25 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No semivolatile contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-120-SA7-SB-9.0-10.0MS/MSD (SL-120-SA7-SB-9.0-10.0)	Benzidine	9 (10-150)	8 (10-150)	-	J (all detects) UJ (all non-detects)	A
SL-048-SA7-SB-9.0-10.0MS/MSD (SL-048-SA7-SB-9.0-10.0)	Benzidine	8 (10-150)	8 (10-150)	-	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No semivolatiles were detected in any of the samples.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	SL-120-SA7-SB-9.0-10.0 SL-048-SA7-SB-9.0-10.0	Benzidine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11K007	FB-SA7-110111 SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-185-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A2a **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 10, 13 15, 17
XVII.	Field blanks	ND	FB = 1 EB = 23

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	FB-SA7-110111 W	11	SL-175-SA7-SB-9.0-10.0	21	SL-171-SA7-SB-4.0-5.0	31	MBLKIW
2	SL-001-SA7-SB-4.0-5.0	12	SL-~~175~~185-SA7-SB-3.0-4.0	22	SL-171-SA7-SB-9.0-10.0	32	MBLKIS
3	SL-120-SA7-SB-4.0-5.0	13	DUP-01-SA7-QC-110111	23	EB-SA7-SB-110311 W	33	MBLK2S
4	SL-120-SA7-SB-9.0-10.0	14	SL-048-SA7-SB-4.0-5.0	24	SL-120-SA7-SB-9.0-10.0MS	34	
5	SL-121-SA7-SB-4.0-5.0	15	SL-048-SA7-SB-9.0-10.0	25	SL-120-SA7-SB-9.0-10.0MSD	35	
6	SL-121-SA7-SB-9.0-10.0	16	SL-161-SA7-SB-4.0-5.0	26	SL-048-SA7-SB-9.0-10.0MS	36	
7	SL-123-SA7-SB-4.0-5.0	17	DUP02-SA7-QC-110211	27	SL-048-SA7-SB-9.0-10.0MSD	37	
8	SL-123-SA7-SB-9.0-10.0	18	SL-108-SA7-SB-2.9-3.9	28		38	
9	SL-160-SA7-SB-0.0-1.0	19	SL-128-SA7-SB-4.0-5.0	29		39	
10	SL-175-SA7-SB-4.0-5.0	20	SL-128-SA7-SB-9.0-10.0	30		40	

LDC #: 27103A29

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of $\geq$ 0.990?	✓			
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $>$ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 27103A2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	•		✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 27163A29

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		24+25	SSS	9 (10-150)	8 (10-150)	( )	4	J/UJ/A (Q)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		26+27	SSS	8 (↓)	8 (↓)	( )	15	J/UJ/A (Q)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 27163A29

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF ($\bar{x}$ std)	Recalculated RRF ($\bar{x}$ std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	09/19/11	Phenol (1st internal standard)	2.369	2.369	2.307	2.307	5.64	5.64
	SVE9119		~~Naphthalene~~ 4-chloroaniline (2nd internal standard)	0.500	0.500	0.477	0.477	7.30	7.30
			~~Fluorene~~ 4-nitrophenol (3rd internal standard)	0.341	0.341	0.313	0.313	8.45	8.45
			Pentachlorophenol (4th internal standard)	0.150	0.150	0.159	0.159	8.72	8.72
			~~Bis(2-ethylhexyl)phthalate~~ 3,3-Dichlorobenzidine (5th internal standard)	0.491	0.491	0.466	0.466	5.50	5.50
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.462	1.462	1.462	1.462	7.13	7.13
2	ICAL	10/17/11	Phenol (1st internal standard)	1.301	1.301	1.322	1.322	3.70	3.70
	SVE4317		Naphthalene (2nd internal standard)	0.985	0.985	0.993	0.993	4.64	4.64
			Fluorene (3rd internal standard)	1.300	1.300	1.320	1.320	5.01	5.01
			Pentachlorophenol (4th internal standard)	0.161	0.161	0.155	0.155	5.65	5.65
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.421	0.421	0.407	0.407	8.80	8.80
			Benzo(a)pyrene (6th internal standard)	1.034	1.034	1.034	1.034	1.54	1.54
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27163A29

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKL007	11/9/11	Phenol (1st internal standard)	2.307	2.180	2.180	5.5	5.5
			~~Naphthalene~~ 4-chloroaniline (2nd internal standard)	0.477	0.483	0.483	1.3	1.3
			~~Fluorene~~ 4-nitrophenol (3rd internal standard)	0.313	0.257	0.257	17.9	17.9
			Pentachlorophenol (4th internal standard)	0.159	0.151	0.151	5.0	5.0
			~~Bis(2-ethylhexyl)phthalate~~ 3,3-Dichlorobenzidine (5th internal standard)	0.466	0.415	0.415	10.9	10.9
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.462	1.387	1.387	5.1	5.1
2	RKJ093	11/9/11	Phenol (1st internal standard)	1.322	1.238	1.238	6.4	6.4
			Naphthalene (2nd internal standard)	0.993	0.951	0.951	4.2	4.2
			Fluorene (3rd internal standard)	1.320	1.327	1.327	0.5	0.5
			Pentachlorophenol (4th internal standard)	0.155	0.153	0.153	1.3	1.3
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.718	0.724	0.724	0.8	0.8
			Benzo(a)pyrene (6th internal standard)	1.034	0.985	0.985	4.7	4.7
3	RK1138	11/10/11	Phenol (1st internal standard)		1.187	1.187	10.2	10.2
			Naphthalene (2nd internal standard)		0.958	0.958	3.5	3.5
			Fluorene (3rd internal standard)		1.348	1.348	2.1	2.1
			Pentachlorophenol (4th internal standard)		0.154	0.154	0.6	0.6
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.736	0.736	2.5	2.5
			Benzo(a)pyrene (6th internal standard)		1.023	1.023	1.1	1.1

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of [illegible]
Reviewer: FT
2nd reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #22

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	6.90	69.0	69.0	0
2-Fluorobiphenyl	↓	8.43	84.3	84.3	
Terphenyl-d14	↓	10.09	101	101	↓
Phenol-d5	30	21.05	70.2	70.2	↓
2-Fluorophenol	↓	19.95	66.5	66.5	↓
2,4,6-Tribromophenol	↓	25.47	84.9	84.9	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 27102A09

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 24 + 25

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	755	755	ND	460	440	61	61	58	58	4	4
N-Nitroso-di-n-propylamine	↓	↓	↓	450	464	60	60	62	62	3	3
4-Chloro-3-methylphenol	↓	↓	↓	498	497	66	66	66	66	0	0
Acenaphthene	↓	↓	↓	546	536	72	72	71	71	2	2
Pentachlorophenol	↓	↓	↓	506	475	67	67	63	63	6	6
Pyrene	↓	↓	↓	571	619	76	76	82	82	8	8

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A2S

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 1651P 801L

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	667	667	461	404	69	69	61	61	13	13
N-Nitroso-di-n-propylamine	↓	↓	462	403	69	69	60	60	14	14
4-Chloro-3-methylphenol			514	439	77	77	66	66	16	16
Acenaphthene			530	443	80	80	72	72	9	9
Pentachlorophenol			554	476	83	83	71	71	15	15
Pyrene			697	556	105	105	83	83	22	22

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____ , _____:

Conc. = ( )( )( )( )( ) / ( )( )( )( )( ) =

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

SL-001-SA7-SB-4.0-5.0
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-160-SA7-SB-0.0-1.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
SL-185-SA7-SB-3.0-4.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
SL-161-SA7-SB-4.0-5.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 25 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
Bis(2-ethylhexyl)phthalate	18U	16	200 (≤50)	J (all detects) UJ (all non-detects)	A

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
Acenaphthene	1.8U	1.2	200 (≤50)	J (all detects) UJ (all non-detects)	A
Acenaphthylene	1.8U	1.2	200 (≤50)	J (all detects) UJ (all non-detects)	A
Naphthalene	1.8U	1.7	200 (≤50)	J (all detects) UJ (all non-detects)	A
2-Methylnaphthalene	1.8U	1.4	200 (≤50)	J (all detects) UJ (all non-detects)	A
1-Methylnaphthalene	1.8U	1.3	200 (≤50)	J (all detects) UJ (all non-detects)	A
Bis(2-ethylhexyl)phthalate	18U	22	200 (≤50)	J (all detects) UJ (all non-detects)	A
N-Nitrosodimethylamine	1.8U	1.9	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-185-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11K007	SL-175-SA7-SB-4.0-5.0 DUP-01-SA7-QC-110111	Bis(2-ethylhexyl)phthalate	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)
11K007	SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211	Acenaphthene Acenaphthylene Naphthalene 2-Methylnaphthalene 1-Methylnaphthalene Bis(2-ethylhexyl)phthalate N-Nitrosodimethylamine	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/21/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: ~~Lancaster Laboratories~~ EMAX Reviewer: [illegible]
2nd Reviewer: A

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 – 11/03/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9, 12 14, 16
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-001-SA7-SB-4.0-5.0	11	SL-~~175~~185-SA7-SB-3.0-4.0	21	SL-171-SA7-SB-9.0-10.0	31	MBLK15
2	SL-120-SA7-SB-4.0-5.0	12	DUP-01-SA7-QC-110111	22	SL-120-SA7-SB-9.0-10.0MS	32	MBLK23
3	SL-120-SA7-SB-9.0-10.0	13	SL-048-SA7-SB-4.0-5.0	23	SL-120-SA7-SB-9.0-10.0MSD	33	
4	SL-121-SA7-SB-4.0-5.0	14	SL-048-SA7-SB-9.0-10.0	24	SL-048-SA7-SB-9.0-10.0MS	34	
5	SL-121-SA7-SB-9.0-10.0	15	SL-161-SA7-SB-4.0-5.0	25	SL-048-SA7-SB-9.0-10.0MSD	35	
6	SL-123-SA7-SB-4.0-5.0	16	DUP02-SA7-QC-110211	26		36	
7	SL-123-SA7-SB-9.0-10.0	17	SL-108-SA7-SB-2.9-3.9	27		37	
8	SL-160-SA7-SB-0.0-1.0	18	SL-128-SA7-SB-4.0-5.0	28		38	
9	SL-175-SA7-SB-4.0-5.0	19	SL-128-SA7-SB-9.0-10.0	29		39	
10	SL-175-SA7-SB-9.0-10.0	20	SL-171-SA7-SB-4.0-5.0	30		40	

LDC #: 27103A2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 27103A2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.				
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 27103A2b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

(FD)

Compound	Concentration (ug/kg)		≤ 50 RPD
	9	12	
EEE	1.8 U	16	200 J/UJ/A

Compound	Concentration (ug/kg)		≤ 50 RPD
	14	16	
GG	1.8 U	1.2	200 J/UJ/A
DD	1.8 U	1.2	
S	1.8 U	1.7	
W	1.8 U	1.4	
TTT	1.8 U	1.3	

Compound	Concentration (ug/kg)		RPD
	14	16	
EEE	1.8 U	22	J/UJ/A
OOO	1.8 U	1.9	

Compound	Concentration ( )		RPD

LDC #: 27103A2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	SVE4J17S	10/18/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	3.817	3.817	3.668	3.668	5.91	5.91
			~~Fluorene~~ Anthracene (3rd internal standard)	1.182	1.182	1.101	1.101	3.92	3.92
			~~Pentachlorophenol~~ Benzo(b) fluoranthene (4th internal standard)	1.107	1.107	0.983	0.983	8.55	8.55
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103#26

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKJ093	11/09/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.668	3.359	3.359	8.4	8.4
			~~Fluorene~~ Anthracene (3rd internal standard)	1.101	1.073	1.073	2.5	2.5
			~~Pentachlorophenol~~ Benzo(b)fluoranthene (4th internal standard)	0.983	1.006	1.006	2.3	2.3
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	RKJ138	11/10/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.668	3.253	3.253	11.3	11.3
			~~Fluorene~~ Anthracene (3rd internal standard)	1.101	1.056	1.056	4.1	4.1
			~~Pentachlorophenol~~ Benzo(b)fluoranthene (4th internal standard)	0.983	1.067	1.067	8.5	8.5
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 21165A5-D

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 17

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	4.96	49.6	49.6	0
2-Fluorobiphenyl	↓	5.56	55.6	55.6	↓
Terphenyl-d14	↓	8.81	88.1	88.1	↓
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 27103A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 22 + 23

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~ Acenaphthene	377	377	ND	298	294	79	79	78	78	1	1
~~N-Nitroso-di-n-propylamine~~ Pyrene	↓	↓	ND	363	343	96	96	91	91	6	6
~~4-Chloro-3-methylphenol~~											
~~Acenaphthene~~											
Pentachlorophenol											
~~Pyrene~~											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27603A26

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 10 (MBLK2S)

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	333	333	268	266	80	80	80	80	1	1
Pentachlorophenol										
Pyrene	↓	↓	302	307	91	91	92	92	2	2

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A2b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #7, S:

Conc. = $\frac{(105B)(40)(1)(100Q)}{(255504)(3.668)(30)(0.884)(\quad)}$

= 1.7 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-001-SA7-SB-4.0-5.0
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-160-SA7-SB-0.0-1.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
SL-185-SA7-SB-3.0-4.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
SL-161-SA7-SB-4.0-5.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 25 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No polychlorinated biphenyl contaminants were detected in any of the samples.

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-185-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/21/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 – 11/03/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	A	% ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	ND	D = 10, 13, 15, 17
XVI.	Field blanks	ND	FB = 1 EB = 23

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + water

1	FB-SA7-110111	11	SL-175-SA7-SB-9.0-10.0	21	SL-171-SA7-SB-4.0-5.0	31	MBLK1W
2	SL-001-SA7-SB-4.0-5.0	12	SL-~~175~~185-SA7-SB-3.0-4.0	22	SL-171-SA7-SB-9.0-10.0	32	MBLK2S
3	SL-120-SA7-SB-4.0-5.0	13	DUP-01-SA7-QC-110111	23	EB-SA7-SB-110311	33	MBLK2W
4	SL-120-SA7-SB-9.0-10.0	14	SL-048-SA7-SB-4.0-5.0	24	SL-120-SA7-SB-9.0-10.0MS	34	
5	SL-121-SA7-SB-4.0-5.0	15	SL-048-SA7-SB-9.0-10.0	25	SL-120-SA7-SB-9.0-10.0MSD	35	
6	SL-121-SA7-SB-9.0-10.0	16	SL-161-SA7-SB-4.0-5.0	26	SL-048-SA7-SB-9.0-10.0MS	36	
7	SL-123-SA7-SB-4.0-5.0	17	DUP02-SA7-QC-110211	27	SL-048-SA7-SB-9.0-10.0MSD	37	
8	SL-123-SA7-SB-9.0-10.0	18	SL-108-SA7-SB-2.9-3.9	28		38	
9	SL-160-SA7-SB-0.0-1.0	19	SL-128-SA7-SB-4.0-5.0	29		39	
10	SL-175-SA7-SB-4.0-5.0	20	SL-128-SA7-SB-9.0-10.0	30		40	

Notes: _____

LDC #: 27103A3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?				
V. Blanks	✓			
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 27103A3b
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F?
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (50.0 std)	Recalculated CF (50.0 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/01/11	Aroclor 1260-1 ZB Res-1	4457.88	4457.88	4706.103	4706.103	9.9	9.9
			ZB Res-2	1466 5	1466 5	16502.1	16502.1	18.3	18.3
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27163A3b
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	KK11002A	11/11/11	Aroclor 1260 ZB-1	500	440.852	440.85	12	12
			ZB-2	500.0	441.20	441.20	12	12
	KK11016A	11/11/11			~~457.358~~ 449.76	449.76	10	10
2			↓	↓	~~449.976~~ 448.779	448.78	10	10
	KK11034A	11/12/11	↓	↓	453.989	453.99	9	9
			↓	↓	451.818	451.82	10	10
3	KK11046A	11/13/11	↓	↓	484.532	484.53	3	3
			↓	↓	475.283	475.28	5	5
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A3b
SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
DCB	ZB-Res-2	40	34.94	87.3	87.3	0
TCMX	↓	40	28.11	70.3	70.3	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 27103A36
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: CZ
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 24 + 25

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Aroclor 1260	75.5	75.5	ND	64.8	63.4	86	86	sol	sol	2	2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: ws10 (MB1K1S)

Compound	Spike Added (ng/kg)		Spiked Sample Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)			60.1	61.5						
Aroclor 1260	66.7	66.7	~~NR~~		90	90	92	92	2	2

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #19 Compound Name Aroclor 1254

final Concentration = $\frac{23.16\ (3)}{(30.03)(0.919)}$

= 3.4 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	1254-1 = 11376 / 3322.2	= 3.42	1254-1 =	3.42	
			-2 =	6.43	
			-3 =	3.75	
			-4 =	4.20	
			-5 =	5.36	
				23.16	

Comments:

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 15, 2012

Matrix: Soil/Water

Parameters: Metals

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007/11K008/11K021/11K036/11K037

Sample Identification

FB-SA7-110111
SL-001-SA7-SB-4.0-5.0
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-160-SA7-SB-0.0-1.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
SL-175-SA7-SB-3.0-4.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
SL-161-SA7-SB-4.0-5.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 25 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020, 7470A, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Manganese Titanium	0.000297 mg/L 0.000547 mg/L	All water samples in SDG 11K007/11K008/11K021/11K036/ 11K037
ICB/CCB	Thallium	0.204 ug/L	SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-161-SA7-SB-4.0-5.0
ICB/CCB	Thallium	0.203 ug/L	DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-120-SA7-SB-4.0-5.0	Thallium	0.221 mg/Kg	0.221U mg/Kg
SL-121-SA7-SB-4.0-5.0	Thallium	0.255 mg/Kg	0.255U mg/Kg
SL-123-SA7-SB-4.0-5.0	Thallium	0.232 mg/Kg	0.232U mg/Kg
SL-160-SA7-SB-0.0-1.0	Thallium	0.167 mg/Kg	0.167U mg/Kg
SL-175-SA7-SB-4.0-5.0	Thallium	0.255 mg/Kg	0.255U mg/Kg
SL-185-SA7-SB-3.0-4.0	Thallium	0.236 mg/Kg	0.236U mg/Kg
DUP-01-SA7-QC-110111	Thallium	0.253 mg/Kg	0.253U mg/Kg
SL-161-SA7-SB-4.0-5.0	Thallium	0.252 mg/Kg	0.252U mg/Kg
DUP02-SA7-QC-110211	Thallium	0.215 mg/Kg	0.215U mg/Kg
SL-108-SA7-SB-2.9-3.9	Thallium	0.230 mg/Kg	0.230U mg/Kg
SL-128-SA7-SB-4.0-5.0	Thallium	0.223 mg/Kg	0.223U mg/Kg
SL-128-SA7-SB-9.0-10.0	Thallium	0.210 mg/Kg	0.210U mg/Kg
SL-171-SA7-SB-4.0-5.0	Thallium	0.178 mg/Kg	0.178U mg/Kg
SL-171-SA7-SB-9.0-10.0	Thallium	0.223 mg/Kg	0.223U mg/Kg

Sample EB-SA7-SB-110311 was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-SA7-SB-110311	11/3/11	Copper	0.000561 mg/L	SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0

Sample FB-SA7-110111 was identified as a field blank. No metal contaminants were found.

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-120-SA7-SB-9.0-10.0MS/MSD (SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111)	Antimony Chromium Cobalt Copper Nickel Potassium Sodium Phosphorus Zirconium	72 (75-125) 23 (75-125) 64 (75-125) 36 (75-125) 38 (75-125) 73 (75-125) 73 (75-125) 64 (75-125) 52 (75-125)	73 (75-125) 24 (75-125) 63 (75-125) 37 (75-125) 39 (75-125) 68 (75-125) 74 (75-125) 62 (75-125) 54 (75-125)	- - - - - - - - -	J (all detects) UJ (all non-detects)	A
SL-048-SA7-SB-9.0-10.0MS/MSD (SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0)	Copper Magnesium Nickel Potassium Vanadium Phosphorus Zirconium	70 (75-125) 57 (75-125) - - - 50 (75-125) 42 (75-125)	66 (75-125) 49 (75-125) 72 (75-125) 67 (75-125) 66 (75-125) 49 (75-125) 37 (75-125)	- - - - - - -	J (all detects) UJ (all non-detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-120-SA7-SB-9.0-10.0	Potassium	18 (≤10)	SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111	J (all detects) UJ (all non-detects)	A
SL-048-SA7-SB-9.0-10.0	Aluminum Calcium Magnesium Potassium Vanadium	14 (≤10) 17 (≤10) 14 (≤10) 11 (≤10) 13 (≤10)	SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0	J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K007/11K008/11K021/ 11K036/11K037	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
Aluminum	12500	10600	16 (≤50)	-	-
Antimony	0.146	0.139	5 (≤50)	-	-
Arsenic	5.39	4.67	14 (≤50)	-	-
Barium	66.1	60.0	10 (≤50)	-	-
Beryllium	0.549	0.486	12 (≤50)	-	-
Cadmium	0.123	0.119	3 (≤50)	-	-
Calcium	2360	2270	4 (≤50)	-	-
Chromium	15.8	15.3	3 (≤50)	-	-
Cobalt	4.02	4.28	6 (≤50)	-	-
Copper	5.13	4.91	4 (≤50)	-	-
Iron	16200	15200	6 (≤50)	-	-
Lead	5.06	4.34	15 (≤50)	-	-
Magnesium	3350	3300	2 (≤50)	-	-
Manganese	218	223	2 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
Molybdenum	0.499	0.432	14 (≤50)	-	-
Nickel	7.73	7.92	2 (≤50)	-	-
Potassium	2430	2500	3 (≤50)	-	-
Sodium	58.6	55.0	6 (≤50)	-	-
Strontium	13.4	11.3	17 (≤50)	-	-
Thallium	0.255	0.253	1 (≤50)	-	-
Titanium	852	847	1 (≤50)	-	-
Vanadium	25.0	22.4	11 (≤50)	-	-
Zinc	55.4	48.0	14 (≤50)	-	-
Lithium	19.8	20.3	2 (≤50)	-	-
Phosphorus	280	280	0 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
Aluminum	10800	9950	8 (≤50)	-	-
Antimony	0.145	0.137	6 (≤50)	-	-
Arsenic	2.87	2.92	2 (≤50)	-	-
Barium	85.2	75.3	12 (≤50)	-	-
Beryllium	0.442	0.454	3 (≤50)	-	-
Cadmium	0.205	0.119	53 (≤50)	J (all detects)	A
Calcium	1970	1940	2 (≤50)	-	-
Chromium	14.6	14.5	1 (≤50)	-	-
Cobalt	3.99	3.77	6 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
Copper	6.95	4.25	48 (≤50)	-	-
Iron	18600	15600	18 (≤50)	-	-
Lead	3.70	3.83	3 (≤50)	-	-
Magnesium	4130	3240	24 (≤50)	-	-
Manganese	299	191	44 (≤50)	-	-
Molybdenum	0.454	0.373	20 (≤50)	-	-
Nickel	8.98	7.41	19 (≤50)	-	-
Potassium	3330	2200	41 (≤50)	-	-
Sodium	91.9	72.4	24 (≤50)	-	-
Strontium	14.0	12.7	10 (≤50)	-	-
Thallium	0.219	0.215	2 (≤50)	-	-
Titanium	957	901	6 (≤50)	-	-
Vanadium	25.8	23.2	11 (≤50)	-	-
Zinc	54.4	46.7	15 (≤50)	-	-
Lithium	23.6	21.4	10 (≤50)	-	-
Phosphorus	391	244	46 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111	Antimony Chromium Cobalt Copper Nickel Potassium Sodium Phosphorus Zirconium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0	Copper Magnesium Nickel Potassium Vanadium Phosphorus Zirconium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111	Potassium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0	Aluminum Calcium Magnesium Potassium Vanadium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	FB-SA7-110111 SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211	Cadmium	J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-120-SA7-SB-4.0-5.0	Thallium	0.221U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-121-SA7-SB-4.0-5.0	Thallium	0.255U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-123-SA7-SB-4.0-5.0	Thallium	0.232U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-160-SA7-SB-0.0-1.0	Thallium	0.167U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-175-SA7-SB-4.0-5.0	Thallium	0.255U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-185-SA7-SB-3.0-4.0	Thallium	0.236U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	DUP-01-SA7-QC-110111	Thallium	0.253U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-161-SA7-SB-4.0-5.0	Thallium	0.252U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	DUP02-SA7-QC-110211	Thallium	0.215U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-108-SA7-SB-2.9-3.9	Thallium	0.230U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-128-SA7-SB-4.0-5.0	Thallium	0.223U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-128-SA7-SB-9.0-10.0	Thallium	0.210U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-171-SA7-SB-4.0-5.0	Thallium	0.178U mg/Kg	A	B
11K007/ 11K008/ 11K021/ 11K036/ 11K037	SL-171-SA7-SB-9.0-10.0	Thallium	0.223U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

No Sample Data Qualified in this SDG

LDC #: 27103A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 2-13-12

SDG #: 11K007 / 11K008 / 11K024 / 11K036 / 11K037 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: CR

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method ~~6010B~~/6020~~A~~/7000) 7470A/7471A

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/3/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	Not utilized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(10, 13) (15, 17)
XV	Field Blanks	SW	FB=1, EB=23

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil/water

1 3	FB-SA7-110111 W	11	SL-175-SA7-SB-9.0-10.0	21	SL-171-SA7-SB-4.0-5.0	31	
2 1	SL-001-SA7-SB-4.0-5.0	12	SL-175-SA7-SB-3.0-4.0	22 2	SL-171-SA7-SB-9.0-10.0	32	
3	SL-120-SA7-SB-4.0-5.0	13 1	DUP-01-SA7-QC-110111	23 3	EB-SA7-SB-110311 W	33	
4	SL-120-SA7-SB-9.0-10.0	14 2	SL-048-SA7-SB-4.0-5.0	24	SL-120-SA7-SB-9.0-10.0MS	34	
5	SL-121-SA7-SB-4.0-5.0	15	SL-048-SA7-SB-9.0-10.0	25	SL-120-SA7-SB-9.0-10.0MSD	35	
6	SL-121-SA7-SB-9.0-10.0	16	SL-161-SA7-SB-4.0-5.0	26	SL-048-SA7-SB-9.0-10.0MS	36	
7	SL-123-SA7-SB-4.0-5.0	17	DUP02-SA7-QC-110211	27	SL-048-SA7-SB-9.0-10.0MSD	37	
8	SL-123-SA7-SB-9.0-10.0	18	SL-108-SA7-SB-2.9-3.9	28		38	
9	SL-160-SA7-SB-0.0-1.0	19	SL-128-SA7-SB-4.0-5.0	29		39	
10	SL-175-SA7-SB-4.0-5.0	20	SL-128-SA7-SB-9.0-10.0	30		40	

Notes: _____

LDC #: 27603A4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [illegible]

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓	✓		
Were %RSD of isotopes in the tuning solution ≤5%?				
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 27603A4

VALIDATION FINDINGS CHECKLIST

Reviewer: ER
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?		✓		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target analytes were detected in the field blanks.	✓			

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: V

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-23		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
Q: 24-27		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
Analysis Method		
ICP		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
ICP-MS		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr

Comments: Mercury by CVAA if performed

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

(CB)

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 25x x 10xdil
Sample Concentration units, unless otherwise noted: mg/L
Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (mg/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Mn		0.000297		0.00149										
Ti		0.000547		0.00274										

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 2, 3, 5-14, 16

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	3	5	7	9	10	12	13	16		
Tl			0.204	0.255	0.221	0.255	0.232	0.167	0.255	0.236	0.253	0.252		

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 17-22

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	17	18	19	20	21	22				
Tl			0.203	0.254	0.215	0.230	0.223	0.210	0.178	0.223				

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CR
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6010B/7000)
Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/3/11 Soil factor applied 25 ~~100~~x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: 18-22

Analyte	Blank ID	Sample Identification										
	23	Action Level	No Qualifiers									
Cu	0.000561	0.07 ~~0.2805~~										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer:

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	24/25	S	Sb	72	73		2-B	J/UJ/A (Q) PS=94%
			Cr	23	24			
			Co	64	63			
			Cu	36	37			
			Ni	38	39			
			K	73	68			
			Na	73	74			
			P	64	62			
			Zr	52	54			
	26/27	S	Cu	70	66		14-22	
			Mg	57	49			
			Ni		72			
			K		67			
			V		66			
			P	50	49			
			Zr	42	37			

Comments:

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: AR
2nd Reviewer: [signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y (N) N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		4	S	K	18	2-13	J/UJ/A (B)
		15	S	Al	14	14-22	
				Ca	17	↓	
				Mg	14		
				K	11		
				V	13	↓	↓

Comments: _____

SDILICPMS.wpd

LDC#: 27103A4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: AV
2nd Reviewer: LW

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	10	13		
Aluminum	12500	10600	16	
Antimony	0.146	0.139	5	
Arsenic	5.39	4.67	14	
Barium	66.1	60.0	10	
Beryllium	0.549	0.486	12	
Cadmium	0.123	0.119	3	
Calcium	2360	2270	4	
Chromium	15.8	15.3	3	
Cobalt	4.02	4.28	6	
Copper	5.13	4.91	4	
Iron	16200	15200	6	
Lead	5.06	4.34	15	
Magnesium	3350	3300	2	
Manganese	218	223	2	
Molybdenum	0.499	0.432	14	
Nickel	7.73	7.92	2	
Potassium	2430	2500	3	
Sodium	58.6	55.0	6	
Strontium	13.4	11.3	17	

LDC#: 27103A4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: SR
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	10	13		
Thallium	0.255	0.253	1	
Titanium	852	847	1	
Vanadium	25.0	22.4	11	
Zinc	55.4	48.0	14	
Lithium	19.8	20.3	2	
Phosphorus	280	280	0	

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Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	15	17		
Aluminum	10800	9950	8	
Antimony	0.145	0.137	6	
Arsenic	2.87	2.92	2	
Barium	85.2	75.3	12	
Beryllium	0.442	0.454	3	
Cadmium	0.205	0.119	53	Jdet/A (FD)
Calcium	1970	1940	2	
Chromium	14.6	14.5	1	
Cobalt	3.99	3.77	6	
Copper	6.95	4.25	48	
Iron	18600	15600	18	

LDC#: 27103A4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	15	17		
Lead	3.70	3.83	3	
Magnesium	4130	3240	24	
Manganese	299	191	44	
Molybdenum	0.454	0.373	20	
Nickel	8.98	7.41	19	
Potassium	3330	2200	41	
Sodium	91.9	72.4	24	
Strontium	14.0	12.7	10	
Thallium	0.219	0.215	2	
Titanium	957	901	6	
Vanadium	25.8	23.2	11	
Zinc	54.4	46.7	15	
Lithium	23.6	21.4	10	
Phosphorus	391	244	46	

LDC #: 27103A4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: [signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
ICV	ICP/MS (Initial calibration)	Cu	32.42	30	108	108	Y
↓	CVAA (Initial calibration)	Hg	2.07	2	104	—	↓
	ICP (Continuing calibration)						
CCV (10:01 pm)	ICP/MS (Continuing calibration)	Sn	24.72	25	99	99	
CCV	CVAA (Continuing calibration)	Hg	4.89	5	98	—	↓
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A5

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Zn	20,85	20	104	104	Y
LCS	Laboratory control sample	Sb	11,9	12,5	95	95	
24	Matrix spike	Se	(SSR-SR) 12.6	13,7	92	92	
24/25	Duplicate	Sb	52,5	52.4	0	0	
4	ICP serial dilution	V	59,3	60,3	2	2	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 4
Reviewer: AL
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Se were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{50\,mL\,(1.834\,ug/L)(10)}{2.07g\,(1000)(0.936)} = 0.473\,mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
0.936	2	Aluminum	11400	11400	Y
		Antimony	0.261	0.261	
		Arsenic	5.38	5.38	
		Barium	88.4	88.4	
		Beryllium	0.634	0.634	
		Cadmium	0.229	0.229	
		Calcium	2780	2780	
		Chromium	19.5	19.5	
		Cobalt	7.65	7.65	
		Copper	8.15	8.15	
		Iron	23100	23100	
		Lead	4.57	4.57	
		Magnesium	5020	5020	
		Manganese	530	530	
		Molybdenum	1.12	1.12	
		Nickel	13.2	13.2	
		Potassium	2490	2490	
		Selenium	0.473	0.473	
		Sodium	68.8	68.8	
		Strontium	14.0	14.0	
		Thallium	0.295	0.295	
		Titanium	1210	1210	
		Vanadium	38.0	38.0	
		Zinc	55.6	55.6	

LDC #: 27103A 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 2 of 4
Reviewer: SL
2nd reviewer: N

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Pb were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{50mL(10)\,18.75ng/L}{2.05g(1000)(0.953)} = 4.80mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	2	Lithium	21.9	21.9	Y
		Phosphorus	422	422	↓
0.953	3	Aluminum	14900	14900	Y
		Antimony	0.207	0.207	↓
		Arsenic	3.59	3.59	
		Barium	94.0	94.0	
		Beryllium	0.644	0.644	
		Boron	3.63	3.63	
		Cadmium	0.121	0.121	
		Calcium	1800	1800	
		Chromium	15.9	15.9	
		Cobalt	4.24	4.24	
		Copper	5.84	5.84	
		Iron	16500	16500	
		Lead	4.80	4.80	
		Magnesium	3540	3540	
		Manganese	183	183	
		Molybdenum	0.603	0.603	
		Nickel	8.13	8.13	
		Potassium	1910	1910	
		Sodium	71.7	71.7	
		Strontium	19.4	19.4	
		Thallium	0.221	0.221	↓

LDC #: 27103A 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Ba were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{50mL(10)451.2mg/L}{2.03g(0.883)(1000)/1000} = 126mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	3	Titanium	993	993	Y
		Vanadium	29.5	29.5	
		Zinc	42.8	42.8	
		Lithium	18.1	18.1	
		Phosphorus	239	239	
0.883	4	Aluminum	26700	26700	Y
		Antimony	0.277	0.277	
		Arsenic	5.64	5.64	
		Barium	126	126	
		Beryllium	0.911	0.911	
		Boron	9.11	9.11	
		Cadmium	0.408	0.408	
		Calcium	20600	20600	
		Chromium	33.9	33.9	
		Cobalt	9.57	9.57	
		Copper	17.6	17.6	
		Iron	29200	29200	
		Lead	8.75	8.75	
		Magnesium	7730	7730	
		Manganese	436	436	
		Molybdenum	0.494	0.494	
		Nickel	20.0	20.0	
		Potassium	3460	3460	

LDC #: 27103A 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CL
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

See Page Before

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	4	Sodium	273	273	Y
		Strontium	39.9	39.9	
		Thallium	0.288	0.288	
		Titanium	806	806	
		Vanadium	59.3	59.3	
		Zinc	67.3	67.3	
		Lithium	22.0	22.0	
		Phosphorus	371	371	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 15, 2012

Matrix: Soil/Water

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007/11K008/11K021/11K036/11K037

Sample Identification

FB-SA7-110111
SL-001-SA7-SB-4.0-5.0
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-160-SA7-SB-0.0-1.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
SL-175-SA7-SB-3.0-4.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
SL-161-SA7-SB-4.0-5.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 25 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 9010A and 9014 for Cyanide, EPA Method 300.0 for Nitrate, Nitrite, and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
FB-SA7-110111	Hexavalent chromium	24.25 hours	24 hours	J (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No contaminant concentrations were found.

Sample FB-SA7-110111 was identified as a field blank. No contaminant concentrations were found.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K007/11K008/11K021/11K036/11K037	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
Fluoride	2.18	2.24	3 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-11021			
Fluoride	2.10	2.08	1 (≤50)	-	-
Nitrate	1.16	1.20	3 (≤50)	-	-

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	FB-SA7-110111	Hexavalent chromium	J (all detects) UJ (all non-detects)	P	Technical holding times (H)
11K007/ 11K008/ 11K021/ 11K036/ 11K037	FB-SA7-110111 SL-001-SA7-SB-4.0-5.0 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-160-SA7-SB-0.0-1.0 SL-175-SA7-SB-9.0-10.0 SL-175-SA7-SB-3.0-4.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 SL-161-SA7-SB-4.0-5.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K007/11K008/11K021/11K036/11K037

No Sample Data Qualified in this SDG

LDC #: 27103A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 2-14-12

SDG #: 11K007 / 11K008/ 11K021/11K036/11K037 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: 02

2nd Reviewer: W

METHOD: (Analyte) Cyanide (EPA SW846 Method 9010A/9014), Nitrate-N, Nitrite-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 10/31 - 11/3/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/D
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS/D
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(10, 13), (15, 17)
X	Field blanks	ND	FB=1; EB=23

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil/water

1	FB-SA7-110111 W	11	SL-175-SA7-SB-9.0-10.0	21	SL-171-SA7-SB-4.0-5.0	31	
2	SL-001-SA7-SB-4.0-5.0	12	SL-175-SA7-SB-3.0-4.0	22	SL-171-SA7-SB-9.0-10.0	32	
3	SL-120-SA7-SB-4.0-5.0	13	DUP-01-SA7-QC-110111	23	EB-SA7-SB-110311 W	33	
4	SL-120-SA7-SB-9.0-10.0	14	SL-048-SA7-SB-4.0-5.0	24	SL-120-SA7-SB-9.0-10.0MS	34	
5	SL-121-SA7-SB-4.0-5.0	15	SL-048-SA7-SB-9.0-10.0	25	SL-120-SA7-SB-9.0-10.0MSD	35	
6	SL-121-SA7-SB-9.0-10.0	16	SL-161-SA7-SB-4.0-5.0	26	SL-048-SA7-SB-9.0-10.0MS	36	
7	SL-123-SA7-SB-4.0-5.0	17	DUP02-SA7-QC-110211	27	SL-048-SA7-SB-9.0-10.0MSD	37	
8	SL-123-SA7-SB-9.0-10.0	18	SL-108-SA7-SB-2.9-3.9	28		38	
9	SL-160-SA7-SB-0.0-1.0	19	SL-128-SA7-SB-4.0-5.0	29		39	
10	SL-175-SA7-SB-4.0-5.0	20	SL-128-SA7-SB-9.0-10.0	30		40	

Notes:

LDC #: 27103A6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: W

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 25103H6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
X. Field blanks				
Field blanks were identified in this SDG.	✓			
Target analytes were detected in the field blanks.		✓		

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Parameter
1,23	pH TDS Cl (F) (NO_3) (NO_2) SO_4 O-PO_4 Alk (CN) NH_3 TKN TOC (Cr6+) (ClO_4)
2-22	pH TDS Cl (F) NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC (Cr6+) (ClO_4)
3,4,14,15,17, 18-22	pH TDS Cl F (NO_3) (NO_2) SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
3-8, 10, 11, 13-15, 17	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk (CN) NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
24,25	pH TDS Cl (F) (NO_3) (NO_2) SO_4 O-PO_4 Alk (CN) NH_3 TKN TOC Cr6+ (ClO_4)
26,27	pH TDS Cl (F) (NO_3) (NO_2) SO_4 O-PO_4 Alk (CN) NH_3 TKN TOC Cr6+ (ClO_4)
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 27103A6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: CR
2nd reviewer: W

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria?

Method:	7199					
Parameters:	Cr+					
Technical holding time:	24hrs					

Sample ID	Sampling date	Analysis date	Analysis date	Analysis date	Analysis date	Analysis date	Qualifier
1	11/1/11 10:45	11/2/11 10:58	(25.25hrs)				J/UJ/P

LDC# 27103A6

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: CR
2nd Reviewer:

Inorganics, Method See Cover

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	10	13		
Fluoride	2.18	2.24	3	

V:\FIELD DUPLICATES\FD_inorganic\27103A6.wpd

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	15	17		
Fluoride	2.10	2.08	1	
Nitrate	1.16	1.20	3	

LDC #: 2703A6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [signature]

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of F was recalculated. Calibration date: 9/30/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution

True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (ug/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	F	s1	0.1	2.41700	*0.999964*	0.999963	Y
		s2	0.2	5.01400			
		s3	0.5	13.40000			
		s4	1	28.03000			
		s5	2	58.89000			
		s6	5	148.60000			
Calibration verification	NO3	~~ICV~~ CCV	1	0.986	98.6	98.6	
Calibration verification	Cl	CCV	15	15.053	100	100	
Calibration verification	SO_4^{2-}	"	2	1.846	92	92	"

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27163A6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{Found}{True} \times 100$$

Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	F	2.06	2	103	103	Y
24	Matrix spike sample	NO3	(SSR-SR) 15.16	15.1	100	100	↓
24125	Duplicate sample	CL	9.36	9.30	1	1	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103B6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: QR
2nd reviewer:

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for F reported with a positive detect were recalculated and verified using the following equation:

Concentration =

$F = 0.0333906 Area + 0.039963$

$NO_3\text{-}N = 0.0219574 (Area) + 0.0522169$

Recalculation:

4: $F = \frac{(0.0333906(21.94) + 0.039963) 60mL}{20.0044g (0.883)} = 2.62 mg/kg$

3: $F = \frac{(0.0219574(3.155) + 0.0522169) 60mL}{20.0009 (0.953)} \times \frac{62}{14} = 1.69 mg/kg$

2: $F = \frac{0.0333906 (5.147) + 0.039963}{20.0034g (0.936)} \times 60mL = 0.679 mg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
0.936	2	F	0.679	0.679	Y
0.953	3	F	1.46	1.46	Y
		NO_3	1.70	~~1.64 1.69~~	1.69 ↓
0.883	4	F	2.62	2.62	Y
		NO_3	8.14	8.14	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.5
SL-120-SA7-SB-9.5
SL-121-SA7-SB-4.5
SL-121-SA7-SB-9.5
SL-123-SA7-SB-4.5
SL-123-SA7-SB-9.5
SL-175-SA7-SB-4.5
SL-175-SA7-SB-9.5
DUP-01-SA7-QC-110111
TB-110111
SL-048-SA7-SB-4.5
SL-048-SA7-SB-9.5
DUP02-SA7-QC-110211
TB-110211
SL-108-SA7-SB-3.3
SL-128-SA7-SB-4.5
SL-128-SA7-SB-9.5
SL-171-SA7-SB-4.5
SL-171-SA7-SB-9.5
TB-110311
EB-SA7-SB-110311
SL-120-SA7-SB-9.5MS
SL-120-SA7-SB-9.5MSD
SL-048-SA7-SB-9.5MS
SL-048-SA7-SB-9.5MSD

Introduction

This data review covers 21 soil samples and 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

Samples TB-110111, TB-110211, and TB-110311 were identified as trip blanks. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Trip Blank ID	Sampling Date	Compound	Concentration	Associated Samples
TB-110111	11/1/11	Gasoline range organics	21 ug/L	FB-SA7-110111 SL-120-SA7-SB-4.5 SL-120-SA7-SB-9.5 SL-121-SA7-SB-4.5 SL-121-SA7-SB-9.5 SL-123-SA7-SB-4.5 SL-123-SA7-SB-9.5 SL-175-SA7-SB-4.5 SL-175-SA7-SB-9.5 DUP-01-SA7-QC-110111
TB-110211	11/2/11	Gasoline range organics	18 ug/L	SL-048-SA7-SB-4.5 SL-048-SA7-SB-9.5 DUP02-SA7-QC-110211

Trip Blank ID	Sampling Date	Compound	Concentration	Associated Samples
TB-110311	11/3/11	Gasoline range organics	26 ug/L	SL-108-SA7-SB-3.3 SL-128-SA7-SB-4.5 SL-128-SA7-SB-9.5 SL-171-SA7-SB-4.5 SL-171-SA7-SB-9.5 EB-SA7-SB-110311

Sample EB-SA7-SB-110311 was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Field Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-SA7-110111	11/3/11	Gasoline range organics	47 ug/L	SL-123-SA7-SB-4.5 SL-123-SA7-SB-9.5 SL-175-SA7-SB-4.5 SL-175-SA7-SB-9.5 DUP-01-SA7-QC-110111

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
FB-SA7-110111	Gasoline range organics	47 ug/L	50U ug/L

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-175-SA7-SB-4.5 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.5 and DUP02-SA7-QC-110211 were identified as field duplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.5	DUP02-SA7-QC-110211			
Gasoline range organics	1.1U	0.77	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.5 SL-120-SA7-SB-9.5 SL-121-SA7-SB-4.5 SL-121-SA7-SB-9.5 SL-123-SA7-SB-4.5 SL-123-SA7-SB-9.5 SL-175-SA7-SB-4.5 SL-175-SA7-SB-9.5 DUP-01-SA7-QC-110111 TB-110111 SL-048-SA7-SB-4.5 SL-048-SA7-SB-9.5 DUP02-SA7-QC-110211 TB-110211 SL-108-SA7-SB-3.3 SL-128-SA7-SB-4.5 SL-128-SA7-SB-9.5 SL-171-SA7-SB-4.5 SL-171-SA7-SB-9.5 TB-110311 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11K007	SL-120-SA7-SB-9.5 DUP-01-SA7-QC-110111 SL-048-SA7-SB-9.5 DUP02-SA7-QC-110211	Gasoline range organics	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
11K007	FB-SA7-110111	Gasoline range organics	50U ug/L	A	T

LDC #: 27103A7 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12

SDG #: 11K007 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/3/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	SW	*D = 8,10 13,14
XIII.	Field blanks	SW	FB = 1 TB = 11, 15, 21 *EB = 22

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

* ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: soil & water

1†	FB-SA7-110111 W	11†	TB-110111 W	21†	TB-110311 W	31	MBLK1W
2	SL-120-SA7-SB-4.5	12	SL-048-SA7-SB-4.5	22	EB-SA7-SB-110311 W	32	MBLK2W
3†	SL-120-SA7-SB-9.5	13	SL-048-SA7-SB-9.5	23	SL-120-SA7-SB-9.5MS	33	MBLK3W
4	SL-121-SA7-SB-4.5	14†	DUP02-SA7-QC-110211	24	SL-120-SA7-SB-9.5MSD	34	MBLK1S
5	SL-121-SA7-SB-9.5	15†	TB-110211 W	25	SL-048-SA7-SB-9.5MS	35	
6	SL-123-SA7-SB-4.5	16	SL-108-SA7-SB-3.3	26	SL-048-SA7-SB-9.5MSD	36	
7	SL-123-SA7-SB-9.5	17	SL-128-SA7-SB-4.5	27		37	
8	SL-175-SA7-SB-4.5	18	SL-128-SA7-SB-9.5	28		38	
9	SL-175-SA7-SB-9.5	19	SL-171-SA7-SB-4.5	29		39	
10	DUP-01-SA7-QC-110111	20	SL-171-SA7-SB-9.5	30		40	

Notes: _____

LDC #: 27103A7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FA
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

LDC #: 27103A7

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer: A

METHOD: / GC __ HPLC
Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:** ug/L + mg/kg (T)
Sampling date: 11/01/11
Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:
Associated Samples: 1 → 10

Compound	Blank ID	Blank ID	Sample Identification							
	11	5X	1							
gasoline range organics	21	105	47/50							
CRQL										

Blank units: ug/L **Associated sample units:**
Sampling date: 11/02/11
Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:
Associated Samples: 12 → 14 (ND + 75X)

Compound	Blank ID	Blank ID	Sample Identification							
	15									
gasoline range organics	18									
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with compound concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27103A7

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: / GC __ HPLC

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

16 → 20, 22 (ND)

Blank units: ug/L **Associated sample units:** ug/L & mg/kg

Sampling date: 11/3/11

Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: _____

Associated Samples: ~~2 → 10~~, ~~12 → 14~~, ~~16 → 20~~

Compound	Blank ID	Blank ID	Sample Identification							
	21									
gasoline Range Organics	26									
CRQL										

Blank units: ug/L **Associated sample units:** mg/kg

Sampling date: 11/01/11

Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: FB

Associated Samples: 6 - 10 (ND)

Compound	Blank ID	Blank ID	Sample Identification							
	1									
↓	47									
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with compound concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27103A7

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC __ HPLC
Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		%RPD Limit ≤50	Qualification Parent only / All Samples
	3	10		
~~Gasoline Range Organics~~	0.68	1.14	~~200~~	J/UJ/A (FQ)

Compound	Concentration (mg/kg)		%RPD Limit ≤50	Qualification Parent only / All Samples
	13	14		
↓	1.14	0.77	200	J/UJ/A (FQ)

LDC #: 27103A7
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				CF (SDG std)	CF (SDG std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	10/17/11	gasoline	17193	17193	17076.9	17076.9	1.9	1.9
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A7
SDG #: w conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	EK03002A	11/3/11	GRO C5 - C12	1000	935.96	935.96	6	6
	EK03013A	11/3/11	↓	1000	938.95	938.95	6	6
	EK04002A	11/4/11	↓	1000	904.62	904.62	10	
2	EK04011A	11/4/11	↓	1000	959.30	959.30	4	4
	EK04022A	11/5/11	↓	1000	955.23	955.23	4	4
	EK04034A	11/5/11	↓	1000	939.65	939.65	6	6
3	EK04045A	11/5/11	↓	1000	927.41	927.41	7	7
	EK07002A	11/7/11	↓	1000	896.09	896.09	10	10
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27105A1

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #3

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
4-BFB	~~RTX~~ DB-5	40.0	33.57	83.9	83.9	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 27103A7
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: A

METHOD: GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SA = Spike added SC = Sample concentration

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 23 + 24

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	34.5	33.4	0.683	34.2	30.0	97	97	~~88~~	~~88~~	10	10
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A7
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: ves 10

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	x.0	x.0	22.5	x.4	90	90	102	102	12	12
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #3 Compound Name GRO

Concentration = $\frac{(20585)(5)}{(17076.9)(5.07)(0.883)(1000)}$

= 0.68 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: [illegible]

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 21 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No total petroleum hydrocarbons as extractable contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-175-SA7-SB-4.0-5.0	DUP-01-SA7-QC-110111			
Extractable fuel hydrocarbons (C8-C11)	0.64	1.1	53 (≤50)	J (all detects)	A
Extractable fuel hydrocarbons (C21-C30)	2.2	0.99	76 (≤50)	J (all detects)	A
Extractable fuel hydrocarbons (C30-C40)	1.9	0.70	92 (≤50)	J (all detects)	A
Total extractable fuel hydrocarbons (C8-C40)	4.7	2.8	51 (≤50)	J (all detects)	A

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
Extractable fuel hydrocarbons (C8-C11)	0.59	1.2	68 (≤50)	J (all detects)	A

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-048-SA7-SB-9.0-10.0	DUP02-SA7-QC-110211			
Extractable fuel hydrocarbons (C21-C30)	1.1	1.6	37 (≤50)	J (all detects)	A
Extractable fuel hydrocarbons (C30-C40)	0.78	1.0	25 (≤50)	J (all detects)	A
Total extractable fuel hydrocarbons (C8-C40)	2.5	3.8	41 (≤50)	J (all detects)	A

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11K007	SL-120-SA7-SB-9.0-10.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211	Extractable fuel hydrocarbons (C8-C11) Extractable fuel hydrocarbons (C21-C30) Extractable fuel hydrocarbons (C30-C40) Total extractable fuel hydrocarbons (C8-C40)	J (all detects) J (all detects) J (all detects) J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12

SDG #: 11K007 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31/11 - 11/03/11
II	Initial calibration	A	%. RSD ≤20
III.	Calibration verification/ICV	A	1CV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	SW	D = 8, 10 12, 13
XIII.	Field blanks	ND	FB = 1 EB = 19

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: soil + water

1 -	FB-SA7-110111 W	11	SL-048-SA7-SB-4.0-5.0	21	SL-120-SA7-SB-9.0-10.0MSD	31	
2 +	SL-120-SA7-SB-4.0-5.0	12	SL-048-SA7-SB-9.0-10.0	22	SL-048-SA7-SB-9.0-10.0MS	32	
3 +	SL-120-SA7-SB-9.0-10.0	13	DUP02-SA7-QC-110211	23	SL-048-SA7-SB-9.0-10.0MSD	33	
4	SL-121-SA7-SB-4.0-5.0	14	SL-108-SA7-SB-2.9-3.9	24		34	
5	SL-121-SA7-SB-9.0-10.0	15	SL-128-SA7-SB-4.0-5.0	25		35	
6	SL-123-SA7-SB-4.0-5.0	16	SL-128-SA7-SB-9.0-10.0	26		36	
7	SL-123-SA7-SB-9.0-10.0	17	SL-171-SA7-SB-4.0-5.0	27		37	
8	SL-175-SA7-SB-4.0-5.0	18	SL-171-SA7-SB-9.0-10.0	28		38	
9	SL-175-SA7-SB-9.0-10.0	19 -	EB-SA7-SB-110311 W	29		39	
10	DUP-01-SA7-QC-110111	20	SL-120-SA7-SB-9.0-10.0MS	30		40	

Notes: _____

LDC #: 27103A8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A8
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC#: 27103AX

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: A

METHOD: 8015B

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(FD)

Compound	Concentration (mg/kg)		≤50 RPD	
	8	10		
EFH (C8-C11)	0.64	1.1	53	J/A
EFH (C21-C30)	2.2	0.99	76	
EFH (C30-C40)	~~2.8~~ 1.9	0.70	~~122~~ 92	
TOTAL EFH (C8-C40)	~~5.7~~ 4.7	2.8	~~88~~ 51	

Compound	Concentration (mg/kg)		≤50 RPD	
	12	13		
EFH (C8-C11)	0.59	1.2	68	J/A
EFH (C21-C30)	1.1	1.6	37	—
EFH (C30-C40)	0.78	1.0	25	—
TOTAL EFH (C8-C40)	2.5	3.8	41	—

LDC #: 27103 1B
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FF
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (102 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/31/11	EFH (C8-C11)	23664	23664	216867	216867	8.3	8.3
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103 48
SDG #: pw Cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	LK08003A	11/8/11	EFH (C8-C40)	500.0	536.62	536.62	7	7
	LK08019A	11/8/11	↓	↓	553.65	553.65	11	11
2	LK10002A	11/10/11	↓	↓	553.92	553.92	11	11
3	LK10014A	11/10/11	↓	↓	556.63	556.63	11	11
	LK10026A	11/10/11	↓	↓	562.85	562.85	13	13
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103Aj
SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Bromobenzene	NS	100	65.986	66.0	66.0	0
Hexacosane	↓	25	20.342	81.4	81.4	U

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 27163AJ
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 22 & 23

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (C8-C40)	52.7	52.7	2.47	49.8	49.6	90	90	89	89	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103AJ
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: [illegible]

Compound	Spike Added (mg/L)		Spiked Sample Concentration (mg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
EFH Cx-C40	5.0	5.0	4.51	4.63	90	90	93	93	3	3

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103AJ
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: _____

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #2 Compound Name EFH (C8-C11)

Concentration = $\frac{(228247)\ (3)}{(21686.7)\ (30.02)\ (0.953)}$

= 1.1 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	October 31 through November 3, 2011
LDC Report Date:	February 22, 2012
Matrix:	Soil/Water
Parameters:	Nitroglycerine & PETN
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
DUP02-SA7-QC-110211
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 9 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8332 for Nitroglycerine and PETN.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

Triplicate injections of the initial calibration were performed.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No nitroglycerine or PETN contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No nitroglycerine or PETN contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No nitroglycerine or PETN contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/(Matrix Spike) Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No nitroglycerine or PETN was detected in any of the samples.

Santa Susana Field Laboratory
Nitroglycerine & PETN - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Nitroglycerine & PETN - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Nitroglycerine & PETN - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A24 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FJ
2nd Reviewer:

METHOD: HPLC Nitroglycerine & PETN (EPA SW 846 Method 8332)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/03/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates ND	SW	D= 5, 6
XIII.	Field blanks	ND	FB= 1 EB= 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	FB-SA7-110111 W	11	SL-048-SA7-SB-9.0-10.0MSD	21	MBLK1W	31	
2	SL-120-SA7-SB-4.0-5.0 S	12		22	MBLK1S	32	
3	SL-120-SA7-SB-9.0-10.0	13		23		33	
4	SL-048-SA7-SB-4.0-5.0	14		24		34	
5	SL-048-SA7-SB-9.0-10.0	15		25		35	
6	DUP02-SA7-QC-110211	16		26		36	
7	EB-SA7-SB-110311 W	17		27		37	
8	SL-120-SA7-SB-9.0-10.0MS	18		28		38	
9	SL-120-SA7-SB-9.0-10.0MSD	19		29		39	
10	SL-048-SA7-SB-9.0-10.0MS	20		30		40	

Notes:

LDC #: 27103A24
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: A

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A24
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓	✓		
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 27103A24
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC _____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (m^2 std)	Recalculated CF (m^2 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL C-18	7/20/11	nitroglycerin	102	102	101.8	101.8	5.1	5.1
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A04
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC_____HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	PK14002A	11/14/11	nitroglycerin	750	656.91	656.91	12	12
	PK14013A	11/14/11	↓	↓	649.47	649.47	13	13
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27163A24
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #6

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1,2 - DNB	NS	200	235.2	235.2	118	ⓓ

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 27103A24
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; MS = Matrix spike; SC = Sample concentration; MSD = Matrix spike duplicate

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

MS/MSD samples: 8 + 9

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
nitroglycerin	7500	7500	ND	7390	7810	99	99	104	104	5	5

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A24
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: wes/D soil

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
nitroglycerin	7500	7500	7070	6560	94	94	87	87	7	7

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27163A24
SDG #: all cases

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Explosives

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
DUP02-SA7-QC-110211
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 9 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No explosive contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No explosive contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No explosives were detected in any of the samples.

Santa Susana Field Laboratory
Explosives - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Explosives - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A40 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12

SDG #: 11K007 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/03/11
II	Initial calibration	A	%RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 5 + 6
XIII.	Field blanks	ND	FB = 1 EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + Water

1	FB-SA7-110111 W	11	SL-048-SA7-SB-9.0-10.0MSD	21	MBLK W	31	
2	SL-120-SA7-SB-4.0-5.0 S	12		22	MBLK S	32	
3	SL-120-SA7-SB-9.0-10.0	13		23		33	
4	SL-048-SA7-SB-4.0-5.0	14		24		34	
5	SL-048-SA7-SB-9.0-10.0 D	15		25		35	
6	DUP02-SA7-QC-110211 D	16		26		36	
7	EB-SA7-SB-110311 W	17		27		37	
8	SL-120-SA7-SB-9.0-10.0MS	18		28		38	
9	SL-120-SA7-SB-9.0-10.0MSD	19		29		39	
10	SL-048-SA7-SB-9.0-10.0MS	20		30		40	

Notes: _____

LDC #: 27103A4U
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FP
2nd Reviewer: [illegible]

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A4U
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?		✓		
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 27103A4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC_____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (200 std)	Recalculated CF (200 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL Luna SU Phenyl. Hexyl	9/30/11	~~HMX~~ RDX	249.36	249.36	245.809	245.809	9.8	9.8
			~~RDX~~ HMX	236.90	236.90	227.042	227.042	12.9	12.9
2	ICAL C18	8/26/11	~~RDD~~ RDX	269	269	261.9	261.9	3.6	3.6
			HMX	225	225	221.9	221.9	5.6	5.6
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A40
SDG #: w Conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC_____HPLC✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	XK14012A	11/14/11	HMX C18	400	404.52	404.52	1	1
			RDX	↓	415.96	415.96	4	4
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A40
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC_____ HPLC✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	PK090602A	11/09/11	HMX Rheny Hexyl	400.00	385.62	385.62	4	4
			RDX	↓	368.29	368.29	8	8
2	PK09010A	11/09/11	↓	↓	397.95	397.95	1	1
			↓	↓	380.79	380.79	5	5
3	PK09020A	11/10/11	↓	↓	404.70	404.70	1	1
			↓	↓	389.38	389.38	3	3
4	XK14003A	11/14/11	↓ C18	↓	407.08	407.08	2	2
			↓	↓	410.86	410.86	3	3

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103940
SDG #: see cover

METHOD: ___ GC ✓ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
4 2 - DNB	Luna 5u	200	212.4	106	106	0
	Phenyl - Hexyl					

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 27103A40
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: A

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 8 & 9

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)		980									
HMX (8330)	2000	~~2000~~	ND	2106	2180	105	105	110	110	5	5
2,4,6-Trinitrotoluene (8330)	↓	↓	ND	2040	1800	102	102	91	91	11	11

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A40
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
2nd Reviewer: A

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: WBLD soil

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000	2000	2120	2160	106	106	108	108	2	2
2,4,6-Trinitrotoluene (8330)	↓	↓	2180	1920	109	109	96	96	13	13

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103 AW
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Alcohols

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
DUP-01-SA7-QC-110111
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 21 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No alcohol contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No alcohol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-110111 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No alcohols were detected in any of the samples.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 DUP-01-SA7-QC-110111 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A43 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12
SDG #: 11K007 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: 1
2nd Reviewer: 2

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 - 11/03/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A/	not required
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 8, 10 12, 13
XIII.	Field blanks	ND	FB = 1 EB = 19

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
Soil + water

1	FB-SA7-110111 W	11	SL-048-SA7-SB-4.0-5.0	21	SL-120-SA7-SB-9.0-10.0MSD	31	MBLK1W
2	SL-120-SA7-SB-4.0-5.0	12	SL-048-SA7-SB-9.0-10.0	22	SL-048-SA7-SB-9.0-10.0MS	32	MBLK2S
3	SL-120-SA7-SB-9.0-10.0	13	DUP02-SA7-QC-110211	23	SL-048-SA7-SB-9.0-10.0MSD	33	
4	SL-121-SA7-SB-4.0-5.0	14	SL-108-SA7-SB-2.9-3.9	24		34	
5	SL-121-SA7-SB-9.0-10.0	15	SL-128-SA7-SB-4.0-5.0	25		35	
6	SL-123-SA7-SB-4.0-5.0	16	SL-128-SA7-SB-9.0-10.0	26		36	
7	SL-123-SA7-SB-9.0-10.0	17	SL-171-SA7-SB-4.0-5.0	27		37	
8	SL-175-SA7-SB-4.0-5.0	18	SL-171-SA7-SB-9.0-10.0	28		38	
9	SL-175-SA7-SB-9.0-10.0	19	EB-SA7-SB-110311 W	29		39	
10	DUP-01-SA7-QC-110111	20	SL-120-SA7-SB-9.0-10.0MS	30		40	

Notes:

LDC #: 27103A43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: A

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓		✓	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 27103A43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (10 std)	Recalculated CF (10 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/29/11	ethanol	13619	13619	13407.9	13407.9	12.5	12.5
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A43
SDG #: RW Conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: A

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	BK03003A	11/3/11	~~methano~~ ethano	10.0	10.66	10.66	7	7
	BK03015 A	11/3/11	ethano	10.0	11.0	11.0	10	10
2								
	BK0323A A	11/3/11	ethano	10.0	10.62	10.62	6	6
3	BK04003A	11/4/11	ethano	10	10.68	10.68	7	7
	BK04023A	11/4/11	ethano	10	9.60	9.60	4	4
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A43
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 20 & 2

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
ethanol	11300	11300	ND	14100	13700	124	124	121	121	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A43
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration
LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCSD 8011

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
ethanol	10000	10000	10600	10300	106	106	103	103	3	3

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A#3
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: October 31 through November 3, 2011

LDC Report Date: February 22, 2012

Matrix: Soil/Water

Parameters: Glycols

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

FB-SA7-110111
SL-120-SA7-SB-4.0-5.0
SL-120-SA7-SB-9.0-10.0
SL-121-SA7-SB-4.0-5.0
SL-121-SA7-SB-9.0-10.0
SL-123-SA7-SB-4.0-5.0
SL-123-SA7-SB-9.0-10.0
SL-175-SA7-SB-4.0-5.0
SL-175-SA7-SB-9.0-10.0
DUP-01-SA7-QC-11011
SL-048-SA7-SB-4.0-5.0
SL-048-SA7-SB-9.0-10.0
DUP02-SA7-QC-110211
SL-108-SA7-SB-2.9-3.9
SL-128-SA7-SB-4.0-5.0
SL-128-SA7-SB-9.0-10.0
SL-171-SA7-SB-4.0-5.0
SL-171-SA7-SB-9.0-10.0
EB-SA7-SB-110311
SL-120-SA7-SB-9.0-10.0MS
SL-120-SA7-SB-9.0-10.0MSD
SL-048-SA7-SB-9.0-10.0MS
SL-048-SA7-SB-9.0-10.0MSD

Introduction

This data review covers 21 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015M for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

Sample EB-SA7-SB-110311 was identified as an equipment blank. No glycol contaminants were found.

Sample FB-SA7-110111 was identified as a field blank. No glycol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-175-SA7-SB-4.0-5.0 and DUP-01-SA7-QC-11011 and samples SL-048-SA7-SB-9.0-10.0 and DUP02-SA7-QC-110211 were identified as field duplicates. No glycols were detected in any of the samples.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	FB-SA7-110111 SL-120-SA7-SB-4.0-5.0 SL-120-SA7-SB-9.0-10.0 SL-121-SA7-SB-4.0-5.0 SL-121-SA7-SB-9.0-10.0 SL-123-SA7-SB-4.0-5.0 SL-123-SA7-SB-9.0-10.0 SL-175-SA7-SB-4.0-5.0 SL-175-SA7-SB-9.0-10.0 DUP-01-SA7-QC-11011 SL-048-SA7-SB-4.0-5.0 SL-048-SA7-SB-9.0-10.0 DUP02-SA7-QC-110211 SL-108-SA7-SB-2.9-3.9 SL-128-SA7-SB-4.0-5.0 SL-128-SA7-SB-9.0-10.0 SL-171-SA7-SB-4.0-5.0 SL-171-SA7-SB-9.0-10.0 EB-SA7-SB-110311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A45 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/17/12

SDG #: 11K007 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Glycols (EPA SW 846 Method 8015M)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31 — 11/03/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	%D/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	N	not required
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/LCSD
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 8, 10 12, 13
XIII.	Field blanks	ND	FB = 1 EB = 19

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	FB-SA7-110111 W	11	SL-048-SA7-SB-4.0-5.0	21	SL-120-SA7-SB-9.0-10.0MSD	31	MBLK1W
2	SL-120-SA7-SB-4.0-5.0 S	12	SL-048-SA7-SB-9.0-10.0	22	SL-048-SA7-SB-9.0-10.0MS	32	MB1K1S
3	SL-120-SA7-SB-9.0-10.0	13	DUP02-SA7-QC-110211	23	SL-048-SA7-SB-9.0-10.0MSD	33	
4	SL-121-SA7-SB-4.0-5.0	14	SL-108-SA7-SB-2.9-3.9	24		34	
5	SL-121-SA7-SB-9.0-10.0	15	SL-128-SA7-SB-4.0-5.0	25		35	
6	SL-123-SA7-SB-4.0-5.0	16	SL-128-SA7-SB-9.0-10.0	26		36	
7	SL-123-SA7-SB-9.0-10.0	17	SL-171-SA7-SB-4.0-5.0	27		37	
8	SL-175-SA7-SB-4.0-5.0	18	SL-171-SA7-SB-9.0-10.0	28		38	
9	SL-175-SA7-SB-9.0-10.0	19	EB-SA7-SB-110311 W	29		39	
10	DUP-01-SA7-QC-110111	20	SL-120-SA7-SB-9.0-10.0MS	30		40	

Notes: _____

LDC #: 27103A45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 27103A45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.		✓		
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 27103A45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: A

METHOD: GC _____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF ($\bar{x}$ std)	Recalculated CF ($\bar{x}$ std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/22/11	Propylene Glycol	7613.64	7613.64	7470.95	7470.95	2.4	2.4
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICIO 1SB

LDC #: 27163A45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: A

METHOD: GC_____HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	BK07002A	11/7/11	Ethylene Glycol	50.0	44.12	44.12	12	12
	BK07013A	11/7/11	↓	50.0	54.86	54.86	10	10
2								
	BK07026A	11/7/11	↓	50.0	54.53	54.53	9	9
3	BK08004A	11/8/11	↓	50	50.31	50.31	1	1
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: A

METHOD: __ GC __ ~~HPLC~~

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 20 + 21

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Diethylene Glycol	56.6	56.6	ND	57.9	56.6	102	102	108	108	5	5

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A45
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ___ GC ___HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: las 10

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Diethylene Glycol	50.0	50.0	52.7	48.0	105	105	96	96	9	9

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103A45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 1 through November 2, 2012

LDC Report Date: February 22, 2012

Matrix: Soil

Parameters: Perchlorate

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11K007

Sample Identification

SL-123-SA7-SB-4.0-5.0
SL-048-SA7-SB-4.0-5.0

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 30.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 30.0% for labeled compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K007	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Perchlorate - Data Qualification Summary - SDG 11K007

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11K007	SL-123-SA7-SB-4.0-5.0 SL-048-SA7-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG 11K007

No Sample Data Qualified in this SDG

LDC #: 27103A87 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/21/12

SDG #: 11K007 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: F

2nd Reviewer: A

METHOD: LC/MS Perchlorate (EPA SW846 Method 6850)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/01 - 11/02/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/30
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-123-SA7-SB-4.0-5.0	11	MB1K15	21		31	
2	SL-048-SA7-SB-4.0-5.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 27103A87

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

Method: Semivolatiles ~~(EPA SW 846 Method 8270C)~~ 8270

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 15/30 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 27103A87

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target/compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC # 27163987
SDG# ~~_____~~

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: E

METHOD: LCMS 6850

Parameter: Perchlorate

weighted

Date	Instrument	Compound	Y	X	
11/01/2011	lcms	perchlorate	0.0851966449	0.0400	
			0.1709348749	0.1000	
			0.3336474736	0.2000	
			0.6241504694	0.4000	
			1.6134261656	1.0000	

Regression Output:		Regression Output:	Reported	
Constant		0.01058		
Std Err of Y Est		0.01625		
R Squared		0.99949		0.99910
No. of Observations		5.00000		
Degrees of Freedom		3.00000		
X Coefficient(s)	1.595E+000			
Std Err of Coef.	0.020875	0.00		

LDC #: 27103A87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %R	Recalculated %R
1	MK09013	11/09/11	~~Phenol~~ Perchlorate (1st internal standard)	1.0	0.90	0.90	90	90
	13:51		Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103187

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS ID

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	25.0	25.0	24.3	22.0	97	97	88	88	10	10

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 27103 A87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____ , _____:

Conc. = ( )( )( )( )( ) / ( )( )( )( )( )

=

ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

SAMPLE DELIVERY GROUP

DE242

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	TB-091311	6404519	TB	5030B	8015M	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3050B	6010B	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3050B	6020	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3060A	7199	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3550B	8081A	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3550B	8082	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3550B	8151A	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3550B	8270C	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	3550B	8270C SIM	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	METHOD	300.0	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	METHOD	314.0	IV
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404508	N	METHOD	7471A	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3050B	6010B	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3050B	6020	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3060A	7199	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3546	1625C	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3550B	8015B	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3550B	8015M	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3550B	8082	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3550B	8270C	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	3550B	8270C SIM	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	5035	8015M	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	8330	8330A	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	300.0	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	314.0	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	7471A	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	8015B	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	8015M	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	8315A	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0	6404514	N	METHOD	9012B	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0DUP	P404514D271852A	DUP	METHOD	9012B	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0MSD	P404514M240303A	MSD	8330	8330A	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0MSD	P404514M251353A	MSD	5035	8015M	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0MS	P404514R240221A	MS	8330	8330A	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0MS	P404514R251320A	MS	5035	8015M	IV
13-Sep-2011	SL-338-SA5B-SB-7.0-8.0MS	P404514R271853A	MS	METHOD	9012B	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3050B	6010B	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3050B	6020	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3060A	7199	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8015B	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8015M	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8081A	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8082	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8151A	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8270C	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	3550B	8270C SIM	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	METHOD	300.0	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	METHOD	314.0	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	METHOD	7471A	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	METHOD	8015B	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404509	N	METHOD	8015M	IV
13-Sep-2011	SL-041-SA7-SS-0.0-0.5DUP	P404509D270723B	DUP	METHOD	314.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-041-SA7-SS-0.0-0.5MS	P404509R270809B	MS	METHOD	314.0	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3050B	6010B	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3050B	6020	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3060A	7199	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8015B	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8015M	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8081A	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8082	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8151A	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8270C	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	3550B	8270C SIM	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	METHOD	300.0	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	METHOD	314.0	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	METHOD	7471A	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	METHOD	8015B	IV
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404511	N	METHOD	8015M	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3050B	6010B	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3050B	6020	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3060A	7199	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8015B	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8015M	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8081A	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8082	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8151A	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8270C	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	3550B	8270C SIM	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	METHOD	300.0	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	METHOD	314.0	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	METHOD	7471A	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	METHOD	8015B	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404507	N	METHOD	8015M	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5MSD	P404507M322139A	MSD	3550B	8015M	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5MSD	P404507M322223A	MSD	METHOD	8015B	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5MS	P404507R322115A	MS	3550B	8015M	IV
13-Sep-2011	SL-037-SA7-SS-0.0-0.5MS	P404507R322209A	MS	METHOD	8015B	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3050B	6010B	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3050B	6020	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3060A	7199	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8015B	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8015M	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8081A	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8082	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8151A	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8270C	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	3550B	8270C SIM	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	METHOD	300.0	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	METHOD	314.0	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	METHOD	7471A	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	METHOD	8015B	IV
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404510	N	METHOD	8015M	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3050B	6010B	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3050B	6020	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3060A	7199	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3550B	8081A	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3550B	8082	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3550B	8151A	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3550B	8270C	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	3550B	8270C SIM	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	METHOD	300.0	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	METHOD	314.0	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	METHOD	6850	IV
13-Sep-2011	SL-146-SA7-SS-0.0-0.5	6404513	N	METHOD	7471A	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3050B	6010B	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3050B	6020	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3060A	7199	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3546	1625C	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3550B	8015B	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3550B	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3550B	8082	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3550B	8270C	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	3550B	8270C SIM	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	5035	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	8330	8330A	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	300.0	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	314.0	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	6850	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	7471A	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	8015B	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	8315A	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0	6404515	N	METHOD	9012B	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0DUP	P404515D271625B	DUP	METHOD	300.0	IV
13-Sep-2011	SL-341-SA5B-SB-4.0-5.0MS	P404515R271640B	MS	METHOD	300.0	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3050B	6010B	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3050B	6020	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3060A	7199	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3546	1625C	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3550B	8015B	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3550B	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3550B	8082	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3550B	8270C	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	3550B	8270C SIM	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	5035	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	8330	8330A	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	300.0	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	314.0	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	7471A	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	8015B	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	8015M	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	8315A	IV
13-Sep-2011	SL-341-SA5B-SB-9.0-10.0	6404516	N	METHOD	9012B	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3050B	6010B	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3050B	6020	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3060A	7199	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3550B	8081A	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3550B	8082	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3550B	8151A	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3550B	8270C	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	3550B	8270C SIM	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	METHOD	300.0	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	METHOD	314.0	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404505	N	METHOD	7471A	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5DUP	P404505D271307A	DUP	METHOD	300.0	IV
13-Sep-2011	SL-034-SA7-SS-0.0-0.5MS	P404505R271321A	MS	METHOD	300.0	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3050B	6010B	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3050B	6020	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3060A	7199	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3550B	8081A	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3550B	8082	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3550B	8151A	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3550B	8270C	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	3550B	8270C SIM	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	METHOD	300.0	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	METHOD	314.0	IV
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404506	N	METHOD	7471A	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3050B	6010B	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3050B	6020	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3060A	7199	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8015B	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8015M	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8081A	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8082	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8151A	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8270C	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	3550B	8270C SIM	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	METHOD	300.0	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	METHOD	314.0	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	METHOD	7471A	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	METHOD	8015B	IV
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404512	N	METHOD	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3050B	6010B	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3050B	6020	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3060A	7199	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3546	1625C	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3550B	8015B	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3550B	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3550B	8082	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3550B	8270C	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	3550B	8270C SIM	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	5035	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	8330	8330A	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	300.0	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	314.0	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	7471A	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	8015B	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	8015M	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	8315A	IV
13-Sep-2011	SL-342-SA5B-SB-4.0-5.0	6404517	N	METHOD	9012B	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3050B	6010B	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3050B	6020	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3060A	7199	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3550B	8081A	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3550B	8082	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3550B	8151A	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3550B	8270C	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	3550B	8270C SIM	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	METHOD	300.0	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	METHOD	314.0	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	METHOD	6850	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404504	N	METHOD	7471A	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3050B	6010B	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3050B	6020	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3060A	7199	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3546	1625C	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3550B	8015B	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3550B	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3550B	8082	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3550B	8270C	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	3550B	8270C SIM	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	5035	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	8330	8330A	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	300.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	314.0	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	7471A	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	8015B	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	8015M	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	8315A	IV
13-Sep-2011	SL-342-SA5B-SB-9.0-10.0	6404518	N	METHOD	9012B	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5MSD	P404504M242113A	MSD	3550B	8081A	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5MSD	P404504M242350A	MSD	3550B	8151A	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5MS	P404504R242059A	MS	3550B	8081A	IV
13-Sep-2011	SL-030-SA7-SS-0.0-0.5MS	P404504R242323A	MS	3550B	8151A	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.91	J	0.79	MDL	0.98	PQL	mg/Kg	J	Z

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.1	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-341-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.3	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.1	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.2	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	4110		0.438	MDL	9.95	PQL	mg/Kg	U	B

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	75.3	J	5.92	MDL	99.5	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.23	J	0.358	MDL	4.98	PQL	mg/Kg	J	Z
TIN	2.91	J	0.318	MDL	9.95	PQL	mg/Kg	U	B
Zirconium	2.73	J	0.458	MDL	4.98	PQL	mg/Kg	J	Z

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	4200		0.436	MDL	9.90	PQL	mg/Kg	U	B

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.04	J	0.356	MDL	4.95	PQL	mg/Kg	U	B
TIN	2.97	J	0.317	MDL	9.90	PQL	mg/Kg	U	B
Zirconium	2.93	J	0.455	MDL	4.95	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	5110		0.425	MDL	9.66	PQL	mg/Kg	U	B

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.48	J	0.348	MDL	4.83	PQL	mg/Kg	U	B
TIN	3.80	J	0.309	MDL	9.66	PQL	mg/Kg	U	B

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3800		0.439	MDL	9.97	PQL	mg/Kg	U	B

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	81.9	J	5.93	MDL	99.7	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-037-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 10:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.63	J	0.359	MDL	4.99	PQL	mg/Kg	J	Z
TIN	2.91	J	0.319	MDL	9.97	PQL	mg/Kg	U	B
Zirconium	2.88	J	0.459	MDL	4.99	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 8:46:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	4080		0.435	MDL	9.90	PQL	mg/Kg	U	B

Sample ID: SL-040-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 8:46:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	67.8	J	5.89	MDL	99.0	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 8:46:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.08	J	0.356	MDL	4.95	PQL	mg/Kg	J	Z
TIN	2.98	J	0.317	MDL	9.90	PQL	mg/Kg	U	B
Zirconium	2.96	J	0.455	MDL	4.95	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 9:09:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3880		0.445	MDL	10.1	PQL	mg/Kg	U	B

Sample ID: SL-041-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 9:09:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	70.6	J	6.02	MDL	101	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 9:09:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.36	J	0.364	MDL	5.06	PQL	mg/Kg	J	Z
TIN	3.00	J	0.324	MDL	10.1	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	3.32	J	0.465	MDL	5.06	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:35:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	95.8	J	5.75	MDL	96.7	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.86	J	0.348	MDL	4.83	PQL	mg/Kg	J	Z
TIN	2.78	J	0.309	MDL	9.67	PQL	mg/Kg	U	B
Zirconium	2.67	J	0.445	MDL	4.83	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	72.8	J	5.75	MDL	96.7	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.95	J	0.348	MDL	4.83	PQL	mg/Kg	J	Z
TIN	2.78	J	0.309	MDL	9.67	PQL	mg/Kg	U	B
Zirconium	3.22	J	0.445	MDL	4.83	PQL	mg/Kg	J	Z

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.89	J	0.352	MDL	4.89	PQL	mg/Kg	J	Z
TIN	3.71	J	0.313	MDL	9.78	PQL	mg/Kg	U	B
Zirconium	3.10	J	0.450	MDL	4.89	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-146-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.17	J	0.353	MDL	4.90	PQL	mg/Kg	U	B
TIN	4.49	J	0.314	MDL	9.80	PQL	mg/Kg	U	B
Zirconium	4.01	J	0.451	MDL	4.90	PQL	mg/Kg	J	Z

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.97	J	0.368	MDL	5.11	PQL	mg/Kg	U	B
TIN	2.25	J	0.327	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	2.32	J	0.470	MDL	5.11	PQL	mg/Kg	J	Z

Sample ID: SL-341-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.29	J	0.398	MDL	5.53	PQL	mg/Kg	J	Z
TIN	3.02	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.82	J	0.509	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.09	J	0.396	MDL	5.49	PQL	mg/Kg	J	Z
TIN	3.05	J	0.352	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.72	J	0.505	MDL	5.49	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.96	J	0.397	MDL	5.52	PQL	mg/Kg	J	Z
TIN	3.02	J	0.353	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.91	J	0.508	MDL	5.52	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.14	J	0.352	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	4.41	J	0.506	MDL	5.50	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.212	J	0.0566	MDL	0.390	PQL	mg/Kg	J	Z, Q

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.634		0.0488	MDL	0.0976	PQL	mg/Kg	J	Q

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	96.9		0.103	MDL	0.390	PQL	mg/Kg	J	A

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.233		0.0722	MDL	0.195	PQL	mg/Kg	J	Q
BERYLLIUM	0.606		0.0156	MDL	0.0976	PQL	mg/Kg	J	Q
CADMIUM	0.224		0.0429	MDL	0.0976	PQL	mg/Kg	J	Q
CHROMIUM	17.1		0.117	MDL	0.390	PQL	mg/Kg	J	Q
COBALT	5.89		0.0195	MDL	0.0976	PQL	mg/Kg	J	Q, A
COPPER	9.27		0.0781	MDL	0.390	PQL	mg/Kg	J	Q
LEAD	17.1		0.010	MDL	0.195	PQL	mg/Kg	J	Q, A
NICKEL	11.0		0.0976	MDL	0.390	PQL	mg/Kg	J	Q
SILVER	0.0276	J	0.0139	MDL	0.0976	PQL	mg/Kg	J	Z, Q
THALLIUM	0.275		0.0293	MDL	0.0976	PQL	mg/Kg	J	Q
ZINC	84.3		0.547	MDL	2.93	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-034-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 12:15:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.105	J	0.0563	MDL	0.388	PQL	mg/Kg	J	Z, Q

Sample ID: SL-034-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 12:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.24		0.0485	MDL	0.0971	PQL	mg/Kg	J	Q

Sample ID: SL-034-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 12:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	98.1		0.103	MDL	0.388	PQL	mg/Kg	J	A

Sample ID: SL-034-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 12:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.340		0.0718	MDL	0.194	PQL	mg/Kg	J	Q
BERYLLIUM	0.460		0.0155	MDL	0.0971	PQL	mg/Kg	J	Q
CADMIUM	0.437		0.0427	MDL	0.0971	PQL	mg/Kg	J	Q
CHROMIUM	47.9		0.117	MDL	0.388	PQL	mg/Kg	J	Q
COBALT	6.35		0.0194	MDL	0.0971	PQL	mg/Kg	J	Q, A
COPPER	13.8		0.0777	MDL	0.388	PQL	mg/Kg	J	Q
LEAD	26.4		0.0099	MDL	0.194	PQL	mg/Kg	J	Q, A
NICKEL	33.0		0.0971	MDL	0.388	PQL	mg/Kg	J	Q
SILVER	0.0584	J	0.0138	MDL	0.0971	PQL	mg/Kg	J	Z, Q
THALLIUM	0.245		0.0291	MDL	0.0971	PQL	mg/Kg	J	Q

Sample ID: SL-035-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.168	J	0.0566	MDL	0.390	PQL	mg/Kg	J	Z, Q

Sample ID: SL-035-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:05:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.44		0.0488	MDL	0.0976	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-035-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 2:05:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	118		0.103	MDL	0.390	PQL	mg/Kg	J	A

Sample ID: **SL-035-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 2:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.298		0.0722	MDL	0.195	PQL	mg/Kg	J	Q
BERYLLIUM	0.603		0.0156	MDL	0.0976	PQL	mg/Kg	J	Q
CADMIUM	1.47		0.0429	MDL	0.0976	PQL	mg/Kg	J	Q
CHROMIUM	62.5		0.117	MDL	0.390	PQL	mg/Kg	J	Q
COBALT	8.66		0.0195	MDL	0.0976	PQL	mg/Kg	J	Q, A
COPPER	15.5		0.0781	MDL	0.390	PQL	mg/Kg	J	Q
LEAD	20.3		0.010	MDL	0.195	PQL	mg/Kg	J	Q, A
NICKEL	32.2		0.0976	MDL	0.390	PQL	mg/Kg	J	Q
SILVER	0.0929	J	0.0139	MDL	0.0976	PQL	mg/Kg	J	Z, Q
THALLIUM	0.313		0.0293	MDL	0.0976	PQL	mg/Kg	J	Q

Sample ID: **SL-037-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:15:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0584	MDL	0.403	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-037-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:15:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.796		0.0504	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: **SL-037-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:15:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	125		0.107	MDL	0.403	PQL	mg/Kg	J	A

Sample ID: **SL-037-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.253		0.0745	MDL	0.201	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-037-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.784		0.0161	MDL	0.101	PQL	mg/Kg	J	Q
CADMIUM	0.284		0.0443	MDL	0.101	PQL	mg/Kg	J	Q
CHROMIUM	21.4		0.121	MDL	0.403	PQL	mg/Kg	J	Q
COBALT	7.79		0.0201	MDL	0.101	PQL	mg/Kg	J	Q, A
COPPER	10.6		0.0806	MDL	0.403	PQL	mg/Kg	J	Q
LEAD	24.6		0.0103	MDL	0.201	PQL	mg/Kg	J	Q, A
NICKEL	18.4		0.101	MDL	0.403	PQL	mg/Kg	J	Q
SILVER	0.0619	J	0.0143	MDL	0.101	PQL	mg/Kg	J	Z, Q
THALLIUM	0.323		0.0302	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.215	J	0.0585	MDL	0.404	PQL	mg/Kg	J	Z, Q

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.762		0.0505	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** REA4 ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	134		0.267	MDL	1.01	PQL	mg/Kg	J	A

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.219		0.0747	MDL	0.202	PQL	mg/Kg	J	Q
BERYLLIUM	0.757		0.0162	MDL	0.101	PQL	mg/Kg	J	Q
CADMIUM	0.411		0.0444	MDL	0.101	PQL	mg/Kg	J	Q
CHROMIUM	20.3		0.121	MDL	0.404	PQL	mg/Kg	J	Q
COBALT	7.42		0.0202	MDL	0.101	PQL	mg/Kg	J	Q, A
COPPER	13.1		0.0808	MDL	0.404	PQL	mg/Kg	J	Q
LEAD	13.5		0.0103	MDL	0.202	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	18.1		0.101	MDL	0.404	PQL	mg/Kg	J	Q
SILVER	0.0647	J	0.0143	MDL	0.101	PQL	mg/Kg	J	Z, Q
THALLIUM	0.363		0.0303	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.101	J	0.0581	MDL	0.400	PQL	mg/Kg	J	Z, Q

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.603		0.0501	MDL	0.100	PQL	mg/Kg	J	Q

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	125		0.106	MDL	0.400	PQL	mg/Kg	J	A

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.138	J	0.0741	MDL	0.200	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.588		0.0160	MDL	0.100	PQL	mg/Kg	J	Q
CADMIUM	0.237		0.0440	MDL	0.100	PQL	mg/Kg	J	Q
CHROMIUM	17.3		0.120	MDL	0.400	PQL	mg/Kg	J	Q
COBALT	6.08		0.0200	MDL	0.100	PQL	mg/Kg	J	Q, A
COPPER	10.1		0.0801	MDL	0.400	PQL	mg/Kg	J	Q
LEAD	9.27		0.0102	MDL	0.200	PQL	mg/Kg	J	Q, A
NICKEL	13.8		0.100	MDL	0.400	PQL	mg/Kg	J	Q
SILVER	0.0404	J	0.0142	MDL	0.100	PQL	mg/Kg	J	Z, Q
THALLIUM	0.288		0.0300	MDL	0.100	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.120	J	0.0566	MDL	0.390	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.618		0.0488	MDL	0.0976	PQL	mg/Kg	J	Q

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	94.4		0.103	MDL	0.390	PQL	mg/Kg	J	A

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.180	J	0.0722	MDL	0.195	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.615		0.0156	MDL	0.0976	PQL	mg/Kg	J	Q
CADMIUM	0.196		0.0429	MDL	0.0976	PQL	mg/Kg	J	Q
CHROMIUM	17.0		0.117	MDL	0.390	PQL	mg/Kg	J	Q
COBALT	8.08		0.0195	MDL	0.0976	PQL	mg/Kg	J	Q, A
COPPER	10.3		0.0781	MDL	0.390	PQL	mg/Kg	J	Q
LEAD	17.6		0.010	MDL	0.195	PQL	mg/Kg	J	Q, A
NICKEL	13.5		0.0976	MDL	0.390	PQL	mg/Kg	J	Q
SILVER	0.0571	J	0.0139	MDL	0.0976	PQL	mg/Kg	J	Z, Q
THALLIUM	0.271		0.0293	MDL	0.0976	PQL	mg/Kg	J	Q

Sample ID: **SL-071-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:26:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0949	J	0.0566	MDL	0.390	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-071-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:26:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.746		0.0488	MDL	0.0976	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory:** LL

EDD Filename: DE242_v2. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	134		0.103	MDL	0.390	PQL	mg/Kg	J	A

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.151	J	0.0722	MDL	0.195	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.714		0.0156	MDL	0.0976	PQL	mg/Kg	J	Q
CADMIUM	0.218		0.0430	MDL	0.0976	PQL	mg/Kg	J	Q
CHROMIUM	19.5		0.117	MDL	0.390	PQL	mg/Kg	J	Q
COBALT	6.75		0.0195	MDL	0.0976	PQL	mg/Kg	J	Q, A
COPPER	10.8		0.0781	MDL	0.390	PQL	mg/Kg	J	Q
LEAD	8.94		0.010	MDL	0.195	PQL	mg/Kg	J	Q, A
NICKEL	15.6		0.0976	MDL	0.390	PQL	mg/Kg	J	Q
SILVER	0.0578	J	0.0139	MDL	0.0976	PQL	mg/Kg	J	Z, Q
THALLIUM	0.324		0.0293	MDL	0.0976	PQL	mg/Kg	J	Q

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.149	J	0.0567	MDL	0.391	PQL	mg/Kg	J	Z, Q

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.742		0.0489	MDL	0.0978	PQL	mg/Kg	J	Q

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	125		0.104	MDL	0.391	PQL	mg/Kg	J	A

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.164	J	0.0724	MDL	0.196	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-073-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 2:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.645		0.0156	MDL	0.0978	PQL	mg/Kg	J	Q
CADMIUM	0.271		0.0430	MDL	0.0978	PQL	mg/Kg	J	Q
CHROMIUM	19.0		0.117	MDL	0.391	PQL	mg/Kg	J	Q
COBALT	7.45		0.0196	MDL	0.0978	PQL	mg/Kg	J	Q, A
COPPER	16.5		0.0782	MDL	0.391	PQL	mg/Kg	J	Q
LEAD	16.6		0.010	MDL	0.196	PQL	mg/Kg	J	Q, A
NICKEL	13.3		0.0978	MDL	0.391	PQL	mg/Kg	J	Q
SILVER	0.0336	J	0.0139	MDL	0.0978	PQL	mg/Kg	J	Z, Q
THALLIUM	0.313		0.0293	MDL	0.0978	PQL	mg/Kg	J	Q

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	184		0.297	MDL	0.990	PQL	mg/Kg	J	Q

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.114	J	0.0574	MDL	0.396	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	7.99		0.0495	MDL	0.0990	PQL	mg/Kg	J	Q

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	111		0.105	MDL	0.396	PQL	mg/Kg	J	A

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.452		0.0733	MDL	0.198	PQL	mg/Kg	J	Q
BERYLLIUM	0.441		0.0158	MDL	0.0990	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-146-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 11:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	1.36		0.0436	MDL	0.0990	PQL	mg/Kg	J	Q
COBALT	10.1		0.0198	MDL	0.0990	PQL	mg/Kg	J	Q, A
COPPER	30.4		0.0792	MDL	0.396	PQL	mg/Kg	J	Q
LEAD	41.6		0.0101	MDL	0.198	PQL	mg/Kg	J	Q, A
NICKEL	163		0.0990	MDL	0.396	PQL	mg/Kg	J	Q
SILVER	0.168		0.0141	MDL	0.0990	PQL	mg/Kg	J	Q
THALLIUM	0.239		0.0297	MDL	0.0990	PQL	mg/Kg	J	Q

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.297		0.0516	MDL	0.103	PQL	mg/Kg	J	Q

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	99.5		0.109	MDL	0.413	PQL	mg/Kg	J	A

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.146	J	0.0764	MDL	0.206	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.337		0.0165	MDL	0.103	PQL	mg/Kg	J	Q
CADMIUM	0.0949	J	0.0454	MDL	0.103	PQL	mg/Kg	J	Z, Q
CHROMIUM	12.6		0.124	MDL	0.413	PQL	mg/Kg	J	Q
COBALT	6.34		0.0206	MDL	0.103	PQL	mg/Kg	J	Q, A
COPPER	17.3		0.0826	MDL	0.413	PQL	mg/Kg	J	Q
LEAD	3.39		0.0105	MDL	0.206	PQL	mg/Kg	J	Q, A
NICKEL	7.71		0.103	MDL	0.413	PQL	mg/Kg	J	Q
SILVER	0.0201	J	0.0147	MDL	0.103	PQL	mg/Kg	J	Z, Q
THALLIUM	0.140		0.0310	MDL	0.103	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.420	J	0.0648	MDL	0.447	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.01		0.0559	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	149		0.118	MDL	0.447	PQL	mg/Kg	J	A

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.238		0.0827	MDL	0.223	PQL	mg/Kg	J	Q
BERYLLIUM	0.744		0.0179	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.296		0.0492	MDL	0.112	PQL	mg/Kg	J	Q
CHROMIUM	23.8		0.134	MDL	0.447	PQL	mg/Kg	J	Q
COBALT	7.79		0.0223	MDL	0.112	PQL	mg/Kg	J	Q, A
COPPER	15.8		0.0894	MDL	0.447	PQL	mg/Kg	J	Q
LEAD	8.69		0.0114	MDL	0.223	PQL	mg/Kg	J	Q, A
NICKEL	15.2		0.112	MDL	0.447	PQL	mg/Kg	J	Q
SILVER	0.0506	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z, Q
THALLIUM	0.323		0.0335	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.258	J	0.0613	MDL	0.423	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.06		0.0528	MDL	0.106	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	136		0.112	MDL	0.423	PQL	mg/Kg	J	A

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.278		0.0782	MDL	0.211	PQL	mg/Kg	J	Q
BERYLLIUM	0.755		0.0169	MDL	0.106	PQL	mg/Kg	J	Q
CADMIUM	0.185		0.0465	MDL	0.106	PQL	mg/Kg	J	Q
CHROMIUM	23.5		0.127	MDL	0.423	PQL	mg/Kg	J	Q
COBALT	8.84		0.0211	MDL	0.106	PQL	mg/Kg	J	Q, A
COPPER	12.5		0.0845	MDL	0.423	PQL	mg/Kg	J	Q
LEAD	7.73		0.0108	MDL	0.211	PQL	mg/Kg	J	Q, A
NICKEL	16.0		0.106	MDL	0.423	PQL	mg/Kg	J	Q
SILVER	0.0483	J	0.0150	MDL	0.106	PQL	mg/Kg	J	Z, Q
THALLIUM	0.347		0.0317	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.407	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.01		0.0541	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	156		0.115	MDL	0.433	PQL	mg/Kg	J	A

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.301		0.0801	MDL	0.216	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.898		0.0173	MDL	0.108	PQL	mg/Kg	J	Q
CADMIUM	0.236		0.0476	MDL	0.108	PQL	mg/Kg	J	Q
CHROMIUM	31.8		0.130	MDL	0.433	PQL	mg/Kg	J	Q
COBALT	9.72		0.0216	MDL	0.108	PQL	mg/Kg	J	Q, A
COPPER	16.2		0.0866	MDL	0.433	PQL	mg/Kg	J	Q
LEAD	9.57		0.0110	MDL	0.216	PQL	mg/Kg	J	Q, A
NICKEL	19.4		0.108	MDL	0.433	PQL	mg/Kg	J	Q
SILVER	0.0558	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z, Q
THALLIUM	0.356		0.0325	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.199	J	0.0626	MDL	0.431	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.21		0.0539	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	128		0.114	MDL	0.431	PQL	mg/Kg	J	A

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.183	J	0.0798	MDL	0.216	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.676		0.0173	MDL	0.108	PQL	mg/Kg	J	Q
CADMIUM	0.208		0.0475	MDL	0.108	PQL	mg/Kg	J	Q
CHROMIUM	22.4		0.129	MDL	0.431	PQL	mg/Kg	J	Q
COBALT	7.45		0.0216	MDL	0.108	PQL	mg/Kg	J	Q, A
COPPER	14.5		0.0863	MDL	0.431	PQL	mg/Kg	J	Q
LEAD	7.26		0.0110	MDL	0.216	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-342-SA5B-SB-9.0-10.0 **Collected:** 9/13/2011 2:55:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	15.0		0.108	MDL	0.431	PQL	mg/Kg	J	Q
SILVER	0.0535	J	0.0153	MDL	0.108	PQL	mg/Kg	J	Z, Q
THALLIUM	0.313		0.0324	MDL	0.108	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-034-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 12:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.61	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 2:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.46	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-146-SA7-SS-0.0-0.5 **Collected:** 9/13/2011 11:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.94	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-4.0-5.0 **Collected:** 9/13/2011 2:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-9.0-10.0 **Collected:** 9/13/2011 2:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.45	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0236	J	0.0068	MDL	0.0965	PQL	mg/Kg	U	B, B

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0894	J	0.0066	MDL	0.0938	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0522	J	0.0067	MDL	0.0955	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0234	J	0.0069	MDL	0.0983	PQL	mg/Kg	U	B

Sample ID: SL-040-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 8:46:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0145	J	0.0070	MDL	0.100	PQL	mg/Kg	U	B, B

Sample ID: SL-041-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0098	J	0.0068	MDL	0.0965	PQL	mg/Kg	U	B

Sample ID: SL-070-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0148	J	0.0070	MDL	0.0996	PQL	mg/Kg	U	B, B

Sample ID: SL-071-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0116	J	0.0067	MDL	0.0951	PQL	mg/Kg	U	B, B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-073-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0257	J	0.0069	MDL	0.0987	PQL	mg/Kg	U	B

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0181	J	0.0071	MDL	0.101	PQL	mg/Kg	U	B, B

Sample ID: SL-341-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0241	J	0.0077	MDL	0.110	PQL	mg/Kg	U	B

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0603	J	0.0076	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0266	J	0.0077	MDL	0.110	PQL	mg/Kg	U	B, B

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0178	J	0.0077	MDL	0.110	PQL	mg/Kg	U	B, B

Method Category: SVOA

Method: 6850 **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	2.5	J	2.1	MDL	5.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 6850 **Matrix: SO**

Sample ID: SL-146-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.6	J	2.1	MDL	5.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* REA *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	4.2	J	4.0	MDL	12	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:09:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.0	J	0.81	MDL	2.4	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:26:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C12-C14)	0.40	U	0.40	MDL	1.2	PQL	mg/Kg	UJ	S
EFH (C15-C20)	0.40	U	0.40	MDL	1.2	PQL	mg/Kg	UJ	S
EFH (C21-C30)	2.3		0.40	MDL	1.2	PQL	mg/Kg	J	S
EFH (C30-C40)	6.8		0.40	MDL	1.2	PQL	mg/Kg	J	S
EFH (C8-C11)	0.40	U	0.40	MDL	1.2	PQL	mg/Kg	UJ	S

Sample ID: SL-073-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:30:00 *Analysis Type:* REA *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	4.1	J	2.0	MDL	6.0	PQL	mg/Kg	J	Z

Sample ID: SL-341-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 11:43:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	3.2	J	2.3	MDL	6.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	6.5	J	2.2	MDL	6.6	PQL	mg/Kg	J	Z

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.7	J	2.2	MDL	6.7	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* DL-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	2.4		0.33	MDL	1.7	PQL	ug/Kg	J	Q, *XIII

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	3.1	J	0.80	MDL	3.4	PQL	ug/Kg	J	Z, *XIII
DIELDRIN	1.4	U	1.4	MDL	1.4	PQL	ug/Kg	R	Q
ENDOSULFAN I	0.044	U	0.044	MDL	0.17	PQL	ug/Kg	R	Q
ENDOSULFAN II	0.40	U	0.40	MDL	0.40	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.066	U	0.066	MDL	0.34	PQL	ug/Kg	R	Q
ENDRIN	0.45	U	0.45	MDL	0.45	PQL	ug/Kg	R	Q
ENDRIN ALDEHYDE	0.70	U	0.70	MDL	0.70	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	2.4		0.33	MDL	1.7	PQL	ug/Kg	J	S
Chlordane	7.1	J	4.0	MDL	17	PQL	ug/Kg	J	Z, S
gamma-BHC (Lindane)	0.17	U	0.17	MDL	0.83	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.8		0.066	MDL	0.34	PQL	ug/Kg	J	S
Chlordane	7.3		0.80	MDL	3.4	PQL	ug/Kg	J	S, *XIII
ENDOSULFAN II	0.57	U	0.57	MDL	0.57	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.66		0.066	MDL	0.34	PQL	ug/Kg	J	S, C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDOSULFAN II	0.45	U	0.45	MDL	0.45	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.44	U	0.44	MDL	0.44	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C

Sample ID: SL-040-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 8:46:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.15	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
4,4'-DDE	0.15	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
4,4'-DDT	0.24	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.15	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z, C, *XIII
ENDRIN	0.11	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDRIN ALDEHYDE	0.22	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z, C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C
MIREX	0.24	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z, *XIII

Sample ID: SL-041-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:09:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DELTA-BHC	0.095	J	0.036	MDL	0.17	PQL	ug/Kg	J	Z, *XIII
ENDOSULFAN II	0.16	U	0.16	MDL	0.34	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.33	U	0.33	MDL	0.34	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.057	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z, C, *XIII

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-070-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	1.9	J	0.80	MDL	3.4	PQL	ug/Kg	J	Z, *XIII
ENDOSULFAN II	0.31	U	0.31	MDL	0.34	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.61	U	0.61	MDL	0.61	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.24	J	0.066	MDL	0.34	PQL	ug/Kg	J	Z
Chlordane	2.2	J	0.80	MDL	3.4	PQL	ug/Kg	J	Z
DELTA-BHC	0.096	J	0.036	MDL	0.17	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.073	U	0.073	MDL	0.34	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.15	U	0.15	MDL	0.34	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.047	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z
TOXAPHENE	3.6	J	2.2	MDL	6.6	PQL	ug/Kg	J	Z, *XIII

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	1.5	J	0.81	MDL	3.4	PQL	ug/Kg	J	Z, *XIII
ENDOSULFAN II	0.089	U	0.089	MDL	0.34	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.35	U	0.35	MDL	0.35	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.073	J	0.060	MDL	0.17	PQL	ug/Kg	J	Z, *XIII

Sample ID: SL-146-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 11:40:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDOSULFAN II	3.7	U	3.7	MDL	3.7	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	4.8	U	4.8	MDL	4.8	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.17	U	0.17	MDL	0.83	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: **SL-030-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **10**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	160		3.3	MDL	17	PQL	ug/Kg	J	S
AROCLOR 1260	42		3.9	MDL	17	PQL	ug/Kg	J	S
Aroclor 5460	450		10	MDL	33	PQL	ug/Kg	J	S

Sample ID: **SL-037-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.4	J	1.0	MDL	3.3	PQL	ug/Kg	J	Z

Sample ID: **SL-041-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:09:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.6	J	1.0	MDL	3.3	PQL	ug/Kg	J	Z

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.70	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-071-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:26:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.95	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.70	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	2.1		0.36	MDL	1.9	PQL	ug/Kg	J	*XIII
AROCLOR 1260	0.78	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.7	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.1	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.075	U	0.075	MDL	0.17	PQL	ug/Kg	UJ	Q
DINOSEB	0.80	U	0.80	MDL	2.4	PQL	ug/Kg	UJ	Q

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	2.7		0.62	MDL	1.7	PQL	ug/Kg	J	*IX

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-T	0.79		0.083	MDL	0.17	PQL	ug/Kg	J	*IX
MCPP	110	J	76	MDL	250	PQL	ug/Kg	J	Z, *IX

Sample ID: SL-071-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DICAMBA	0.42	J	0.40	MDL	1.2	PQL	ug/Kg	J	Z, L, *IX

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-146-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-T	0.20		0.082	MDL	0.17	PQL	ug/Kg	J	*IX

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	230	J	17	MDL	330	PQL	ug/Kg	J	Z
CHRYSENE	17	J	17	MDL	170	PQL	ug/Kg	J	Z
Di-n-butylphthalate	40	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	17	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	38	J	17	MDL	340	PQL	ug/Kg	J	Z
Di-n-butylphthalate	20	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: **SL-040-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 8:46:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

Sample ID: **SL-041-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:09:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	510	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	510	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: **SL-070-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 10:35:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZO(B)FLUORANTHENE	18	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

Sample ID: **SL-071-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 9:26:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

Sample ID: **SL-073-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 2:30:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	170	U	170	MDL	500	PQL	ug/Kg	UJ	L
BENZO(G,H,I)PERYLENE	21	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZOIC ACID	170	U	170	MDL	500	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: **SL-146-SA7-SS-0.0-0.5** ***Collected:*** **9/13/2011 11:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	240	J	17	MDL	330	PQL	ug/Kg	J	Z

Sample ID: **SL-338-SA5B-SB-7.0-8.0** ***Collected:*** **9/13/2011 9:00:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	180	U	180	MDL	530	PQL	ug/Kg	UJ	L
BENZO(G,H,I)PERYLENE	110	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZOIC ACID	180	U	180	MDL	530	PQL	ug/Kg	UJ	L

Sample ID: **SL-341-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 11:43:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	L
BENZOIC ACID	190	U	190	MDL	560	PQL	ug/Kg	UJ	L

Sample ID: **SL-341-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 11:47:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	180	U	180	MDL	550	PQL	ug/Kg	UJ	L
BENZOIC ACID	180	U	180	MDL	550	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	60	J	18	MDL	370	PQL	ug/Kg	J	Z
FLUORANTHENE	19	J	18	MDL	180	PQL	ug/Kg	J	Z
PHENANTHRENE	24	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	19	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: **SL-342-SA5B-SB-4.0-5.0** ***Collected:*** **9/13/2011 2:50:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	L
BENZOIC ACID	190	U	190	MDL	560	PQL	ug/Kg	UJ	L

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **RES-ACID** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	190	U	190	MDL	560	PQL	ug/Kg	UJ	L

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.49	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	0.97	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.41	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	24		0.67	MDL	1.7	PQL	ug/Kg	J	I
BENZO(B)FLUORANTHENE	23		0.67	MDL	1.7	PQL	ug/Kg	J	I
BENZO(G,H,I)PERYLENE	11		0.67	MDL	1.7	PQL	ug/Kg	J	I
BENZO(K)FLUORANTHENE	25		0.67	MDL	1.7	PQL	ug/Kg	J	I
DIBENZO(A,H)ANTHRACENE	5.5		0.67	MDL	1.7	PQL	ug/Kg	J	I
Di-n-octylphthalate	6.0	U	6.0	MDL	18	PQL	ug/Kg	R	I
INDENO(1,2,3-CD)PYRENE	5.6		0.67	MDL	1.7	PQL	ug/Kg	J	I
NAPHTHALENE	0.98	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	5.9	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
FLUORANTHENE	4.5	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	3.4	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
PYRENE	5.3	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-037-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:15:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	7.4	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	76	J	30	MDL	91	PQL	ug/Kg	J	Z
Butylbenzylphthalate	43	J	30	MDL	91	PQL	ug/Kg	J	Z
NAPHTHALENE	3.9	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.75	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	0.50	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	0.70	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.87	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	0.95	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-070-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	3.5	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z
FLUORANTHENE	8.3	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
NAPHTHALENE	3.7	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
PYRENE	6.3	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.75	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.67	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.5	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	6.0	MDL	18	PQL	ug/Kg	J	Z
Butylbenzylphthalate	7.7	J	6.0	MDL	18	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-071-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:26:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	1.4	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-073-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 2:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	4.5	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	4.3	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	5.4	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
NAPHTHALENE	3.7	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z

Sample ID: SL-146-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 11:40:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	30	J	30	MDL	90	PQL	ug/Kg	J	Z
FLUORANTHENE	5.0	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
NAPHTHALENE	5.2	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z
PYRENE	5.7	J	3.3	MDL	8.3	PQL	ug/Kg	J	Z

Sample ID: SL-338-SA5B-SB-7.0-8.0 ***Collected:*** 9/13/2011 9:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.9	J	6.3	MDL	19	PQL	ug/Kg	J	Z
FLUORENE	0.80	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-341-SA5B-SB-4.0-5.0 ***Collected:*** 9/13/2011 11:43:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.3	J	1.9	MDL	9.3	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	4.4	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	4.4	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
NAPHTHALENE	5.2	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
ANTHRACENE	1.2	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
FLUORENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.79	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.96	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	0.79	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-342-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.0	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.7	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B **Matrix: SO**

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Isopropanol	110	J	100	MDL	500	PQL	ug/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	230	J	100	MDL	510	PQL	ug/Kg	J	Z, *IX

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

Method: 8015B **Matrix: SO**

Sample ID: SL-070-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Isopropanol	100	J	100	MDL	500	PQL	ug/Kg	J	Z, *IX
METHANOL	230	J	100	MDL	500	PQL	ug/Kg	J	Z, *IX

Sample ID: SL-071-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	250	J	100	MDL	500	PQL	ug/Kg	J	Z

Sample ID: SL-073-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Isopropanol	160	J	100	MDL	500	PQL	ug/Kg	J	Z
METHANOL	330	J	100	MDL	500	PQL	ug/Kg	J	Z

Sample ID: SL-338-SA5B-SB-7.0-8.0 *Collected:* 9/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	340	J	110	MDL	530	PQL	ug/Kg	J	Z, *IX

Sample ID: SL-341-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	410	J	110	MDL	560	PQL	ug/Kg	J	Z, *IX

Sample ID: SL-341-SA5B-SB-9.0-10.0 *Collected:* 9/13/2011 11:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	420	J	110	MDL	550	PQL	ug/Kg	J	Z, *IX

Sample ID: SL-342-SA5B-SB-4.0-5.0 *Collected:* 9/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	290	J	110	MDL	560	PQL	ug/Kg	J	Z, *IX

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8015B** ***Matrix:*** **SO**

Sample ID: **SL-342-SA5B-SB-9.0-10.0** ***Collected:*** **9/13/2011 2:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
METHANOL	340	J	110	MDL	560	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*IX, XIII	Compound Quantitation and RLs
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE242

Method Blank Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P25708CB221307	9/22/2011 1:07:00 PM	BORON	0.683 mg/Kg	SL-030-SA7-SS-0.0-0.5
		CALCIUM	11.1 mg/Kg	SL-034-SA7-SS-0.0-0.5
		MANGANESE	0.0780 mg/Kg	SL-035-SA7-SS-0.0-0.5
		PHOSPHORUS	0.876 mg/Kg	SL-037-SA7-SS-0.0-0.5
		STRONTIUM	0.0590 mg/Kg	SL-040-SA7-SS-0.0-0.5
		TIN	1.70 mg/Kg	SL-041-SA7-SS-0.0-0.5
				SL-070-SA7-SS-0.0-0.5
				SL-071-SA7-SS-0.0-0.5
				SL-073-SA7-SS-0.0-0.5
				SL-146-SA7-SS-0.0-0.5
				SL-338-SA5B-SB-7.0-8.0
				SL-341-SA5B-SB-4.0-5.0
				SL-341-SA5B-SB-9.0-10.0
				SL-342-SA5B-SB-4.0-5.0
				SL-342-SA5B-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-030-SA7-SS-0.0-0.5(RES)	TIN	2.91 mg/Kg	2.91U mg/Kg
SL-034-SA7-SS-0.0-0.5(RES)	BORON	1.04 mg/Kg	1.04U mg/Kg
SL-034-SA7-SS-0.0-0.5(RES)	TIN	2.97 mg/Kg	2.97U mg/Kg
SL-035-SA7-SS-0.0-0.5(RES)	BORON	1.48 mg/Kg	1.48U mg/Kg
SL-035-SA7-SS-0.0-0.5(RES)	TIN	3.80 mg/Kg	3.80U mg/Kg
SL-037-SA7-SS-0.0-0.5(RES)	TIN	2.91 mg/Kg	2.91U mg/Kg
SL-040-SA7-SS-0.0-0.5(RES)	TIN	2.98 mg/Kg	2.98U mg/Kg
SL-041-SA7-SS-0.0-0.5(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-070-SA7-SS-0.0-0.5(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-071-SA7-SS-0.0-0.5(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-073-SA7-SS-0.0-0.5(RES)	TIN	3.71 mg/Kg	3.71U mg/Kg
SL-146-SA7-SS-0.0-0.5(RES)	BORON	2.17 mg/Kg	2.17U mg/Kg
SL-146-SA7-SS-0.0-0.5(RES)	TIN	4.49 mg/Kg	4.49U mg/Kg
SL-338-SA5B-SB-7.0-8.0(RES)	BORON	2.97 mg/Kg	2.97U mg/Kg
SL-338-SA5B-SB-7.0-8.0(RES)	TIN	2.25 mg/Kg	2.25U mg/Kg
SL-341-SA5B-SB-4.0-5.0(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-341-SA5B-SB-9.0-10.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-342-SA5B-SB-4.0-5.0(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-342-SA5B-SB-9.0-10.0(RES)	TIN	3.14 mg/Kg	3.14U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P25711BB220853	9/16/2011 8:53:00 AM	MERCURY	0.0072 mg/Kg	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-030-SA7-SS-0.0-0.5(RES)	MERCURY	0.0236 mg/Kg	0.0236U mg/Kg
SL-037-SA7-SS-0.0-0.5(RES)	MERCURY	0.0234 mg/Kg	0.0234U mg/Kg
SL-040-SA7-SS-0.0-0.5(RES)	MERCURY	0.0145 mg/Kg	0.0145U mg/Kg
SL-041-SA7-SS-0.0-0.5(RES)	MERCURY	0.0098 mg/Kg	0.0098U mg/Kg
SL-070-SA7-SS-0.0-0.5(RES)	MERCURY	0.0148 mg/Kg	0.0148U mg/Kg
SL-071-SA7-SS-0.0-0.5(RES)	MERCURY	0.0116 mg/Kg	0.0116U mg/Kg
SL-073-SA7-SS-0.0-0.5(RES)	MERCURY	0.0257 mg/Kg	0.0257U mg/Kg
SL-338-SA5B-SB-7.0-8.0(RES)	MERCURY	0.0181 mg/Kg	0.0181U mg/Kg
SL-341-SA5B-SB-4.0-5.0(RES)	MERCURY	0.0241 mg/Kg	0.0241U mg/Kg
SL-342-SA5B-SB-4.0-5.0(RES)	MERCURY	0.0266 mg/Kg	0.0266U mg/Kg
SL-342-SA5B-SB-9.0-10.0(RES)	MERCURY	0.0178 mg/Kg	0.0178U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD (SL-030-SA7-SS-0.0-0.5)	2,4,5-T 2,4-D MCPA	375 - -	- - -	10.00-156.00 17.00-180.00 10.00-213.00	176 (35.00) 46 (35.00) 69 (50.00)	2,4,5-T 2,4-D MCPA	J (all detects)
SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD (SL-030-SA7-SS-0.0-0.5)	2,4,5-TP (Silvex) DINOSEB	14 6	- 6	24.00-141.00 10.00-46.00	133 (35.00) -	2,4,5-TP (Silvex) DINOSEB	J(all detects) UJ(all non-detects)

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA7-SS-0.0-0.5MSD (SL-030-SA7-SS-0.0-0.5)	4,4'-DDE ENDOSULFAN II HEPTACHLOR EPOXIDE	- - -	451 363 188	18.00-161.00 28.00-154.00 13.00-157.00	- 95 (50.00) 64 (50.00)	4,4'-DDE ENDOSULFAN II HEPTACHLOR EPOXIDE	J(all detects)
SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD (SL-030-SA7-SS-0.0-0.5)	4,4'-DDT DIELDRIN ENDOSULFAN I ENDOSULFAN SULFATE ENDRIN	-19 - - - 0	238 0 0 0 0	10.00-176.00 19.00-154.00 16.00-137.00 21.00-160.00 11.00-149.00	- 200 (50.00) 200 (50.00) 200 (50.00) -	4,4'-DDT DIELDRIN ENDOSULFAN I ENDOSULFAN SULFATE ENDRIN	J(all detects) R(all non-detects) 4,4'-DDT, No Qual, >4x

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA7-SS-0.0-0.5MS SL-037-SA7-SS-0.0-0.5MSD (SL-037-SA7-SS-0.0-0.5)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	135 861 1645	262 1603 3199	49.00-123.00 49.00-123.00 49.00-123.00	24 (20.00) - -	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	No Qual, Diluted Out
SL-037-SA7-SS-0.0-0.5MS SL-037-SA7-SS-0.0-0.5MSD (SL-037-SA7-SS-0.0-0.5)	EFH (C12-C14) EFH (C8-C11)	0 0	0 0	49.00-123.00 49.00-123.00	- -	EFH (C12-C14) EFH (C8-C11)	No Qual, Diluted Out
SL-338-SA5B-SB-7.0-8.0MSD (SL-338-SA5B-SB-7.0-8.0)	GASOLINE RANGE ORGANICS (	-	121	39.00-118.00	-	GASOLINE RANGE ORGANICS	No Qual, Diluted Out

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12584AQ242133A	DICAMBA	148	-	54.00-121.00	-	DICAMBA	
(SL-030-SA7-SS-0.0-0.5							
SL -034-SA7-SS-0.0-0.5							
SL -035-SA7-SS-0.0-0.5							
SL -037-SA7-SS-0.0-0.5							
SL -040-SA7-SS-0.0-0.5							J (all detects)
SL -041-SA7-SS-0.0-0.5							
SL -070-SA7-SS-0.0-0.5							
SL -071-SA7-SS-0.0-0.5							
SL -073-SA7-SS-0.0-0.5							
SL -146-SA7-SS-0.0-0.5)							

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P25726AQ220852A	VANADIUM	121	-	80.00-120.00	-	VANADIUM	
(SL-030-SA7-SS-0.0-0.5							
SL -034-SA7-SS-0.0-0.5							
SL -035-SA7-SS-0.0-0.5							
SL -037-SA7-SS-0.0-0.5							
SL -040-SA7-SS-0.0-0.5							
SL -041-SA7-SS-0.0-0.5							
SL -070-SA7-SS-0.0-0.5							
SL -071-SA7-SS-0.0-0.5							No Qual, SRM within QC Limits
SL -073-SA7-SS-0.0-0.5							
SL -146-SA7-SS-0.0-0.5							
SL -338-SA5B-SB-7.0-8.0							
SL -341-SA5B-SB-4.0-5.0							
SL -341-SA5B-SB-9.0-10.0							
SL -342-SA5B-SB-4.0-5.0							
SL -342-SA5B-SB-9.0-10.0)							

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P25708CQ221311	ALUMINUM	149	-	80.00-120.00	-	ALUMINUM	
P25708CQ221634	IRON	141	-	80.00-120.00	-	IRON	
(SL-030-SA7-SS-0.0-0.5	MAGNESIUM	126	-	80.00-120.00	-	MAGNESIUM	
SL -034-SA7-SS-0.0-0.5							
SL -035-SA7-SS-0.0-0.5							
SL -037-SA7-SS-0.0-0.5							
SL -040-SA7-SS-0.0-0.5							
SL -041-SA7-SS-0.0-0.5							
SL -070-SA7-SS-0.0-0.5							No Qual, SRM within QC Limits
SL -071-SA7-SS-0.0-0.5							
SL -073-SA7-SS-0.0-0.5							
SL -146-SA7-SS-0.0-0.5							
SL -338-SA5B-SB-7.0-8.0							
SL -341-SA5B-SB-4.0-5.0							
SL -341-SA5B-SB-9.0-10.0							
SL -342-SA5B-SB-4.0-5.0							
SL -342-SA5B-SB-9.0-10.0)							

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P8LALCSQ260158	4,6-DINITRO-2-METHYLPHENOL	39	-	46.00-120.00	-	4,6-DINITRO-2-METHYLPHEN	
(SL-030-SA7-SS-0.0-0.5	BENZOIC ACID	57	-	62.00-113.00	-	BENZOIC ACID	
SL -034-SA7-SS-0.0-0.5							
SL -035-SA7-SS-0.0-0.5							
SL -037-SA7-SS-0.0-0.5							
SL -040-SA7-SS-0.0-0.5							
SL -041-SA7-SS-0.0-0.5							
SL -070-SA7-SS-0.0-0.5							J(all detects)
SL -071-SA7-SS-0.0-0.5							UJ(all non-detects)
SL -073-SA7-SS-0.0-0.5							
SL -146-SA7-SS-0.0-0.5							
SL -338-SA5B-SB-7.0-8.0							
SL -341-SA5B-SB-4.0-5.0							
SL -341-SA5B-SB-9.0-10.0							
SL -342-SA5B-SB-4.0-5.0							
SL -342-SA5B-SB-9.0-10.0)							

Surrogate Outlier Report

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-071-SA7-SS-0.0 -0.5	CHLOROBENZENE	15	37.00-125.00	All Target Analytes	J(all detects)
	O-TERPHENYL	18	47.00-145.00		UJ(all non-detects)

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-034-SA7-SS-0.0 -0.5	DECACHLOROBIPHENYL	390	20.00-120.00	All Target Analytes	J(all detects)
SL-035-SA7-SS-0.0 -0.5	DECACHLOROBIPHENYL	151	20.00-120.00	All Target Analytes	J(all detects)

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-030-SA7-SS-0.0 -0.5	DECACHLOROBIPHENYL	151	45.00-120.00	All Target Analytes	J (all detects)

Method: 8270C SIM
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-034-SA7-SS-0.0 -0.5	Terphenyl-d14	157	45.00-135.00	No Affected Compounds	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-034-SA7-SS-0.0-0.5	FLUORIDE	J	0.91	0.98	PQL	mg/Kg	J (all detects)
SL-338-SA5B-SB-7.0-8.0	Nitrate-NO3	J	1.1	1.6	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	Nitrate-NO3	J	1.1	1.7	PQL	mg/Kg	J (all detects)
SL-342-SA5B-SB-9.0-10.0	Nitrate-NO3	J	1.2	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	BORON	J	4.23	4.98	PQL	mg/Kg	J (all detects)
	SODIUM	J	75.3	99.5	PQL	mg/Kg	
	TIN	J	2.91	9.95	PQL	mg/Kg	
	Zirconium	J	2.73	4.98	PQL	mg/Kg	
SL-034-SA7-SS-0.0-0.5	BORON	J	1.04	4.95	PQL	mg/Kg	J (all detects)
	TIN	J	2.97	9.90	PQL	mg/Kg	
	Zirconium	J	2.93	4.95	PQL	mg/Kg	
SL-035-SA7-SS-0.0-0.5	BORON	J	1.48	4.83	PQL	mg/Kg	J (all detects)
	TIN	J	3.80	9.66	PQL	mg/Kg	
SL-037-SA7-SS-0.0-0.5	BORON	J	4.63	4.99	PQL	mg/Kg	J (all detects)
	SODIUM	J	81.9	99.7	PQL	mg/Kg	
	TIN	J	2.91	9.97	PQL	mg/Kg	
	Zirconium	J	2.88	4.99	PQL	mg/Kg	
SL-040-SA7-SS-0.0-0.5	BORON	J	4.08	4.95	PQL	mg/Kg	J (all detects)
	SODIUM	J	67.8	99.0	PQL	mg/Kg	
	TIN	J	2.98	9.90	PQL	mg/Kg	
	Zirconium	J	2.96	4.95	PQL	mg/Kg	
SL-041-SA7-SS-0.0-0.5	BORON	J	4.36	5.06	PQL	mg/Kg	J (all detects)
	SODIUM	J	70.6	101	PQL	mg/Kg	
	TIN	J	3.00	10.1	PQL	mg/Kg	
	Zirconium	J	3.32	5.06	PQL	mg/Kg	
SL-070-SA7-SS-0.0-0.5	BORON	J	3.86	4.83	PQL	mg/Kg	J (all detects)
	SODIUM	J	95.8	96.7	PQL	mg/Kg	
	TIN	J	2.78	9.67	PQL	mg/Kg	
	Zirconium	J	2.67	4.83	PQL	mg/Kg	
SL-071-SA7-SS-0.0-0.5	BORON	J	3.95	4.83	PQL	mg/Kg	J (all detects)
	SODIUM	J	72.8	96.7	PQL	mg/Kg	
	TIN	J	2.78	9.67	PQL	mg/Kg	
	Zirconium	J	3.22	4.83	PQL	mg/Kg	
SL-073-SA7-SS-0.0-0.5	BORON	J	3.89	4.89	PQL	mg/Kg	J (all detects)
	TIN	J	3.71	9.78	PQL	mg/Kg	
	Zirconium	J	3.10	4.89	PQL	mg/Kg	
SL-146-SA7-SS-0.0-0.5	BORON	J	2.17	4.90	PQL	mg/Kg	J (all detects)
	TIN	J	4.49	9.80	PQL	mg/Kg	
	Zirconium	J	4.01	4.90	PQL	mg/Kg	
SL-338-SA5B-SB-7.0-8.0	BORON	J	2.97	5.11	PQL	mg/Kg	J (all detects)
	TIN	J	2.25	10.2	PQL	mg/Kg	
	Zirconium	J	2.32	5.11	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-341-SA5B-SB-4.0-5.0	BORON	J	4.29	5.53	PQL	mg/Kg	J (all detects)
	TIN	J	3.02	11.1	PQL	mg/Kg	
	Zirconium	J	3.82	5.53	PQL	mg/Kg	
SL-341-SA5B-SB-9.0-10.0	BORON	J	4.09	5.49	PQL	mg/Kg	J (all detects)
	TIN	J	3.05	11.0	PQL	mg/Kg	
	Zirconium	J	3.72	5.49	PQL	mg/Kg	
SL-342-SA5B-SB-4.0-5.0	BORON	J	4.96	5.52	PQL	mg/Kg	J (all detects)
	TIN	J	3.02	11.0	PQL	mg/Kg	
	Zirconium	J	3.91	5.52	PQL	mg/Kg	
SL-342-SA5B-SB-9.0-10.0	TIN	J	3.14	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.41	5.50	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	SELENIUM	J	0.212	0.390	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0276	0.0976	PQL	mg/Kg	
SL-034-SA7-SS-0.0-0.5	SELENIUM	J	0.105	0.388	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0584	0.0971	PQL	mg/Kg	
SL-035-SA7-SS-0.0-0.5	SELENIUM	J	0.168	0.390	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0929	0.0976	PQL	mg/Kg	
SL-037-SA7-SS-0.0-0.5	SELENIUM	J	0.144	0.403	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0619	0.101	PQL	mg/Kg	
SL-040-SA7-SS-0.0-0.5	SELENIUM	J	0.215	0.404	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0647	0.101	PQL	mg/Kg	
SL-041-SA7-SS-0.0-0.5	ANTIMONY	J	0.138	0.200	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.101	0.400	PQL	mg/Kg	
	SILVER	J	0.0404	0.100	PQL	mg/Kg	
SL-070-SA7-SS-0.0-0.5	ANTIMONY	J	0.180	0.195	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.120	0.390	PQL	mg/Kg	
	SILVER	J	0.0571	0.0976	PQL	mg/Kg	
SL-071-SA7-SS-0.0-0.5	ANTIMONY	J	0.151	0.195	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0949	0.390	PQL	mg/Kg	
	SILVER	J	0.0578	0.0976	PQL	mg/Kg	
SL-073-SA7-SS-0.0-0.5	ANTIMONY	J	0.164	0.196	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.149	0.391	PQL	mg/Kg	
	SILVER	J	0.0336	0.0978	PQL	mg/Kg	
SL-146-SA7-SS-0.0-0.5	SELENIUM	J	0.114	0.396	PQL	mg/Kg	J (all detects)
SL-338-SA5B-SB-7.0-8.0	ANTIMONY	J	0.146	0.206	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0949	0.103	PQL	mg/Kg	
	SILVER	J	0.0201	0.103	PQL	mg/Kg	
SL-341-SA5B-SB-4.0-5.0	SELENIUM	J	0.420	0.447	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0506	0.112	PQL	mg/Kg	
SL-341-SA5B-SB-9.0-10.0	SELENIUM	J	0.258	0.423	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0483	0.106	PQL	mg/Kg	
SL-342-SA5B-SB-4.0-5.0	SELENIUM	J	0.407	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0558	0.108	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-342-SA5B-SB-9.0-10.0	ANTIMONY	J	0.183	0.216	PQL	mg/Kg	
	SELENIUM	J	0.199	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0535	0.108	PQL	mg/Kg	

Method: 6850
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	PERCHLORATE	J	2.5	5.0	PQL	ug/Kg	J (all detects)
SL-146-SA7-SS-0.0-0.5	PERCHLORATE	J	3.6	5.0	PQL	ug/Kg	J (all detects)

Method: 7199
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-034-SA7-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.61	1.0	PQL	mg/Kg	J (all detects)
SL-035-SA7-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.46	1.0	PQL	mg/Kg	J (all detects)
SL-146-SA7-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.94	1.0	PQL	mg/Kg	J (all detects)
SL-342-SA5B-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.38	1.1	PQL	mg/Kg	J (all detects)
SL-342-SA5B-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.45	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	MERCURY	J	0.0236	0.0965	PQL	mg/Kg	J (all detects)
SL-034-SA7-SS-0.0-0.5	MERCURY	J	0.0894	0.0938	PQL	mg/Kg	J (all detects)
SL-035-SA7-SS-0.0-0.5	MERCURY	J	0.0522	0.0955	PQL	mg/Kg	J (all detects)
SL-037-SA7-SS-0.0-0.5	MERCURY	J	0.0234	0.0983	PQL	mg/Kg	J (all detects)
SL-040-SA7-SS-0.0-0.5	MERCURY	J	0.0145	0.100	PQL	mg/Kg	J (all detects)
SL-041-SA7-SS-0.0-0.5	MERCURY	J	0.0098	0.0965	PQL	mg/Kg	J (all detects)
SL-070-SA7-SS-0.0-0.5	MERCURY	J	0.0148	0.0996	PQL	mg/Kg	J (all detects)
SL-071-SA7-SS-0.0-0.5	MERCURY	J	0.0116	0.0951	PQL	mg/Kg	J (all detects)
SL-073-SA7-SS-0.0-0.5	MERCURY	J	0.0257	0.0987	PQL	mg/Kg	J (all detects)
SL-338-SA5B-SB-7.0-8.0	MERCURY	J	0.0181	0.101	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-4.0-5.0	MERCURY	J	0.0241	0.110	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	MERCURY	J	0.0603	0.108	PQL	mg/Kg	J (all detects)
SL-342-SA5B-SB-4.0-5.0	MERCURY	J	0.0266	0.110	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-342-SA5B-SB-9.0-10.0	MERCURY	J	0.0178	0.110	PQL	mg/Kg	J (all detects)

Method: 8015B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA7-SS-0.0-0.5	Isopropanol	J	110	500	PQL	ug/Kg	J (all detects)
SL-041-SA7-SS-0.0-0.5	METHANOL	J	230	510	PQL	ug/Kg	J (all detects)
SL-070-SA7-SS-0.0-0.5	Isopropanol METHANOL	J J	100 230	500 500	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-071-SA7-SS-0.0-0.5	METHANOL	J	250	500	PQL	ug/Kg	J (all detects)
SL-073-SA7-SS-0.0-0.5	Isopropanol METHANOL	J J	160 330	500 500	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-338-SA5B-SB-7.0-8.0	METHANOL	J	340	530	PQL	ug/Kg	J (all detects)
SL-341-SA5B-SB-4.0-5.0	METHANOL	J	410	560	PQL	ug/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	METHANOL	J	420	550	PQL	ug/Kg	J (all detects)
SL-342-SA5B-SB-4.0-5.0	METHANOL	J	290	560	PQL	ug/Kg	J (all detects)
SL-342-SA5B-SB-9.0-10.0	METHANOL	J	340	560	PQL	ug/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA7-SS-0.0-0.5	EFH (C15-C20)	J	4.2	12	PQL	mg/Kg	J (all detects)
SL-041-SA7-SS-0.0-0.5	EFH (C15-C20)	J	1.0	2.4	PQL	mg/Kg	J (all detects)
SL-073-SA7-SS-0.0-0.5	EFH (C15-C20)	J	4.1	6.0	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-4.0-5.0	EFH (C15-C20)	J	3.2	6.8	PQL	mg/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	EFH (C15-C20)	J	6.5	6.6	PQL	mg/Kg	J (all detects)
SL-342-SA5B-SB-4.0-5.0	EFH (C15-C20)	J	2.7	6.7	PQL	mg/Kg	J (all detects)

Method: 8081A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	Chlordane	J	3.1	3.4	PQL	ug/Kg	J (all detects)
SL-034-SA7-SS-0.0-0.5	Chlordane	J	7.1	17	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8081A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-040-SA7-SS-0.0-0.5	4,4'-DDD	J	0.15	0.34	PQL	ug/Kg	J (all detects)
	4,4'-DDE	J	0.15	0.34	PQL	ug/Kg	
	4,4'-DDT	J	0.24	0.34	PQL	ug/Kg	
	ENDOSULFAN II	J	0.15	0.34	PQL	ug/Kg	
	ENDRIN	J	0.11	0.34	PQL	ug/Kg	
	ENDRIN ALDEHYDE	J	0.22	0.34	PQL	ug/Kg	
	MIREX	J	0.24	0.34	PQL	ug/Kg	
SL-041-SA7-SS-0.0-0.5	DELTA-BHC	J	0.095	0.17	PQL	ug/Kg	J (all detects)
	gamma-BHC (Lindane)	J	0.057	0.17	PQL	ug/Kg	
SL-070-SA7-SS-0.0-0.5	Chlordane	J	1.9	3.4	PQL	ug/Kg	J (all detects)
SL-071-SA7-SS-0.0-0.5	4,4'-DDE	J	0.24	0.34	PQL	ug/Kg	J (all detects)
	Chlordane	J	2.2	3.4	PQL	ug/Kg	
	DELTA-BHC	J	0.096	0.17	PQL	ug/Kg	
	HEPTACHLOR EPOXIDE	J	0.047	0.17	PQL	ug/Kg	
	TOXAPHENE	J	3.6	6.6	PQL	ug/Kg	
SL-073-SA7-SS-0.0-0.5	Chlordane	J	1.5	3.4	PQL	ug/Kg	J (all detects)
	HEPTACHLOR	J	0.073	0.17	PQL	ug/Kg	

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA7-SS-0.0-0.5	Aroclor 5460	J	2.4	3.3	PQL	ug/Kg	J (all detects)
SL-041-SA7-SS-0.0-0.5	Aroclor 5460	J	1.6	3.3	PQL	ug/Kg	J (all detects)
SL-070-SA7-SS-0.0-0.5	AROCLOR 1242	J	0.70	1.7	PQL	ug/Kg	J (all detects)
SL-071-SA7-SS-0.0-0.5	AROCLOR 1254	J	0.95	1.7	PQL	ug/Kg	J (all detects)
SL-341-SA5B-SB-4.0-5.0	AROCLOR 1254	J	0.70	1.9	PQL	ug/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	AROCLOR 1260	J	0.78	1.9	PQL	ug/Kg	J (all detects)
SL-342-SA5B-SB-4.0-5.0	AROCLOR 1254	J	1.7	1.9	PQL	ug/Kg	J (all detects)
SL-342-SA5B-SB-9.0-10.0	AROCLOR 1254	J	1.1	1.9	PQL	ug/Kg	J (all detects)

Method: 8151A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA7-SS-0.0-0.5	MCPP	J	110	250	PQL	ug/Kg	J (all detects)
SL-071-SA7-SS-0.0-0.5	DICAMBA	J	0.42	1.2	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-034-SA7-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	230	330	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	17	170	PQL	ug/Kg	
	Di-n-butylphthalate	J	40	170	PQL	ug/Kg	
	PYRENE	J	17	170	PQL	ug/Kg	
SL-035-SA7-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	38	340	PQL	ug/Kg	J (all detects)
	Di-n-butylphthalate	J	20	170	PQL	ug/Kg	
SL-041-SA7-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	340	PQL	ug/Kg	J (all detects)
SL-070-SA7-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	18	170	PQL	ug/Kg	J (all detects)
SL-146-SA7-SS-0.0-0.5	BENZO(G,H,I)PERYLENE	J	21	170	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	240	330	PQL	ug/Kg	
SL-338-SA5B-SB-7.0-8.0	BENZO(G,H,I)PERYLENE	J	110	180	PQL	ug/Kg	J (all detects)
SL-341-SA5B-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	60	370	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	19	180	PQL	ug/Kg	
	PHENANTHRENE	J	24	180	PQL	ug/Kg	
	PYRENE	J	19	180	PQL	ug/Kg	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA7-SS-0.0-0.5	ACENAPHTHYLENE	J	0.49	1.7	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	0.97	1.7	PQL	ug/Kg	
SL-034-SA7-SS-0.0-0.5	ANTHRACENE	J	0.41	1.7	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.98	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.7	PQL	ug/Kg	
SL-035-SA7-SS-0.0-0.5	BENZO(A)PYRENE	J	5.9	8.3	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	4.5	8.3	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.4	8.3	PQL	ug/Kg	
	PYRENE	J	5.3	8.3	PQL	ug/Kg	
SL-037-SA7-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	7.4	8.4	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	76	91	PQL	ug/Kg	
	Butylbenzylphthalate	J	43	91	PQL	ug/Kg	
	NAPHTHALENE	J	3.9	8.4	PQL	ug/Kg	
SL-040-SA7-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	0.75	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.50	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	0.70	1.7	PQL	ug/Kg	
SL-041-SA7-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.87	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.6	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.95	1.7	PQL	ug/Kg	
SL-070-SA7-SS-0.0-0.5	CHRYSENE	J	3.5	8.4	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	8.3	8.4	PQL	ug/Kg	
	NAPHTHALENE	J	3.7	8.4	PQL	ug/Kg	
	PYRENE	J	6.3	8.4	PQL	ug/Kg	
SL-071-SA7-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.75	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.67	1.7	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.5	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	18	PQL	ug/Kg	
	Butylbenzylphthalate	J	7.7	18	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.7	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE242 **Laboratory: LL**

EDD Filename: DE242_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-073-SA7-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	4.5	8.3	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	4.3	8.3	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	5.4	8.3	PQL	ug/Kg	
	NAPHTHALENE	J	3.7	8.3	PQL	ug/Kg	
SL-146-SA7-SS-0.0-0.5	Di-n-octylphthalate	J	30	90	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	5.0	8.3	PQL	ug/Kg	
	NAPHTHALENE	J	5.2	8.3	PQL	ug/Kg	
	PYRENE	J	5.7	8.3	PQL	ug/Kg	
SL-338-SA5B-SB-7.0-8.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.9	19	PQL	ug/Kg	J (all detects)
	FLUORENE	J	0.80	1.7	PQL	ug/Kg	
SL-341-SA5B-SB-4.0-5.0	ANTHRACENE	J	2.3	9.3	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	4.4	9.3	PQL	ug/Kg	
	BENZO(A)PYRENE	J	4.4	9.3	PQL	ug/Kg	
	NAPHTHALENE	J	5.2	9.3	PQL	ug/Kg	
SL-341-SA5B-SB-9.0-10.0	ACENAPHTHENE	J	1.0	1.8	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	1.2	1.8	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.4	1.8	PQL	ug/Kg	
	FLUORENE	J	1.4	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.79	1.8	PQL	ug/Kg	
SL-342-SA5B-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.96	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.79	1.9	PQL	ug/Kg	
SL-342-SA5B-SB-9.0-10.0	ANTHRACENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.7	1.9	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.1	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.9	PQL	ug/Kg	

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: January 4, 2012

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
258LALCS	Benzoic acid 4,6-Dinitro-2-methylphenol	57 (62-113) 39 (46-120)	All samples in SDG DE242	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	Benzoic acid 4,6-Dinitro-2-methylphenol	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L2a **VALIDATION COMPLETENESS WORKSHEET** Date: 1/3/12
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: F
2nd Reviewer: L

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	~~SW~~ A	% RSD ≤30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

50 | 2

1	SL-030-SA7-SS-0.0-0.5	11 1	SL-338-SA5B-SB-7.0-8.0	21 1	SBLKLA25B	31	
2	SL-034-SA7-SS-0.0-0.5	12 1	SL-341-SA5B-SB-4.0-5.0	22 2	SBLKLA2	32	
3	SL-035-SA7-SS-0.0-0.5	13 1	SL-341-SA5B-SB-9.0-10.0	23		33	
4	SL-037-SA7-SS-0.0-0.5	14 1	SL-342-SA5B-SB-4.0-5.0	24		34	
5	SL-040-SA7-SS-0.0-0.5	15 1	SL-342-SA5B-SB-9.0-10.0	25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

LDC #: 26859L2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓		✓	
Was a MS/MSD analyzed every 20 samples of each matrix?	✓		✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.		✓		
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26859L2R

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y (N) N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		258LALCS	PPP	57 (62-113)	( )	( )	All	J/UJ/P (L)
			PP	39 (46-120)	( )	( )	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

LDC #: 26859L29

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/12/11	Phenol (1st internal standard)	2.044	2.044	2.033	2.033	2	2
			4-chloroaniline ~~Naphthalene~~ (2nd internal standard)	0.450	0.450	0.452	0.452	2	2
			4-nitroaniline ~~Fluorene~~ (3rd internal standard)	0.356	0.356	0.370	0.370	5	5
			Pentachlorophenol (4th internal standard)	0.149	0.149	0.140	0.140	12	12
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.621	0.621	0.615	0.615	4	4
			Benzo(a)pyrene (6th internal standard)	1.096	1.096	1.050	1.052	4	4
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv 20:12	9/18/11	Phenol (1st internal standard)	2.033	2.059	2.059	1	1
			4-chloroaniline Naphthalene (2nd internal standard)	0.452	0.462	0.462	2	2
			4-nitroaniline Fluorene (3rd internal standard)	0.370	0.367	0.367	1	1
			Pentachlorophenol (4th internal standard)	0.140	0.116	0.116	17	17
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.615	0.626	0.626	2	2
			Benzo(a)pyrene (6th internal standard)	1.050	1.103	1.103	5	5
2	ccv 9:39	9/19/11	Phenol (1st internal standard)		2.086	2.086	3	3
			4-chloroaniline Naphthalene (2nd internal standard)		0.469	0.469	4	4
			4-nitroaniline Fluorene (3rd internal standard)		0.370	0.370	0	0
			Pentachlorophenol (4th internal standard)		0.127	0.127	9	9
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.601	0.601	2	2
			Benzo(a)pyrene (6th internal standard)		1.109	1.109	6	6
3	ccv 1949	9/19/11	Phenol (1st internal standard)		2.214	2.214	9	9
			4-chloroaniline Naphthalene (2nd internal standard)		0.469	0.469	4	4
			4-nitroaniline Fluorene (3rd internal standard)		0.388	0.388	5	5
			Pentachlorophenol (4th internal standard)		0.132	0.132	6	6
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.636	0.636	3	3
			Benzo(a)pyrene (6th internal standard)		1.098	1.098	5	5

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100	85.544	86	86	0
2-Fluorobiphenyl	↓	85.113	85	85	
Terphenyl-d14	↓	81.026	81	81	
Phenol-d5	200	192.805	96	96	
2-Fluorophenol	↓	189.857	95	95	
2,4,6-Tribromophenol	↓	155.541	78	78	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26859L29

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 258 LALCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1666.67	NA	1616.25	NA	97	97				
N-Nitroso-di-n-propylamine			1515.22		91	91				
4-Chloro-3-methylphenol			1629.77		98	98				
Acenaphthene			1573.49		94	94				
Pentachlorophenol			913.03		55	55				
Pyrene			1595.58		96	96	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L2S

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #2 , chrysene

Conc. = (19438)(20)(1000)( )( )( )
(805804)(0.963)(30)( )( )( )

=

17 ug/Kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: January 4, 2012

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
SL-034-SA7-SS-0.0-0.5	Perylene-d12	54415 (175106-700424)	Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	J (all detects) R (all non-detects)	A

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-034-SA7-SS-0.0-0.5	Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	J (all detects) R (all non-detects)	A	Internal standard (area) (I)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L2b **VALIDATION COMPLETENESS WORKSHEET** Date: 01/3/12
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (SW8OA) (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D ≤ 30, r
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-030-SA7-SS-0.0-0.5	11	SL-338-SA5B-SB-7.0-8.0	21	SBLKLC258	31	
2	SL-034-SA7-SS-0.0-0.5	12	SL-341-SA5B-SB-4.0-5.0	22		32	
3	SL-035-SA7-SS-0.0-0.5	13	SL-341-SA5B-SB-9.0-10.0	23		33	
4	SL-037-SA7-SS-0.0-0.5	14	SL-342-SA5B-SB-4.0-5.0	24		34	
5	SL-040-SA7-SS-0.0-0.5	15	SL-342-SA5B-SB-9.0-10.0	25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

LDC #: 26859126

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?		✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26859L26

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

PRY

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26859126

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A) If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		2	TPH	157 (45-135)	no qual
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116
S3 (TPH) = Terphenyl-d14	18-137	33-141
S4 (PHL) = Phenol-d5	24-113	10-94
S5 (2FP)= 2-Fluorophenol	25-121	21-100
S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 26859L25

VALIDATION FINDINGS WORKSHEET
Internal Standards

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard area counts within -50 to +100 of the associated calibration standard? (I)

Y (N) N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
LCS/D		2	PRY	~~82487~~ (175106 - 700424)		J/R/A (all list)
				54415		

* QC limits are advisory

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

LDC #: 26859R2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (1 std)	Recalculated RRF (1 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/22/11	~~Phenol~~ (1st internal standard)						
			Naphthalene (2nd internal standard)	1.096	1.096	1.094	1.094	3	3
			Fluorene (3rd internal standard)	1.350	1.350	1.317	1.317	5	5
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.211	1.211	1.170	1.170	6	6
			~~Bis(2-ethylhexyl)phthalate~~ chrysene (5th internal standard)	1.325	1.325	1.316	1.316	4	4
			Benzo(a)pyrene (6th internal standard)	1.266	1.266	1.213	1.213	5	5
2	ICAL	10/4/11	~~Phenol~~ (1st internal standard)						
			Naphthalene (2nd internal standard)	1.120	1.120	1.110	1.110	3	3
			Fluorene (3rd internal standard)	1.410	1.410	1.352	1.352	7	7
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.217	1.217	1.165	1.165	9	9
			~~Bis(2-ethylhexyl)phthalate~~ chrysene (5th internal standard)	1.286	1.286	1.263	1.263	3	3
			Benzo(a)pyrene (6th internal standard)	1.245	1.245	1.191	1.191	7	7
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (/ std)	Recalculated RRF (/ std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/13/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.155	1.155	1.132	1.132	3	3
			Fluorene (3rd internal standard)	1.393	1.393	1.345	1.345	5	5
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.257	1.257	1.191	1.191	7	7
			~~Bis(2-ethylhexyl)phthalate~~ chrysene (5th internal standard)	1.379	1.379	1.348	1.348	5	5
			Benzo(a)pyrene (6th internal standard)	1.296	1.296	1.243	1.243	5	1
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859126

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	9/21/11	~~Phenol (1st internal standard)~~					
	18:27		Naphthalene (2nd internal standard)	1.132	1.115	1.115	1	1
			Fluorene (3rd internal standard)	1.345	1.376	1.376	2	2
			Anthracene ~~Pentachlorophenol~~ (4th internal standard)	1.191	1.209	1.209	2	2
			Chrysene ~~Bis(2-ethylhexyl)phthalate~~ (5th internal standard)	1.348	1.320	1.320	2	2
			Benzo(a)pyrene (6th internal standard)	1.243	1.256	1.256	1	1
2	CCV	9/22/11	~~Phenol (1st internal standard)~~					
	7:01		Naphthalene (2nd internal standard)		1.109	1.109	2	2
			Fluorene (3rd internal standard)		1.393	1.393	4	4
			Anthracene ~~Pentachlorophenol~~ (4th internal standard)		1.227	1.227	3	3
			Chrysene ~~Bis(2-ethylhexyl)phthalate~~ (5th internal standard)		1.332	1.332	1	1
			Benzo(a)pyrene (6th internal standard)		1.257	1.257	1	1
3	CCV	9/23/11	~~Phenol (1st internal standard)~~					
	16:31		Naphthalene (2nd internal standard)	1.094	1.107	1.107	1	1
			Fluorene (3rd internal standard)	1.317	1.351	1.351	3	3
			Anthracene ~~Pentachlorophenol~~ (4th internal standard)	1.170	1.202	1.202	3	3
			Chrysene ~~Bis(2-ethylhexyl)phthalate~~ (5th internal standard)	1.316	1.321	1.321	0	0
			Benzo(a)pyrene (6th internal standard)	1.213	1.247	1.247	3	3

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26837D

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	1.0	0.90U	90	90	0
2-Fluorobiphenyl	↓	0.838	84	84	↓
Terphenyl-d14		0.840	84	84	
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26859L26

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 28LCLCS

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	33.33	NA	28.67	NA	86	86				
Pentachlorophenol										
Pyrene	33.33	↓	31.38	↓	94	94	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859c26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, Benzo(g,h,i)perylene

Conc. = $\frac{(31930)(1.0)(1000)(\quad)(\quad)}{(32835)(1.233)(30)(0.99)(\quad)}$

=

2.66 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: N-Nitrosodimethylamine

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% .

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0% .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-nitrosodimethylamine was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L2c **VALIDATION COMPLETENESS WORKSHEET** Date: 12/27/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/~~ICV~~ ICV	A	CCV ≤ 20 ICV ≤ 30
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specific
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

SOIL

1	SL-338-SA5B-SB-7.0-8.0	11	SBLKLL257	21		31	
2	SL-341-SA5B-SB-4.0-5.0	12		22		32	
3	SL-341-SA5B-SB-9.0-10.0	13		23		33	
4	SL-342-SA5B-SB-4.0-5.0	14		24		34	
5	SL-342-SA5B-SB-9.0-10.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26859L2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓		✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓		✓	
Were all percent differences (%D) ≤ ~~25~~ 20% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26891L2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26891 2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (~~EPA SW 846 Method 8270~~) 1625C

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/9/11	~~Phenol (1st internal standard)~~ NDMA	1.043	1.043	0.983	0.983	13	13
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA ~~(EPA SW 846 Method 8270C)~~ 1625C

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 14:55	9/20/11	~~Phenol (1st internal standard)~~ NDMA	0.98295	0.89981	0.89981	8.45	8.45
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2	CCV 16:41	9/20/11	~~Phenol (1st internal standard)~~ NDMA	↓	0.97109	0.9711	1.20708	1.21
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3	CCV 20:14	9/20/11	~~Phenol (1st internal standard)~~ NDMA	↓	1.03287	1.033	5.078	5.08
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS Semivolatiles (~~EPA SW 846 Method 8270~~) 1625C

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ NDMA-d6	25.0	22.096	88	88	0
2-~~Fluorobiphenyl~~					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26859L2C

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA ~~(EPA SW 846 Method 8270)~~ 1625C

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 257LLLCS

Compound	Spike Added (ng/kg)		Spike Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~ NDMA	833.33	NA	882.28	NA	106	106	NA			
~~N-Nitroso-di-n-propylamine~~										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
~~Pyrene~~										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: C

METHOD: GC/MS BNA (~~EPA SW 846 Method 8270~~) 625C

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____, _____:

Conc. = $\frac{(\quad)(\quad)(\quad)(\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(\quad)}$

=

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-030-SA7-SS-0.0-0.5MS
SL-030-SA7-SS-0.0-0.5MSD

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of single compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/21/11	1P10263.12R-CCV	RTXCLP1	gamma-BHC	73.1	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD PBLK13262	J (all detects) UJ (all non-detects)	A
9/26/11	1P10269.12R-CCV	RTXCLP1	gamma-BHC	113.1	SL-037-SA7-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/21/11	1P10263.11R-ICV	RTXCLP1	Endosulfan II	26.3	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD PBLK13262	J (all detects) UJ (all non-detects)	A
9/21/11	1P10263.11R-ICV	RTXCLP2	Endrin aldehyde	21.0	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-030-SA7-SS-0.0-0.5MS SL-030-SA7-SS-0.0-0.5MSD PBLK13262	J (all detects) UJ (all non-detects)	A

Retention times (RT) of all compounds in the calibration standards were within QC limits.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0% .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-034-SA7-SS-0.0-0.5	Not specified	Decachlorobiphenyl	390 (20-120)	All TCL compounds	J (all detects)	P
SL-035-SA7-SS-0.0-0.5	Not specified	Decachlorobiphenyl	151 (20-120)	All TCL compounds except 4,4'-DDT	J (all detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-030-SA7-SS-0.0-0.5MS/MSD (SL-030-SA7-SS-0.0-0.5)	Heptachlor epoxide 4,4'-DDE Endosulfan II	- - -	188 (13-157) 451 (18-161) 363 (28-154)	64 (≤50) - 95 (≤50)	J (all detects) J (all detects) J (all detects)	A
SL-030-SA7-SS-0.0-0.5MS/MSD (SL-030-SA7-SS-0.0-0.5)	Endosulfan I Dieldrin Endrin Endosulfan sulfate	- - 0 (11-149) -	0 (16-137) 0 (19-154) 0 (11-149) 0 (21-160)	200 (≤50) 200 (≤50) - 200 (≤50)	J (all detects) R (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-030-SA7-SS-0.0-0.5	Chlordane (Technical) 4,4'-DDE	95 47.72	J (all detects) J (all detects)	A
SL-035-SA7-SS-0.0-0.5	Chlordane (Technical)	79.75	J (all detects)	A
SL-040-SA7-SS-0.0-0.5	Endosulfan II Mirex	47.18 53.69	J (all detects) J (all detects)	A
SL-041-SA7-SS-0.0-0.5	gamma-BHC delta-BHC	46.87 63.61	J (all detects) J (all detects)	A
SL-070-SA7-SS-0.0-0.5	Chlordane (Technical)	97.98	J (all detects)	A
SL-071-SA7-SS-0.0-0.5	Toxaphene	60.48	J (all detects)	A
SL-073-SA7-SS-0.0-0.5	Heptachlor Chlordane (Technical)	81.77 77.92	J (all detects) J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5	gamma-BHC	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5	Endosulfan II Endrin aldehyde	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE242	SL-034-SA7-SS-0.0-0.5	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S)
DE242	SL-035-SA7-SS-0.0-0.5	All TCL compounds except 4,4'-DDT	J (all detects)	A	Surrogate spikes (%R) (S)
DE242	SL-030-SA7-SS-0.0-0.5	Heptachlor epoxide Endosulfan II	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	4,4'-DDE	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	Endosulfan I Dieldrin Endosulfan sulfate	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	Endrin	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	Chlordane (Technical) 4,4'-DDE	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-035-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5	Chlordane (Technical)	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-040-SA7-SS-0.0-0.5	Endosulfan II Mirex	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-041-SA7-SS-0.0-0.5	gamma-BHC delta-BHC	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-071-SA7-SS-0.0-0.5	Toxaphene	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-073-SA7-SS-0.0-0.5	Heptachlor Chlordane (Technical)	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L3a
SDG #: DE242
Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 12/27/11
Page: 1 of 1
Reviewer: FD
2nd Reviewer:

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	%D RSD ≤ 20
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

soil

1	SL-030-SA7-SS-0.0-0.5	11	PBLK132602	21		31	
2	SL-034-SA7-SS-0.0-0.5	12	#1 MS	22		32	
3	SL-035-SA7-SS-0.0-0.5	13	#1 MSD	23		33	
4	SL-037-SA7-SS-0.0-0.5	14		24		34	
5	SL-040-SA7-SS-0.0-0.5	15		25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

Notes:

LDC #: 26859L3a
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FV
2nd Reviewer: A

Method: Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) $\leq$ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ___%D or ___%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns $\leq$ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) $\leq$ ~~15%.0~~ 20 or percent recoveries ~~85-115%?~~ 80-120		✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?	✓			
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 26859L3a
SDG #: all cores

VALIDATION FINDINGS CHECKLIST

Reviewer: RJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 26859L3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20.0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	9/21/11	IP10263.11R-ICV	RTX CLP1	L	26.3	( )	~~AFI~~ 1-3,	J/UJ/A (C)
			RTXCLP2	R	21.0	( )	5-10, 12, 13,	
						( )	PBLK13262	
						( )		
+	9/21/11	IP10263.12R-CCV	RTX CLP1	D	73.1	( )	↓	J/UJ/A (C)
						( )		
						( )		
						( )		
						( )		
+	9/26/11	IP10269.12R-CCV	RTX-CLP1	D	113.1	( )	4	J/UJ/A (C)
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
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						( )		
						( )		
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						( )		

LDC #: 26859L3a

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ **GC** ___ **HPLC**

Are surrogates required by the method? Yes___ or No___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y (N) N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	2	NS	θ	390 (20-120)	J/P det (S)
				( )	
	3	↓	θ	151 (20-120)	J/A det all (S) except θ
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26859L3c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	12 + 13	G	( )	188 (13-157)	64 (50)	# 1	J/A det (Q)
		J	( )	451 (18-161)	( )		↓
		H	( )	0 (16-137)	200 (50)		J/R/A
		I	( )	0 (19-154)	200 (50)		↓
		K	0 (11-149)	0 (11-149)	( )		↓
		L	( )	363 (28-154)	95 (50)		J/A det
+		O	-19 (10-176)	238 (10-176)	( )		no QUAL ZYX
		N	( )	0 (21-160)	200 (50)		J/R/A
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26859L3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer:

METHOD: GC / HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Between Column ≤40 Finding	Associated Samples	Qualifications
	chlordane (Technical)	95	1	J/Adet * XIII
	J	47.72		
	chlordane (Technical)	79.75	3	J/Adet * XIII
	~~EDD~~ L	47.18	5	↓ * XIII
	Mirex	53.69		
	D	46.87	6	↓ * XIII
	C	63.61		
	chlordane (Technical)	97.98	7	↓ * XIII
	U	60.48	8	↓ * XIII
			~~X~~	

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26859L39

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: C

METHOD: GC / HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 col Finding ≤ 40	Associated Samples	Qualifications
	E	81.77	9	J/A det * X111
	chlordane (Technical)	77.92	↓	

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26859L3R
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JTG
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported 10/100 CF (std)	Recalculated 10/100 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL IP102631B	9/21/11	endosulfan I (RTX CLP)	3.63×10^3	3.63×10^3	3.60×10^3	3.60×10^3	7.0	7.0
			methoxychlor ↓	1.34×10^3	1.34×10^3	1.31×10^3	1.31×10^3	5.0	5.0
2			↓ RTX CLP II	2.30×10^3	2.30×10^3	2.40×10^3	2.40×10^3	7.4	7.4
			↓	6.89×10^2	6.89×10^2	6.84×10^2	6.84×10^2	3.1	3.1
3	ICAL IP10269	9/26/11	↓	4.19×10^3	4.19×10^3	4.13×10^3	4.13×10^3	4.6	4.6
			↓	1.63×10^3	1.63×10^3	1.54×10^3	1.54×10^3	4.5	4.5
4			↓	3.02×10^3	3.02×10^3	3.07×10^3	3.07×10^3	6.7	6.7
			↓	1.02×10^3	1.02×10^3	9.92×10^2	9.92×10^2	5.2	5.2

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L3<
SDG #: pw conv

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: FD
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv 9:55	9/26/11	endosulfan I RTxCLP1	10.0	9.68	9.68	3.2	3.2
			methoxychlor	100	100.17	100.17	0.2	0.2
			RTxCLP2	↓	9.14	9.14	8.6	8.6
2			↓	↓	96.31	96.31	3.7	3.7
3	ccv 1244	9/21/11	↓	10.0	10.57	10.57	5.7	5.7
				100	106.95	106.95	7.0	7.0
				10.0	9.70	9.70	3.0	3.0
4			↓	100	100.91	100.91	0.9	0.9

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 20872C

SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: P

2nd reviewer: C

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	RTXCLP2	1.04	0.959573	92	92	0
Decachlorobiphenyl	RTXCLP1	1.04	1.00243	96	96	0
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Notes:

LDC #: 26859C39
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below usir the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration

RPD = I MS - MSD I * 2/(MS + MSD)

MS = Matrix spike percent recovery
MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 12 & 13

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC	0.34	0.34	ND	0.27	0.25	79	79	74	74	8	8
4,4'-DDT	0.71	0.71	10.46	10.32	12.15	-19	-19	238	238	16	16

Comments: Refer ot Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859C39
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: 1
2nd Reviewer: C

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration

RPD = I LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: ICS 13262

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	0.34	NA	0.34	NA	100	100				
4,4'-DDT	0.71	↓	0.76	↓	107	107	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L3a
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Example:

Sample I.D. #1 44-DDE

$$\text{Conc.} = \frac{(25\,925)(20)}{(3.60 \times 10^3)(60)(0.995)}$$

$$= 2.4 \text{ ug/kg}$$

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: January 4, 2012

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
PBLK 18260	Not specified	Decachlorobiphenyl	129 (45-120)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-341-SA5B-SB-9.0-10.0	Aroclor-1254	68.40	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-341-SA5B-SB-9.0-10.0	Aroclor-1254	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L3b **VALIDATION COMPLETENESS WORKSHEET** Date: 01/13/12
SDG #: DE2342 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FF
2nd Reviewer: A

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	%D ≤ 20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS 10
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-030-SA7-SS-0.0-0.5	11	SL-338-SA5B-SB-7.0-8.0	21	PBLK1826O	31	
2	SL-034-SA7-SS-0.0-0.5	12	SL-341-SA5B-SB-4.0-5.0	22		32	
3	SL-035-SA7-SS-0.0-0.5	13	SL-341-SA5B-SB-9.0-10.0	23		33	
4	SL-037-SA7-SS-0.0-0.5	14	SL-342-SA5B-SB-4.0-5.0	24		34	
5	SL-040-SA7-SS-0.0-0.5	15	SL-342-SA5B-SB-9.0-10.0	25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

Notes: _____

LDC #: 26859236
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859L3h

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes___ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	PBLK18260	NS	O	129 (45-120)	J/P det (S)
				( )	
				( )	
	1	↓	↓	151 (↓)	no qual 10x DL
				( )	
				( )	
	10	↓	↓	145 (↓)	no qual 100x DL
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26859L3b

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC / HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 col Finding ≤40	Associated Samples	Qualifications
	AA	68.40	13	J/A det * X111
	AA = Aroclor 1254	GS		

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26859L36
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (20 std)	Recalculated CF (20 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL IP25243	9/20/11	1260-1 (MR-1)	85	85	85	85	8.3	8.3
			1260-1 (MR-2)	46	46	45	45	9.7	9.7
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26559236
SDG #: pw Cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 13:59	9/21/11	Aroclor 1260 MR-1	200	176	176	12	12
			MR-2	↓	190.74	190.74	4.6	4.6
2	CCV 21:31	9/21/11	↓	200	203.14	203.14	1.6	1.6
				↓	219.67	219.67	9.8	9.8
3	CCV 5:19	9/23/11	↓	↓	206.10	206.10	3.1	3.1
					219.88	219.88	9.9	9.9
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859235
SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2 10X

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
#TCMX	MR-1	1.041	0.88918	85	85	0
DCB	MR-2	1.041	0.94859	91	91	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859L3b
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 1826 U

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
PCB-1260	16.67	NA	16.61	NA	100	100				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859235
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 2 Compound Name Aroclor 1260

Concentration = $\frac{72.42}{0.995}$ (final)

= 73 ug/kg

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	1260-4 =	$\frac{13629.37891}{38}\frac{(2000)(10)}{(60)(1000)}$ = 119.55			
			1260-4 =	119.55	
			T =	35.1308	
			6 -	62.5789	
				72.42	

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Boron Calcium Manganese Mercury Phosphorus Strontium Tin	0.683 mg/Kg 11.091 mg/Kg 0.078 mg/Kg 0.007 mg/Kg 0.876 mg/Kg 0.059 mg/Kg 1.701 mg/Kg	All samples in SDG DE242
ICB/CCB	Magnesium	35.6 ug/L	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5
ICB/CCB	Mercury	0.031 ug/L	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5
ICB/CCB	Mercury	0.027 ug/L	SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Mercury	0.034 ug/L	SL-146-SA7-SS-0.0-0.5 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-030-SA7-SS-0.0-0.5	Mercury Tin	0.024 mg/Kg 2.9 mg/Kg	0.024U mg/Kg 2.9U mg/Kg
SL-034-SA7-SS-0.0-0.5	Boron Tin	1.0 mg/Kg 3.0 mg/Kg	1.0U mg/Kg 3.0U mg/Kg
SL-035-SA7-SS-0.0-0.5	Boron Tin	1.5 mg/Kg 3.8 mg/Kg	1.5U mg/Kg 3.8U mg/Kg
SL-037-SA7-SS-0.0-0.5	Mercury Tin	0.023 mg/Kg 2.9 mg/Kg	0.023U mg/Kg 2.9U mg/Kg
SL-040-SA7-SS-0.0-0.5	Mercury Tin	0.015 mg/Kg 3.0 mg/Kg	0.015U mg/Kg 3.0U mg/Kg
SL-041-SA7-SS-0.0-0.5	Mercury Tin	0.0098 mg/Kg 3.0 mg/Kg	0.0098U mg/Kg 3.0U mg/Kg
SL-070-SA7-SS-0.0-0.5	Mercury Tin	0.015 mg/Kg 2.8 mg/Kg	0.015U mg/Kg 2.8U mg/Kg
SL-071-SA7-SS-0.0-0.5	Mercury Tin	0.012 mg/Kg 2.8 mg/Kg	0.012U mg/Kg 2.8U mg/Kg
SL-073-SA7-SS-0.0-0.5	Mercury Tin	0.026 mg/Kg 3.7 mg/Kg	0.026U mg/Kg 3.7U mg/Kg
SL-146-SA7-SS-0.0-0.5	Boron Tin	2.2 mg/Kg 4.5 mg/Kg	2.2U mg/Kg 4.5U mg/Kg
SL-338-SA5B-SB-7.0-8.0	Boron Mercury Tin	3.0 mg/Kg 0.018 mg/Kg 2.3 mg/Kg	3.0U mg/Kg 0.018U mg/Kg 2.3U mg/Kg
SL-341-SA5B-SB-4.0-5.0	Mercury Tin	0.024 mg/Kg 3.0 mg/Kg	0.024U mg/Kg 3.0U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-341-SA5B-SB-9.0-10.0	Tin	3.0 mg/Kg	3.0U mg/Kg
SL-342-SA5B-SB-4.0-5.0	Mercury Tin	0.027 mg/Kg 3.0 mg/Kg	0.027U mg/Kg 3.0U mg/Kg
SL-342-SA5B-SB-9.0-10.0	Mercury Tin	0.018 mg/Kg 3.1 mg/Kg	0.018U mg/Kg 3.1U mg/Kg

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-050-SA6-SB-1.0-2.0MS/D (All samples in SDG DE242)	Antimony	66 (75-125)	70 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-050-SA6-SB-1.0-2.0MS/D (All samples in SDG DE242)	Beryllium	-	135 (75-125)	-	J (all detects)	A
	Cadmium	134 (75-125)	149 (75-125)	-	J (all detects)	
	Chromium	-	131 (75-125)	-	J (all detects)	
	Cobalt	128 (75-125)	142 (75-125)	-	J (all detects)	
	Copper	-	144 (75-125)	-	J (all detects)	
	Lead	-	153 (75-125)	-	J (all detects)	
	Molybdenum	135 (75-125)	147 (75-125)	-	J (all detects)	
	Nickel	-	149 (75-125)	-	J (all detects)	
	Selenium	-	145 (75-125)	-	J (all detects)	
	Silver	131 (75-125)	144 (75-125)	-	J (all detects)	
	Thallium	-	136 (75-125)	-	J (all detects)	

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-050-SA6-SB-1.0-2.0	Barium Cobalt Lead Zinc	12 (≤10) 13 (≤10) 12 (≤10) 11 (≤10)	All samples in SDG DE242	J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE242	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE242

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Silver Thallium	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	Barium Cobalt Lead Zinc	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE242

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE242	SL-030-SA7-SS-0.0-0.5	Mercury Tin	0.024U mg/Kg 2.9U mg/Kg	A	B
DE242	SL-034-SA7-SS-0.0-0.5	Boron Tin	1.0U mg/Kg 3.0U mg/Kg	A	B
DE242	SL-035-SA7-SS-0.0-0.5	Boron Tin	1.5U mg/Kg 3.8U mg/Kg	A	B
DE242	SL-037-SA7-SS-0.0-0.5	Mercury Tin	0.023U mg/Kg 2.9U mg/Kg	A	B
DE242	SL-040-SA7-SS-0.0-0.5	Mercury Tin	0.015U mg/Kg 3.0U mg/Kg	A	B
DE242	SL-041-SA7-SS-0.0-0.5	Mercury Tin	0.0098U mg/Kg 3.0U mg/Kg	A	B
DE242	SL-070-SA7-SS-0.0-0.5	Mercury Tin	0.015U mg/Kg 2.8U mg/Kg	A	B
DE242	SL-071-SA7-SS-0.0-0.5	Mercury Tin	0.012U mg/Kg 2.8U mg/Kg	A	B
DE242	SL-073-SA7-SS-0.0-0.5	Mercury Tin	0.026U mg/Kg 3.7U mg/Kg	A	B
DE242	SL-146-SA7-SS-0.0-0.5	Boron Tin	2.2U mg/Kg 4.5U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE242	SL-338-SA5B-SB-7.0-8.0	Boron Mercury Tin	3.0U mg/Kg 0.018U mg/Kg 2.3U mg/Kg	A	B
DE242	SL-341-SA5B-SB-4.0-5.0	Mercury Tin	0.024U mg/Kg 3.0U mg/Kg	A	B
DE242	SL-341-SA5B-SB-9.0-10.0	Tin	3.0U mg/Kg	A	B
DE242	SL-342-SA5B-SB-4.0-5.0	Mercury Tin	0.027U mg/Kg 3.0U mg/Kg	A	B
DE242	SL-342-SA5B-SB-9.0-10.0	Mercury Tin	0.018U mg/Kg 3.1U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L4

SDG #: DE242

Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 12-23-11

Page: 1 of

Reviewer: OZ

2nd Reviewer: ✓

METHOD: Metals (EPA SW 846 Method 6010B/6020~~A~~/~~7000~~ 7471A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/13/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	SW	
VI.	Matrix Spike Analysis	SW	~~Client specified~~ ✓ from Sng DE241
VII.	Duplicate Sample Analysis	~~N~~ A	✓
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	~~SW~~ N	~~Not utilized~~ ✓ Not Utilized
XI.	ICP Serial Dilution	SW	~~Not performed~~
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-030-SA7-SS-0.0-0.5	11	SL-338-SA5B-SB-7.0-8.0	21	MB	31	
2	SL-034-SA7-SS-0.0-0.5	12	SL-341-SA5B-SB-4.0-5.0	22		32	
3	SL-035-SA7-SS-0.0-0.5	13	SL-341-SA5B-SB-9.0-10.0	23		33	
4	SL-037-SA7-SS-0.0-0.5	14	SL-342-SA5B-SB-4.0-5.0	24		34	
5	SL-040-SA7-SS-0.0-0.5	15	SL-342-SA5B-SB-9.0-10.0	25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

Notes:

LDC #: 26659L4

VALIDATION FINDINGS CHECKLIST

Reviewer: GB
2nd Reviewer: W

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓	✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓		✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓		✓	
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26859L4

VALIDATION FINDINGS CHECKLIST

Reviewer: ER
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?				✓
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?		✓		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data	✓			
Overall assessment of data was found to be acceptable.				
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks		✓		
Field blanks were identified in this SDG.			✓	
Target analytes were detected in the field blanks.				

LDC #: 26859 V 4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: V

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-15		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
Analysis Method		
ICP		Al, B, Ca, Fe, Li, Mg, Mn, P, K, Na, Sr, Sn, Ti, Zr
ICP-MS		Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn

Comments: Mercury by CVAA if performed

LDC #: 26859L4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reason 13

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 100x (Hg=167x)
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: All

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	0.683			3.415		1.0	1.5							2.2	3.0				
Ca	11.091			55.46															
Mn	0.078			0.39															
Hg	0.007			0.04	0.024			0.023	0.015	0.0098	0.015	0.012	0.026		0.018	0.024		0.027	0.018
P	0.876			4.38															
Sr	0.059			0.295															
Sn	1.701			8.505	2.9	3.0	3.8	2.9	3.0	3.0	2.8	2.8	3.7	4.5	2.3	3.0	3.0	3.0	3.1

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-6

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	NO Qual									
Mg			35.6	17.8										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1, 2

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1									
Hg			0.031	0.03	See PB									

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 3-9, 11, 12

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	5	6	7	8	11					
Hg			0.027	0.02	See PB	See PB	See PB	See PB	See PB					

LDC #: 26859L4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: GR
2nd Reviewer: M

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Sample Concentration units, unless otherwise noted: mg/Kg

Soil preparation factor applied: 100x (Hg=167x)
Associated Samples: 10, 13-15

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	14	15								
Hg			0.034	0.03	See PB	See PB								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 26859C4

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were ICP interference check samples performed as required?
Y N N/A Were the AB solution percent recoveries (%R) within the control limits of 80-120% ?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	ICS Identification	Analyte	Finding (mg/L)	Associated Samples	Qualifications
	9/22/11	ICSA (12:53/15:17)	Mn	3 (<0.36)	1-3, 7-11, 14, 15	No Qual (>10x)

Comments:

LDC #: 26854L4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: VK
2nd Reviewer: 9

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

(Y) N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
1	SL-050-SA6	Soil	Sb	66	70		All	J/nJ/A (A)
	-SB-1.0-2.0		Be		135			J/A
			Cd	134	149			
			Cr		131			
			Co	128	142			
			Cu		147			
			Pb		153			
			Mo	135	147			
			Ni		149			
			Se		145			
			Ag	131	144			
			Tl		136			

Comments:

LDC #: 76859L4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?
(X) N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits) ≤10	Associated Samples	Qualifications
1		SL-050-SA6	Soil	Ba	12	All	J/NJ/A (A)
		-SB-10-20		Co	13	↓	↓
				Pb	12		
				Zn	11		

Comments: _____

SDILICPMS.wpd

LDC #: 26859C4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Fe	29343.12	30000	97.8	97.8	Y
↓	ICP/MS (Initial calibration)	Mo	50.12	50	100.2	100.2	↓
↓	CVAA (Initial calibration)	Hg	2.41	2.5	96.4	96.4	
CCV	ICP (Continuing calibration)	Sr	489.27	500	97.9	97.9	
↓	ICP/MS (Continuing calibration)	Se	25.89	25	103.6	103.6	
↓	CVAA (Continuing calibration)	Hg	0.95	1	95	95	↓
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: QR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Ni	20.1	20	100.5	100.5	Y
LCS	Laboratory control sample	P	1062.7	1000	106	106	
SL-050-SA6 SB 10-20	Matrix spike	Cr	(SSR-SR) 9.9192	10.107	98	98	
	Duplicate	Ba	104.79	110.77	6	6	
	ICP serial dilution	V	217	216	4	4	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #:26859 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 2
Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Ti were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{100\,mL\,(12.54757\,mg/L)\,\cancel{F}}{0.995\,(1.01\,g)} = 1249\,mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	1	Al	14600	14600	Y
		Sb	0.23	0.23	
		As	5.1	5.1	
		Ba	96.9	96.9	
		Be	0.61	0.61	
		B	4.2	4.2	
		Cd	0.22	0.22	
		Ca	3080	3080	
		Cr	17.1	17.1	
		Co	5.9	5.9	
		Cu	9.3	9.3	
		Fe	18100	18100	
		Pb	17.1	17.1	
		Li	23.9	23.9	
		Mg	4110	4110	
		Mn	263	263	
		Hg	0.024	0.024	
		Mo	0.63	0.63	
		Ni	11.0	11.0	
		P	439	439	
		K	3300	3300	
		Se	0.21	0.21	
		Ag	0.028	0.028	
		Na	75.3	75.3	
		Sr	17.9	17.9	

LDC #:26859 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$\frac{100\,mL\,(0.01054\,mg/L)}{\cancel{0.1}\,1.0\,(1.0\,kg)} = 1.0\,mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	1	Tl	0.27	0.27	Y
		Sn	2.9	2.9	
		Ti	1250	1250	
		V	35.9	35.9	
		Zn	84.2	84.2	
		Zr	2.7	2.7	
	2	Al	11300	11300	Y
		Sb	0.34	0.34	
		As	4.4	4.4	
		Ba	98.1	98.1	
		Be	0.46	0.46	
		B	1.0	1.0	
		Cd	0.44	0.44	
		Ca	3920	3920	
		Cr	47.9	47.9	
		Co	6.3	6.3	
		Cu	13.8	13.8	
		Fe	18900	18900	
		Pb	26.4	26.4	
		Li	22.4	22.4	
		Mg	4200	4200	
		Mn	257	257	
		Hg	0.089	0.089	
		Mo	1.2	1.2	
		Ni	33.0	33.0	

LDC #:26859 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CR
2nd reviewer: V

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

see previous page

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	2	P	445	445	Y
		K	3920	3920	
		Se	0.11	0.11	
		Ag	0.058	0.058	
		Na	157	157	
		Sr	12.3	12.3	
		Tl	0.25	0.25	
		Sn	3.0	3.0	
		Ti	1220	1220	
		V	38.2	38.2	
		Zn	135	135	
		Zr	2.9	2.9	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Herbicides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-030-SA7-SS-0.0-0.5MS
SL-030-SA7-SS-0.0-0.5MSD

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No herbicide contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for sample SL-040-SA7-SS-0.0-0.5. Since the sample was diluted out, no data were qualified.

VI. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-030-SA7-SS-0.0-0.5MS/MSD (SL-030-SA7-SS-0.0-0.5)	MCPA 2,4-D 2,4,5-T	- - 375 (10-156)	- - -	69 (≤50) 46 (≤35) 176 (≤35)	J (all detects) J (all detects) J (all detects)	A
SL-030-SA7-SS-0.0-0.5MS/MSD (SL-030-SA7-SS-0.0-0.5)	2,4,5-TP Dinoseb	14 (24-141) 6 (10-46)	- 6 (10-46)	133 (≤35) -	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LCS 24258	Dicamba	148 (54-121)	All samples in SDG DE242	J (all detects)	P

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-035-SA7-SS-0.0-0.5	2,4-DB	97	J (all detects)	A
SL-037-SA7-SS-0.0-0.5	MCPP 2,4,5-T	47 81	J (all detects) J (all detects)	A
SL-071-SA7-SS-0.0-0.5	Dicamba	75	J (all detects)	A
SL-146-SA7-SS-0.0-0.5	2,4,5-T	76	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Herbicides - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5	MCPA 2,4-D 2,4,5-T	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	2,4,5-TP	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE242	SL-030-SA7-SS-0.0-0.5	Dinoseb	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5	Dicamba	J (all detects)	P	Laboratory control samples (%R) (L)
DE242	SL-035-SA7-SS-0.0-0.5	2,4-DB	J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-037-SA7-SS-0.0-0.5	MCPP 2,4,5-T	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-071-SA7-SS-0.0-0.5	Dicamba	J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-146-SA7-SS-0.0-0.5	2,4,5-T	J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L5 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 6f 7
Laboratory: Lancaster Laboratories Reviewer: F
2nd Reviewer:

METHOD: GC Herbicides (EPA SW 846 Method 8151A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	SW	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-030-SA7-SS-0.0-0.5	11	#1 MS	21	PBLK24458	31	
2	SL-034-SA7-SS-0.0-0.5	12	#1 MSD	22		32	
3	SL-035-SA7-SS-0.0-0.5	13		23		33	
4	SL-037-SA7-SS-0.0-0.5	14		24		34	
5	SL-040-SA7-SS-0.0-0.5	15		25		35	
6	SL-041-SA7-SS-0.0-0.5	16		26		36	
7	SL-070-SA7-SS-0.0-0.5	17		27		37	
8	SL-071-SA7-SS-0.0-0.5	18		28		38	
9	SL-073-SA7-SS-0.0-0.5	19		29		39	
10	SL-146-SA7-SS-0.0-0.5	20		30		40	

Notes:

LDC #: 26895b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FI
2nd Reviewer:

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L5
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141(Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2,4,6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

LDC #: 26839L5
SDG #: pw comp

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: A
2nd Reviewer: A

METHOD: __ GC __ HPLC

Are surrogates required by the method? Yes___ or No___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	~~4~~ 5	NS	2,4-Q	163 (36-156)	no qual 25x PL
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26859L5
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FJ
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	11 of 12	MCPA	( )	( )	69 (50)	# 1 (6)	J/A det
		2,4-D	( )	( )	46 (35)		#
		2,4,5-TP	14 (24-141)	( )	133 (35)		J/UJ/A
		2,4,5-T	375 (10-156)	( )	176 (35)		J/A det
		dinoseb	6 (10-46)	6 (10-46)	( )		J/UJ/A
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26859L5
SDG #: no cover
METHOD: / GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS 24258	Dicamba	148 (54-121)	( )	( )	All	J / Pdet (L)
		&	( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
		Dicamba = (G)	( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26859L5
SDG #: re cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: D
2nd Reviewer: C

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?
Y N N/A Did the percent difference of detected compounds between two columns./detectors ≤40%?
If no, please see findings bellow.

#	Compound Name	Sample ID	%RPD Between Two Columns/Detectors Limit (≤ 40%)	Qualifications
	2,4-DB	3	97	J/A det * IX
	MCPP	4	~~47~~ 47	↓
	2,4,5-T		81	
	Dicamba	8	75	↓
	2,4,5-T	10	76	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26859L5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported CF (std)	Recalculated CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-ZB-XLB	9/19/11	2,4-DB ZB-XLB	6.99×10^{-2}	6.99×10^{-2}	6.97×10^{-2}	6.97×10^{-2}	6.6	6.6
			Dinoseb	3.61×10^{-1}	3.61×10^{-1}	4.11×10^{-1}	4.11×10^{-1}	17.8	17.8
2			ZB-35	8.52×10^{-2}	8.52×10^{-2}	8.6×10^{-2}	8.6×10^{-2}	13.2	13.2
				3.79×10^{-1}	3.79×10^{-1}	4.32×10^{-1}	4.32×10^{-1}	19.5	19.5
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L5
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC / HPLC

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 22:00	9/19/11	2,4-DB ZB-XLB	200.60	195.62	195.62	2.5	2.5
			Dinoseb	100.70	88.76	88.76	11.9	11.9
			ZB-35	↓	195.55	195.55	2.5	2.5
2			↓	↓	89.74	89.74	10.9	10.9
	CCV 3:29	9/20/11	↓ ZB-XLB	200.6	215.33	215.33	7.3	7.3
			↓	100.70	86.02	86.02	14.6	14.6
3			ZB-35	↓	200.16	200.16	0.2	0.2
			↓	↓	86.78	86.78	13.8	13.8
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L5
SDG #: see cover
METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4-DCAA	DB-XLB	6.641	6.116769	92	92	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859L5
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: # 11, 12

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Dalapon	20.81	20.81	ND	17.78	14.07	85	85	68	68	23	23
Dicamba	0.83	0.83	ND	0.79	0.61	95	95	73	73	26	26

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L5
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 2425B

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Dalapon	20.88	NA	12.48	NA	60	6.0				
Dicamba	0.83	↓	1.23	↓	148	148	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 3 Compound Name 2, 4-DB

Concentration = $\frac{2183\ (2)\ (100)}{39514\ (6.97 \times 10^{-2})\ (60)\ (0.995)}$

2.7 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: January 5, 2012

Matrix: Soil

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-034-SA7-SS-0.0-0.5
SL-035-SA7-SS-0.0-0.5
SL-037-SA7-SS-0.0-0.5
SL-040-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0
SL-034-SA7-SS-0.0-0.5MS
SL-034-SA7-SS-0.0-0.5DUP
SL-041-SA7-SS-0.0-0.5MS
SL-041-SA7-SS-0.0-0.5DUP
SL-338-SA5B-SB-7.0-8.0MS
SL-338-SA5B-SB-7.0-8.0DUP
SL-341-SA5B-SB-4.0-5.0MS
SL-341-SA5B-SB-4.0-5.0DUP

Introduction

This data review covers 23 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE242	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE242

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-034-SA7-SS-0.0-0.5 SL-035-SA7-SS-0.0-0.5 SL-037-SA7-SS-0.0-0.5 SL-040-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L6
SDG #: DE242
Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 1/4/12
Page: 1 of 1
Reviewer: W
2nd Reviewer: A

METHOD: (Analyte) Cyanide (EPA SW846 Method 9012B), Nitrate-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	3MS/Dup
V	Duplicates	A	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-030-SA7-SS-0.0-0.5	11	SL-338-SA5B-SB-7.0-8.0	21	#11 Dup	31	MB
2	SL-034-SA7-SS-0.0-0.5	12	SL-341-SA5B-SB-4.0-5.0	22	#12 MS	32	
3	SL-035-SA7-SS-0.0-0.5	13	SL-341-SA5B-SB-9.0-10.0	23	↓ Dup	33	
4	SL-037-SA7-SS-0.0-0.5	14	SL-342-SA5B-SB-4.0-5.0	24		34	
5	SL-040-SA7-SS-0.0-0.5	15	SL-342-SA5B-SB-9.0-10.0	25		35	
6	SL-041-SA7-SS-0.0-0.5	16	#2 MS	26		36	
7	SL-070-SA7-SS-0.0-0.5	17	↓ Dup	27		37	
8	SL-071-SA7-SS-0.0-0.5	18	#6 MS	28		38	
9	SL-073-SA7-SS-0.0-0.5	19	↓ Dup	29		39	
10	SL-146-SA7-SS-0.0-0.5	20	#11 MS	30		40	

Notes:

LDC #: 26859L6

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: LW
2nd Reviewer: [illegible]

Method: Inorganics (EPA Method See Cover

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26859 6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: A

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
L-15	Soil	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
11-15	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
16,17	Soil	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
18,19	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
20,21		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
22,23		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments: _____

LDC #: 26859L6

Validatin Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Reviewer: VL
2nd Reviewer: C

Method: Inorganics, Method See cover

The correlation coefficient (r) for the calibration of F was recalculated. Calibration date: 9/12/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	F	s1	0.1	0.019939	*0.9972*	0.9972	Y
		s2	0.4	0.094313			
		s3	1	0.203237			
		s4	2	0.416888			
		s5	3	0.667727			
CCV Calibration verification	CN	0.15	0.155		102	102	Y
CCV Calibration verification	Gbt	200	188		94	94	↓
CCV Calibration verification	clay	100	106.5		107	106	↓

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76859L6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

RPD = |S-D| / (S+D)/2 x 100 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Cr	4.07	5	81.4	MR	Y
18	Matrix spike sample	Cr	(SSR-SR) 477	500	95	95	↓
22	Duplicate sample	Cr	1.1	1.1	9	9	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: Inorganics, Method See below

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Have results been reported and calculated correctly?
N N/A Are results within the calibrated range of the instruments?
N N/A Are all detection limits below the CRQL?

Compound (analyte) results for 1, 11 reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

#11 F: $\frac{(0.021 + 0.053) \times 0.052}{0.2198 \times 4.98\ g \times 0.95} = 0.00126\ mg/g = 1.26\ mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	1	F	1.1	1.10	Y
2	11	F	1.3	1.3	Y
		NO3	1.1	1.1	
3	3	Cl	0.46	0.46	Y

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0
TB-091311
SL-338-SA5B-SB-7.0-8.0MS
SL-338-SA5B-SB-7.0-8.0MSD

Introduction

This data review covers 7 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

Sample TB-091311 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-338-SA5B-SB-7.0-8.0MS/MSD (SL-338-SA5B-SB-7.0-8.0)	TPH as gasoline	-	121 (39-118)	-	J (all detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-338-SA5B-SB-7.0-8.0	TPH as gasoline	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE242	SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0 TB-091311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L7 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	LCS ID
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	TB = 6

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Soil + water

1 1	SL-338-SA5B-SB-7.0-8.0 S	11 1	BLK12	21		31	
2 1	SL-341-SA5B-SB-4.0-5.0	12 3	BLK10	22		32	
3 1	SL-341-SA5B-SB-9.0-10.0	13 2	BLK07	23		33	
4 1	SL-342-SA5B-SB-4.0-5.0	14		24		34	
5 1	SL-342-SA5B-SB-9.0-10.0	15		25		35	
6 2	TB-091311 W	16		26		36	
7 3	#1 MS	17		27		37	
8 3	#1 MSD	18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 26859L7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?				
XII. System performance	✓			
System performance was found to be acceptable.				
XIII. Overall assessment of data	✓			
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26859L7
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: / GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	7+8	gasoline	( )	12 (39-118	( )	1	J/A det (Q
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 26859L7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC_____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (550 std)	Recalculated CF (550 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	7/21/11	GRO	7092	7092	6764	6764	8.0	8.0
				(220)	(220)				
2	ICAL	8/2/11	GRO	31057	31057	32127	32127	8.5	8.5
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859Z7
SDG #: w Conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 20:50	9/19/11	GRO	550.00	558.99	558.99	1.6	1.6
	CCV 10:10	9/21/11	GRO	220.00	204.09	204.09	7.2	7.2
2								
	CCV 1957	9/21/11	GRO	220.00	198.84	198.84	9.6	9.6
3	CCV 2:37	9/22/11	GRO	220.00	207.22	207.22	5.8	5.8
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859C7
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TFT	NS	810.39	822.5145	102	102	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859Z7
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 7+8

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	10.98	10.98	ND	12.98	1373	118	118	121	121	6	6
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
g											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L7
SDG #: all cases

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FD
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCSY4

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Gas C5-C12	11	NA	8.21	NA	75	75	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-037-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0
SL-037-SA7-SS-0.0-0.5MS
SL-037-SA7-SS-0.0-0.5MSD

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-071-SA7-SS-0.0-0.5	Chlorobenzene Ortho-Terphenyl	15 (37-125) 18 (47-145)	All TCL compounds	J (all detects) UJ (all non-detects)	A

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since the samples were diluted out, no data were qualified.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-071-SA7-SS-0.0-0.5	All TCL compounds	J (all detects) UJ (all non-detects)	A	Surrogate recovery (%R) (S)
DE242	SL-037-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L8 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-037-SA7-SS-0.0-0.5	11	PBLK01264	21		31	
2	SL-041-SA7-SS-0.0-0.5	12	#1 MS	22		32	
3	SL-070-SA7-SS-0.0-0.5	13	#1 MSD	23		33	
4	SL-071-SA7-SS-0.0-0.5	14		24		34	
5	SL-073-SA7-SS-0.0-0.5	15		25		35	
6	SL-338-SA5B-SB-7.0-8.0	16		26		36	
7	SL-341-SA5B-SB-4.0-5.0	17		27		37	
8	SL-341-SA5B-SB-9.0-10.0	18		28		38	
9	SL-342-SA5B-SB-4.0-5.0	19		29		39	
10	SL-342-SA5B-SB-9.0-10.0	20		30		40	

Notes: _____

LDC #: 26859L8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	.	✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	✓			
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859L8
SDG #: per cover

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC
Are surrogates required by the method? Yes___ or No___.
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Were surrogates spiked into all samples and blanks?
Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	4	NS	A	15 (37-125)	J/UJ/A (S)
			H	18 (47-145)	✓ ✓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26859A8
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: [illegible]
2nd Reviewer: A

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	12 & 13	general	% (R +)	% RPD outside limits		1	MS qual //10x DL
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26859Z8
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (28 std)	Recalculated CF (28 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/13/11	C8 - C40	22403	22403	22854	22854	2.3	2.3
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76859L8
SDG #: w conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 14:06	9/22/11	C8-C40	576.00	521.27	521.27	9.5	9.5
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26857A8
SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
chlorobenzene	NS	1.0	0.672572	67	67	0
o-terphenyl	↓	1.0	0.808229	81	81	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26892 8
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: EZ
2nd Reviewer:

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 12 ✓ 13

Compound	Spike Added (mg/kg)		Sample Conc. mg/kg	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (~~C8-C44~~) C30-C40	2.51	2.51	231.78	273.08	312.07	164 5	164 5	3199	3199	13	13

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L8
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 01264

Compound	Spike Added (mg/Kg)		Spiked Sample Concentration (mg/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
EFH (C30-C40)	2.51	NA	2.22	NA	ss	ss				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 2685928
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name C30-C40

Concentration = $\frac{(31782673)(1000)(10)}{(\cancel{576}\ 22854)(60)(0.993)(1000)}$

= 233 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0
SL-338-SA5B-SB-7.0-8.0MS
SL-338-SA5B-SB-7.0-8.0MSD

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Explosives - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Explosives - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L40 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS 1/0
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: 80/L

1	SL-338-SA5B-SB-7.0-8.0	11	#1 MS	21		31	
2	SL-341-SA5B-SB-4.0-5.0	12	#1 MSD	22		32	
3	SL-341-SA5B-SB-9.0-10.0	13		23		33	
4	SL-342-SA5B-SB-4.0-5.0	14		24		34	
5	SL-342-SA5B-SB-9.0-10.0	15	P1B2K25264	25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 26859L4U
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FJ
2nd Reviewer: [illegible]

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓	✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L4U
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859L4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC _____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				SDG 5 CF (std)	SDG 5 CF (std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL chrompack	8/26/11	1,3,5-TNB	2.09×10^2	2.09×10^2	2.12×10^2	2.12×10^2	1.4	1.4
			2,6-DNT	1.29×10^2	1.29×10^2	1.29×10^2	1.29×10^2	3.7	3.7
2	Capcell	8/26/11	1,3,5-TNB	3.63×10^2	3.63×10^2	3.53×10^2	3.53×10^2	9.5	9.5
			2,4-DNT	~~3.53×10^2~~ 2.64×10^2	2.64×10^2	~~3.53×10^2~~ 2.48×10^2	2.48×10^2	~~9.5~~ 16.5	16.5
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L4U
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC_____HPLC✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 20:4	9/23/11	1,3,5-TNB	500.50	487.52	487.52	2.6	2.6
	chrompack		2,6-DNT	500.50	501.11	501.11	0.1	0.1
2	CCV 5:10	9/24/11	↓	1001.00	1001.03	1001.03	0	0
	chrompack		↓	1001.00	1019.05	1019.05	1.8	1.8
3	CCV 20:4	9/23/11	1,3,5-TNB	500.50	485.32	485.32	3.0	3.0
	Capell		2,4-DNT	501.50	515.25	515.25	2.7	2.7
4	CCV 5:10	9/24/11	↓	1001.00	1029.80	1029.80	2.9	2.9
	Capell		↓	1003.00	1013.76	1013.76	1.1	1.1

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 46837L40
SDG #: see cover

METHOD: ___ GC _/_ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
2-Nitro-m-xylene	Chrompack	2000.0	2278.80786	114	114	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: 26857L4U
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ
2nd Reviewer:

METHOD: __ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 11 & 12

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)	2000	2000	ND	1878.92	1833.06	91	91	92	92	0	0
2,4,6-Trinitrotoluene (8330)	1999.2	1999.2	ND	2068.95	2067.25	103	103	103	103	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 25264

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000	NA	1831.67	NA	92	92				
2,4,6-Trinitrotoluene (8330)	1999.2	↓	2106.32	↓	105	105	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L4U
SDG #: MU power

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MP
2nd Reviewer: C

METHOD: __ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

MP

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Terphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-037-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 10 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No terphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Terphenyls - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-037-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L41 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/24/11

SDG #: DE242 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: FT

2nd Reviewer: A

METHOD: GC Terphenyls (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/RRL	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-037-SA7-SS-0.0-0.5	11	PBLK32258	21		31	
2	SL-041-SA7-SS-0.0-0.5	12		22		32	
3	SL-070-SA7-SS-0.0-0.5	13		23		33	
4	SL-071-SA7-SS-0.0-0.5	14		24		34	
5	SL-073-SA7-SS-0.0-0.5	15		25		35	
6	SL-338-SA5B-SB-7.0-8.0	16		26		36	
7	SL-341-SA5B-SB-4.0-5.0	17		27		37	
8	SL-341-SA5B-SB-9.0-10.0	18		28		38	
9	SL-342-SA5B-SB-4.0-5.0	19		29		39	
10	SL-342-SA5B-SB-9.0-10.0	20		30		40	

Notes:

LDC #: 26859L41
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FP
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L4 1
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859L4/

SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1

Reviewer: FJ

2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

Level 3

#	Standard ID	Calibration Date	Compound	Reported 16.994 CF (std)	Recalculated 16.994 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	~~m-Terphenyl~~ ICAL	9/18/11	m-Terphenyl	2.52×10^4	2.52×10^4	2.55×10^4	2.55×10^4	5.3	5.3
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L41
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 2:01	9/20/11	m-Terphenyl	33.99	33.92	33.92	0.2	0.2
	CCV 6:05	↓	↓	33.99	34.95	34.95	2.8	2.8
2								
	CCV 10:10	9/20/11	↓	33.99	37.48	37.48	10.3	10.3
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L4/
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n-Triacontane -d62	NS	0.3326	0.302697	91	91	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859L41
SDG #: all cases

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 3225B

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
m-Terphenyl	1.65	NA	1.57	NA	95	95	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L41
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-037-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0
SL-037-SA7-SS-0.0-0.5MS
SL-037-SA7-SS-0.0-0.5MSD

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-041-SA7-SS-0.0-0.5	Methanol	60	J (all detects)	A
SL-070-SA7-SS-0.0-0.5	Methanol Isopropanol	77 58	J (all detects) J (all detects)	A
SL-338-SA5B-SB-7.0-8.0	Methanol	94	J (all detects)	A
SL-341-SA5B-SB-4.0-5.0	Methanol	52	J (all detects)	A
SL-341-SA5B-SB-9.0-10.0	Methanol	62	J (all detects)	A
SL-342-SA5B-SB-4.0-5.0	Methanol	80	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-041-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0	Methanol	J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-070-SA7-SS-0.0-0.5	Methanol Isopropanol	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE242	SL-037-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L43 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/28/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FF
2nd Reviewer:

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-037-SA7-SS-0.0-0.5	11	#/MS	21	PBLK 37257	31	
2	SL-041-SA7-SS-0.0-0.5	12	#/MSD	22	PBLK 25260	32	
3	SL-070-SA7-SS-0.0-0.5	13		23		33	
4	SL-071-SA7-SS-0.0-0.5	14		24		34	
5	SL-073-SA7-SS-0.0-0.5	15		25		35	
6	SL-338-SA5B-SB-7.0-8.0	16		26		36	
7	SL-341-SA5B-SB-4.0-5.0	17		27		37	
8	SL-341-SA5B-SB-9.0-10.0	18		28		38	
9	SL-342-SA5B-SB-4.0-5.0	19		29		39	
10	SL-342-SA5B-SB-9.0-10.0	20		30		40	

Notes:

LDC #: 26859L43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: F
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859243
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 col Finding ≤ 40	Associated Samples	Qualifications
	methanol	60	2	J/Adet * IX
	methanol	77	3	↓
	isopropanol	58		
	methanol	94	6	↓
	methanol	52	7	↓
	↓	62	8	↓
	↓	80	9	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26859L43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: A

METHOD: GC _____ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (5000std)	Recalculated CF (5000std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL IM27235	8/23/11	methanol	4.99×10^{-1}	4.99×10^{-1}	5.19×10^{-1}	5.19×10^{-1}	6.3	6.3
2	ICAL IM27241A	8/09/11	methanol	7.22×10^{0}	7.22×10^{0}	7.75×10^{0}	7.75×10^{0}	4.4	4.4
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L43
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 17:38	9/15/11	methanol	5000.00	5255.58	5255.58	5.1	5.1
2	CCV 17:05	9/19/11	methanol	5000.00	4697.35	4697.35	6.1	6.1
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L43
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Acetone	NS	2500	2480 17334	99	99	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859L43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; MS = Matrix spike; SC = Sample concentration; MSD = Matrix spike duplicate

MS/MSD samples: 11 & 12

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
~~Gasoline~~ Methanol (8015)	2500	2500	ND	280304	2697.39	112	112	108	108	4	4
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859C43
SDG #: pre cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS37257

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Methanol ~~Gasoline~~ (8015)	2500	NA	2415.22	NA	97	97	NA			
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859C43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name Isopropanol

Concentration = $\frac{133 \quad (5)}{6.25 \times 10^{-1} \quad (10) \quad (0.993)}$

= ~~[illegible]~~ 107.15 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 13, 2011
LDC Report Date:	December 28, 2011
Matrix:	Soil
Parameters:	Glycols
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE242

Sample Identification

SL-037-SA7-SS-0.0-0.5
SL-041-SA7-SS-0.0-0.5
SL-070-SA7-SS-0.0-0.5
SL-071-SA7-SS-0.0-0.5
SL-073-SA7-SS-0.0-0.5
SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 10 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-037-SA7-SS-0.0-0.5 SL-041-SA7-SS-0.0-0.5 SL-070-SA7-SS-0.0-0.5 SL-071-SA7-SS-0.0-0.5 SL-073-SA7-SS-0.0-0.5 SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L45 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Glycols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-037-SA7-SS-0.0-0.5	11	PBLK09262	21		31	
2	SL-041-SA7-SS-0.0-0.5	12		22		32	
3	SL-070-SA7-SS-0.0-0.5	13		23		33	
4	SL-071-SA7-SS-0.0-0.5	14		24		34	
5	SL-073-SA7-SS-0.0-0.5	15		25		35	
6	SL-338-SA5B-SB-7.0-8.0	16		26		36	
7	SL-341-SA5B-SB-4.0-5.0	17		27		37	
8	SL-341-SA5B-SB-9.0-10.0	18		28		38	
9	SL-342-SA5B-SB-4.0-5.0	19		29		39	
10	SL-342-SA5B-SB-9.0-10.0	20		30		40	

Notes: _____

LDC #: 26859L45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26839L45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FR
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859245
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: PJ
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				105.359 CF (std)	105359 CF (std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	8/22/11	Propylene glycol	8.01×10^2	8.01×10^2	8.04×10^2	8.04×10^2	3.1	3.1
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76859L45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 8:24	9/20/11	propylene glycol	105.36	100.93	100.93	4.2	4.2
	CCV 12:15	9/20/11	↓	↓	96.09	96.09	8.8	8.8
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L45
SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetramethylene Glycol	NS	195.75	144.26895	74	74	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859Z4T
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: FD
2nd Reviewer:

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS0926Z

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
~~Gasoline~~ Ethylene glycol (8015)	194.73	NA	164.73	NA	85	85	NA			
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859245
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name ND

Concentration =_____

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 13, 2011

LDC Report Date: December 28, 2011

Matrix: Soil

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE242

Sample Identification

SL-338-SA5B-SB-7.0-8.0
SL-341-SA5B-SB-4.0-5.0
SL-341-SA5B-SB-9.0-10.0
SL-342-SA5B-SB-4.0-5.0
SL-342-SA5B-SB-9.0-10.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-338-SA5B-SB-7.0-8.0 SL-341-SA5B-SB-4.0-5.0 SL-341-SA5B-SB-9.0-10.0 SL-342-SA5B-SB-4.0-5.0 SL-342-SA5B-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L71 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/26/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II	Initial calibration	A	%D RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
SOIL

1	SL-338-SA5B-SB-7.0-8.0	11	PBLK04262	21		31	
2	SL-341-SA5B-SB-4.0-5.0	12		22		32	
3	SL-341-SA5B-SB-9.0-10.0	13		23		33	
4	SL-342-SA5B-SB-4.0-5.0	14		24		34	
5	SL-342-SA5B-SB-9.0-10.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26859L7 1
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FI
2nd Reviewer: C

Method: GC / HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26859L71
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26859L71
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC [illegible] HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				2002.0 CF (std)	2002.0 CF (std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	9/21/11	Formaldehyde	5.67X10'	5.67x10'	5.58 X10'	5.58 X10'	3.1	3.1
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859271
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC V HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv 19:38	9/21/11	Formaldehyde	202.00	242.54	242.54	7-U	7-U
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26839L11
SDG #: see cover

METHOD: __ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Bntyraldehyde	NS	198.62	3368.746 / 2	85	85	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26859L71
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS04262

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde	5025	NA	5412.95	NA	108	108	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859271
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #2 Compound Name Formaldehyde

Concentration = $\frac{(246490)\ (20)\ (0.1)}{(5.58 \times 10^{1})(20)\ (0.886)}$

= 4985.7 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 13, 2011
LDC Report Date:	December 28, 2011
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE242

Sample Identification

SL-030-SA7-SS-0.0-0.5
SL-146-SA7-SS-0.0-0.5
SL-341-SA5B-SB-4.0-5.0

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the limit of detection verification (LODV) calibration standard were less than or equal to 50.0% for perchlorate.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE242	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Perchlorate - Data Qualification Summary - SDG DE242

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE242	SL-030-SA7-SS-0.0-0.5 SL-146-SA7-SS-0.0-0.5 SL-341-SA5B-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG DE242

No Sample Data Qualified in this SDG

LDC #: 26859L87 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/27/11
SDG #: DE242 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: M
2nd Reviewer: C

METHOD: LC/MS Perchlorate (EPA SW846 Method 6850)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/13/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/50 LODV ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

SOIL

1†	SL-030-SA7-SS-0.0-0.5	11	PBLK2426O	21		31	
2†	SL-146-SA7-SS-0.0-0.5	12		22		32	
3	SL-341-SA5B-SB-4.0-5.0	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26859L87

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles ~~(EPA SW 846 Method 8270C)~~ 6850

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 15/50 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC # 26859B7

SDG#

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: B

2nd Reviewer: A

METHOD: Method 6850

Parameter: perchlorate

Date	Column	Compound	y	x	
09/20/2011	LCMS	perchlorate			
			0.0402827	0.040	
			0.0909110	0.100	
			0.2033273	0.200	
			0.4162495	0.400	
			1.0974669	1.000	
			2.9739612	2.500	

Regression Output:		Regression Output:	Reported	
Constant		-0.04179		
Std Err of Y Est		0.03766		
R Squared		0.99911		0.99999
No. of Observations		6.00000		
Degrees of Freedom		4.00000		
X Coefficient(s)	1.196E+000			
Std Err of Coef.	0.017824	0.04		

LDC #: 26859L87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA ~~(EPA SW 846 Method 8270C)~~ 8270

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	MS5P2621102	9/20/11	Phenol (1st internal standard)	0.4	0.452	0.452	13	13
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859B7

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA ~~(EPA SW 846 Method 8270)~~ 6850

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS2426

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	100	NA	104.9	NA	105	105	NA	—	—	—

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26859L87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example: %S = 0.95

Sample I.D. _____, _____:

Conc. = ( )( )( )( )( ) / ( )( )( )( )( )

= 2.5 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification
		#1 Perchlorate			
		$\frac{1976}{159256} = 0.1160\left(\frac{X}{10}\right)$	-0.0159		
		$X = 2.440$			
		$final = \frac{2.44}{0.95} =$	2.568 ug/kg		

SAMPLE DELIVERY GROUP

DE243

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3050B	6010B	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3050B	6020	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3060A	7199	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3550B	8081A	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3550B	8082	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3550B	8151A	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3550B	8270C	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	3550B	8270C SIM	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	METHOD	300.0	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	METHOD	314.0	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5	6406189	N	METHOD	7471A	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5MSD	P406189M241744A	MSD	3550B	8082	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5MSD	P406189M261153	MSD	3550B	8270C SIM	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5MS	P406189R241725A	MS	3550B	8082	III
14-Sep-2011	SL-028-SA7-SS-0.0-0.5MS	P406189R261120	MS	3550B	8270C SIM	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3050B	6010B	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3050B	6020	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3060A	7199	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3550B	8081A	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3550B	8082	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3550B	8151A	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3550B	8270C	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	3550B	8270C SIM	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	METHOD	300.0	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	METHOD	314.0	III
14-Sep-2011	SL-029-SA7-SS-0.0-0.5	6406190	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	TB-091411	6406207	TB	5030B	8015M	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3050B	6010B	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3050B	6020	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3060A	7199	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8015B	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8015M	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8081A	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8082	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8151A	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8270C	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	3550B	8270C SIM	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	METHOD	300.0	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	METHOD	314.0	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	METHOD	7471A	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	METHOD	8015B	III
14-Sep-2011	SL-076-SA7-SS-0.0-0.5	6406196	N	METHOD	8015M	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3050B	6010B	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3050B	6020	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3060A	7199	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3546	1625C	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3550B	8015B	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3550B	8015M	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3550B	8082	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3550B	8270C	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	3550B	8270C SIM	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	5035	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	8330	8330A	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	Gen Prep	314.0	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	300.0	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	7471A	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	8015B	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	8015M	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	8315A	III
14-Sep-2011	SL-340-SA5B-SB-9.0-10.0	6406204	N	METHOD	9012B	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3050B	6010B	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3050B	6020	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3060A	7199	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3550B	8081A	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3550B	8082	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3550B	8151A	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3550B	8270C	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	3550B	8270C SIM	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	METHOD	300.0	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	METHOD	314.0	III
14-Sep-2011	SL-036-SA7-SS-0.0-0.5	6406193	N	METHOD	7471A	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3050B	6010B	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3050B	6020	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3060A	7199	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8015B	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8015M	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8081A	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8151A	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8270C	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	3550B	8270C SIM	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	METHOD	300.0	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	METHOD	314.0	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	METHOD	7471A	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	METHOD	8015B	III
14-Sep-2011	SL-039-SA7-SS-0.0-0.5	6406195	N	METHOD	8015M	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3050B	6010B	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3050B	6020	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3060A	7199	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8015B	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8015M	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8081A	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8082	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8151A	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8270C	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	3550B	8270C SIM	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	METHOD	300.0	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	METHOD	314.0	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	METHOD	7471A	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	METHOD	8015B	III
14-Sep-2011	SL-077-SA7-SS-0.0-0.5	6406197	N	METHOD	8015M	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3050B	6010B	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3050B	6020	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8015B	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8015M	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8081A	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8082	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8151A	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8270C	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	3550B	8270C SIM	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	300.0	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	314.0	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	6850	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	7471A	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	8015B	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5	6406198	N	METHOD	8015M	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5DUP	P406198D272231B	DUP	METHOD	314.0	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5DUP	P406198D272342B	DUP	METHOD	300.0	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5MS	P406198R272340B	MS	METHOD	314.0	III
14-Sep-2011	SL-078-SA7-SS-0.0-0.5MS	P406198R272355B	MS	METHOD	300.0	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3050B	6010B	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3050B	6020	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3060A	7199	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3546	1625C	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3550B	8015B	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3550B	8015M	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3550B	8082	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3550B	8270C	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	5035	8015M	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	8330	8330A	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	Gen Prep	314.0	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	300.0	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	7471A	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	8015B	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	8015M	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	8315A	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0	6406203	N	METHOD	9012B	III
14-Sep-2011	SL-339-SA5B-SB-9.0-10.0MS	P406203R261731	MS	3546	1625C	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3050B	6010B	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3050B	6020	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3060A	7199	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8015B	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8015M	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8081A	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8082	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8151A	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8270C	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	3550B	8270C SIM	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	METHOD	300.0	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	METHOD	314.0	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	METHOD	7471A	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	METHOD	8015B	III
14-Sep-2011	SL-099-SA7-SS-0.0-0.5	6406199	N	METHOD	8015M	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3060A	7199	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8015B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8015M	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8081A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8082	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8151A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8270C	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	3550B	8270C SIM	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	300.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	314.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	6850	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	7471A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	8015B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	8015M	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5	6406188	N	METHOD	9012B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D220939A	DUP	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D220939B	DUP	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D220939C	DUP	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D220939D	DUP	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D221041	DUP	METHOD	7471A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D221351	DUP	3050B	6010B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D271754A	DUP	METHOD	314.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5DUP	P406188D272051A	DUP	METHOD	300.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M220945A	MSD	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M220945B	MSD	3050B	6020	III

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N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M220945C	MSD	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M220945D	MSD	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M221044	MSD	METHOD	7471A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M221359	MSD	3050B	6010B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M240017A	MSD	3550B	8151A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M241302A	MSD	3550B	8081A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M260748	MSD	3550B	8270C	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M320049A	MSD	3550B	8015M	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MSD	P406188M320106A	MSD	3550B	8015B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R220942A	MS	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R220942B	MS	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R220942C	MS	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R220942D	MS	3050B	6020	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R221043	MS	METHOD	7471A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R221355	MS	3050B	6010B	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R241248A	MS	3550B	8081A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R242254A	MS	3550B	8151A	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R260725	MS	3550B	8270C	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R271817A	MS	METHOD	314.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R272104A	MS	METHOD	300.0	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R320025A	MS	3550B	8015M	III
14-Sep-2011	SL-024-SA7-SS-0.0-0.5MS	P406188R320044A	MS	3550B	8015B	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3050B	6010B	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3050B	6020	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3060A	7199	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3550B	8081A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3550B	8082	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3550B	8151A	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3550B	8270C	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	3550B	8270C SIM	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	Gen Prep	314.0	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	METHOD	300.0	III
14-Sep-2011	SL-183-SA7-SS-0.0-0.5	6406202	N	METHOD	7471A	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3050B	6010B	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3050B	6020	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3060A	7199	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3550B	8081A	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3550B	8082	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3550B	8151A	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3550B	8270C	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	3550B	8270C SIM	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	METHOD	300.0	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	METHOD	314.0	III
14-Sep-2011	SL-038-SA7-SS-0.0-0.5	6406194	N	METHOD	7471A	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3050B	6010B	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3050B	6020	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3060A	7199	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3550B	8015B	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3550B	8015M	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3550B	8082	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3550B	8270C	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	5035	8015M	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	Gen Prep	314.0	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	METHOD	300.0	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	METHOD	7471A	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	METHOD	8015B	III
14-Sep-2011	SL-041-SA7-SB-4.0-5.0	6406205	N	METHOD	8015M	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3050B	6010B	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3050B	6020	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3060A	7199	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3550B	8081A	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3550B	8082	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3550B	8151A	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3550B	8270C	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	3550B	8270C SIM	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	METHOD	300.0	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	METHOD	314.0	III
14-Sep-2011	SL-033-SA7-SS-0.0-0.5	6406192	N	METHOD	7471A	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3050B	6010B	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3050B	6020	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3060A	7199	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3550B	8081A	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3550B	8082	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3550B	8151A	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3550B	8270C	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	3550B	8270C SIM	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	Gen Prep	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	METHOD	300.0	III
14-Sep-2011	SL-145-SA7-SS-0.0-0.5	6406201	N	METHOD	7471A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3005A	6010B	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3020A	6020	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8015B	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8015M	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8081A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8082	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8270C	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3510C	8270C SIM	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	3520C	1625C	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	8330	8330A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	Gen Prep	300.0	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	Gen Prep	314.0	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	Gen Prep	7199	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	Gen Prep	8015B	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	Gen Prep	8015M	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	METHOD	7470A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	METHOD	8151A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	METHOD	8315A	III
14-Sep-2011	EB-SA7-SS-091411	6406208	EB	METHOD	9012B	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3050B	6010B	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3050B	6020	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3060A	7199	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3550B	8081A	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3550B	8151A	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3550B	8270C	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	3550B	8270C SIM	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	Gen Prep	314.0	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	METHOD	300.0	III
14-Sep-2011	SL-144-SA7-SS-0.0-0.5	6406200	N	METHOD	7471A	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3050B	6010B	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3050B	6020	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3060A	7199	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3550B	8015B	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3550B	8015M	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3550B	8082	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3550B	8270C	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	3550B	8270C SIM	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	5035	8015M	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	Gen Prep	314.0	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	METHOD	300.0	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	METHOD	7471A	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	METHOD	8015B	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0	6406206	N	METHOD	8015M	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0DUP	P406206D271944A	DUP	3060A	7199	III
14-Sep-2011	SL-071-SA7-SB-4.0-5.0MS	P406206R271901A	MS	3060A	7199	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3050B	6010B	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3050B	6020	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3060A	7199	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3546	1625C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8015B	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8015M	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8081A	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8082	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8151A	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8270C	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	3550B	8270C SIM	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	8330	8330A	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	300.0	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	314.0	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	7471A	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	8015B	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	8015M	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	8315A	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5	6406191	N	METHOD	9012B	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5MSD	P406191M322153A	MSD	METHOD	8015M	III
14-Sep-2011	SL-032-SA7-SS-0.0-0.5MS	P406191R322140A	MS	METHOD	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory:** LL

EDD Filename: PrepDE243_v3 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-024-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 11:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.80	U	0.80	MDL	1.0	PQL	mg/Kg	UJ	Q

Sample ID: SL-028-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 7:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.81	U	0.81	MDL	1.0	PQL	mg/Kg	UJ	Q

Sample ID: SL-029-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 7:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.81	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-032-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.80	U	0.80	MDL	1.0	PQL	mg/Kg	UJ	Q
Nitrate-NO3	1.1	J	0.80	MDL	1.5	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 1:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.81	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-036-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 8:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.79	U	0.79	MDL	0.99	PQL	mg/Kg	UJ	Q

Sample ID: SL-038-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.79	MDL	0.99	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory:** LL

EDD Filename: PrepDE243_v3 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-039-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 9:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.7		0.82	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-041-SA7-SB-4.0-5.0 **Collected:** 9/14/2011 12:36:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-071-SA7-SB-4.0-5.0 **Collected:** 9/14/2011 2:41:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.4		0.84	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 8:20:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.82	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-077-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 9:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.80	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-078-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 10:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.3		0.80	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-099-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 10:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.81	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-144-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 2:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.80	U	0.80	MDL	1.0	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory: LL**

EDD Filename: PrepDE243_v3 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-145-SA7-SS-0.0-0.5 *Collected:* 9/14/2011 1:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.2		0.81	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-183-SA7-SS-0.0-0.5 *Collected:* 9/14/2011 11:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.97	J	0.81	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: SL-339-SA5B-SB-9.0-10.0 *Collected:* 9/14/2011 10:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.86	U	0.86	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-340-SA5B-SB-9.0-10.0 *Collected:* 9/14/2011 8:38:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	0.91	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: EB-SA7-SS-091411 *Collected:* 9/14/2011 2:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0114	J	0.0022	MDL	0.0500	PQL	mg/L	U	B
MAGNESIUM	0.0078	J	0.0067	MDL	0.100	PQL	mg/L	U	B
STRONTIUM	0.00023	J	0.00022	MDL	0.0050	PQL	mg/L	U	B
Zirconium	0.0046	J	0.0042	MDL	0.0500	PQL	mg/L	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory: LL**

EDD Filename: PrepDE243_v3 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-024-SA7-SS-0.0-0.5** ***Collected:*** **9/14/2011 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.97	J	0.360	MDL	5.01	PQL	mg/Kg	U	F
IRON	16300		2.61	MDL	20.0	PQL	mg/Kg	J	A
POTASSIUM	2750		11.3	MDL	50.1	PQL	mg/Kg	J	Q
SODIUM	83.2	J	5.96	MDL	100	PQL	mg/Kg	J	Z
TIN	3.11	J	0.320	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	2.43	J	0.461	MDL	5.01	PQL	mg/Kg	J	Z

Sample ID: **SL-028-SA7-SS-0.0-0.5** ***Collected:*** **9/14/2011 7:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	18600		2.61	MDL	20.0	PQL	mg/Kg	J	A
POTASSIUM	3280		11.3	MDL	50.1	PQL	mg/Kg	J	Q
TIN	2.66	J	0.320	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	4.12	J	0.461	MDL	5.01	PQL	mg/Kg	J	Z

Sample ID: **SL-029-SA7-SS-0.0-0.5** ***Collected:*** **9/14/2011 7:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.63	J	0.361	MDL	5.02	PQL	mg/Kg	U	F
IRON	20100		2.62	MDL	20.1	PQL	mg/Kg	J	A
POTASSIUM	3120		11.3	MDL	50.2	PQL	mg/Kg	J	Q
TIN	2.84	J	0.321	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	2.26	J	0.461	MDL	5.02	PQL	mg/Kg	U	F

Sample ID: **SL-032-SA7-SS-0.0-0.5** ***Collected:*** **9/14/2011 3:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.45	J	0.363	MDL	5.05	PQL	mg/Kg	U	B, F
IRON	15900		2.64	MDL	20.2	PQL	mg/Kg	J	A
POTASSIUM	3240		11.4	MDL	50.5	PQL	mg/Kg	J	Q
TIN	2.76	J	0.323	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	2.29	J	0.464	MDL	5.05	PQL	mg/Kg	U	F

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory:** LL

EDD Filename: PrepDE243_v3 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 6010B **Matrix:** SO

Sample ID: SL-033-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 1:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.82	J	0.358	MDL	4.97	PQL	mg/Kg	U	F
IRON	18200		2.60	MDL	19.9	PQL	mg/Kg	J	A
POTASSIUM	3940		11.2	MDL	49.7	PQL	mg/Kg	J	Q
SODIUM	90.3	J	5.92	MDL	99.4	PQL	mg/Kg	J	Z
TIN	2.88	J	0.318	MDL	9.94	PQL	mg/Kg	U	B
Zirconium	3.16	J	0.457	MDL	4.97	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 8:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.14	J	0.359	MDL	4.99	PQL	mg/Kg	U	B, F
IRON	16700		2.60	MDL	20.0	PQL	mg/Kg	J	A
POTASSIUM	3040		11.3	MDL	49.9	PQL	mg/Kg	J	Q
SODIUM	88.4	J	5.94	MDL	99.8	PQL	mg/Kg	J	Z
TIN	3.01	J	0.319	MDL	9.98	PQL	mg/Kg	U	B
Zirconium	2.96	J	0.459	MDL	4.99	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 11:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.97	J	0.350	MDL	4.86	PQL	mg/Kg	U	F
IRON	16800		2.53	MDL	19.4	PQL	mg/Kg	J	A
POTASSIUM	3230		11.0	MDL	48.6	PQL	mg/Kg	J	Q
SODIUM	74.3	J	5.78	MDL	97.1	PQL	mg/Kg	J	Z
TIN	3.01	J	0.311	MDL	9.71	PQL	mg/Kg	U	B
Zirconium	2.59	J	0.447	MDL	4.86	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA7-SS-0.0-0.5 **Collected:** 9/14/2011 9:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.33	J	0.370	MDL	5.14	PQL	mg/Kg	U	F
IRON	19700		2.68	MDL	20.5	PQL	mg/Kg	J	A
POTASSIUM	2430		11.6	MDL	51.4	PQL	mg/Kg	J	Q
TIN	2.58	J	0.329	MDL	10.3	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory:** LL

EDD Filename: PrepDE243_v3 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-041-SA7-SB-4.0-5.0 ***Collected:*** 9/14/2011 12:36:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.28		0.369	MDL	5.12	PQL	mg/Kg	U	F, Z
IRON	17200		2.67	MDL	20.5	PQL	mg/Kg	J	A
POTASSIUM	1810		11.6	MDL	51.2	PQL	mg/Kg	J	Q
TIN	2.98	J	0.328	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	3.03	J	0.471	MDL	5.12	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA7-SB-4.0-5.0 ***Collected:*** 9/14/2011 2:41:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.31	J	0.368	MDL	5.11	PQL	mg/Kg	U	B, F
IRON	18300		2.67	MDL	20.4	PQL	mg/Kg	J	A
POTASSIUM	1490		11.5	MDL	51.1	PQL	mg/Kg	J	Q
TIN	3.11	J	0.327	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	2.76	J	0.470	MDL	5.11	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 8:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.83	J	0.356	MDL	4.95	PQL	mg/Kg	U	F
IRON	19000		2.58	MDL	19.8	PQL	mg/Kg	J	A
POTASSIUM	2360		11.2	MDL	49.5	PQL	mg/Kg	J	Q
TIN	2.34	J	0.317	MDL	9.90	PQL	mg/Kg	U	B

Sample ID: SL-077-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 9:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.09	J	0.357	MDL	4.96	PQL	mg/Kg	U	F
IRON	15200		2.59	MDL	19.8	PQL	mg/Kg	J	A
POTASSIUM	2600		11.2	MDL	49.6	PQL	mg/Kg	J	Q
SODIUM	67.6	J	5.90	MDL	99.1	PQL	mg/Kg	J	Z
TIN	2.82	J	0.317	MDL	9.91	PQL	mg/Kg	U	B
Zirconium	2.73	J	0.456	MDL	4.96	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE243 **Laboratory:** LL

EDD Filename: PrepDE243_v3 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-078-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 10:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.50	J	0.361	MDL	5.02	PQL	mg/Kg	U	F
IRON	16800		2.62	MDL	20.1	PQL	mg/Kg	J	A
POTASSIUM	2570		11.3	MDL	50.2	PQL	mg/Kg	J	Q
SODIUM	66.6	J	5.97	MDL	100	PQL	mg/Kg	J	Z
TIN	3.28	J	0.321	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	3.38	J	0.462	MDL	5.02	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 10:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.24	J	0.361	MDL	5.01	PQL	mg/Kg	U	B, F
IRON	16000		2.61	MDL	20.0	PQL	mg/Kg	J	A
POTASSIUM	2530		11.3	MDL	50.1	PQL	mg/Kg	J	Q
SODIUM	65.5	J	5.96	MDL	100	PQL	mg/Kg	J	Z
TIN	4.26	J	0.320	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	3.18	J	0.461	MDL	5.01	PQL	mg/Kg	J	Z

Sample ID: SL-144-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 2:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.16	J	0.356	MDL	4.94	PQL	mg/Kg	U	B, F
IRON	18200		2.58	MDL	19.8	PQL	mg/Kg	J	A
POTASSIUM	3890		11.2	MDL	49.4	PQL	mg/Kg	J	Q
SODIUM	82.1	J	5.88	MDL	98.8	PQL	mg/Kg	J	Z
TIN	3.04	J	0.316	MDL	9.88	PQL	mg/Kg	U	B
Zirconium	2.51	J	0.454	MDL	4.94	PQL	mg/Kg	J	Z

Sample ID: SL-145-SA7-SS-0.0-0.5 ***Collected:*** 9/14/2011 1:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.84	J	0.359	MDL	4.98	PQL	mg/Kg	U	B, F
IRON	18200		2.60	MDL	19.9	PQL	mg/Kg	J	A
POTASSIUM	3310		11.3	MDL	49.8	PQL	mg/Kg	J	Q
SODIUM	85.7	J	5.93	MDL	99.7	PQL	mg/Kg	J	Z
TIN	3.02	J	0.319	MDL	9.97	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling