Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1415082
Reported: 09/17/13 at 09:38 AM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Endrin Aldehyde	0.080	U	0.080	0.016	ug/l	54*	61	55-123	13	20
Endrin Ketone	0.016	U	0.016	0.0040	ug/l	62	67	51-138	8	30
Heptachlor	0.0080	U	0.0080	0.0016	ug/l	58	67	57-126	14	30
Heptachlor Epoxide	0.0080	U	0.0080	0.0018	ug/l	53*	61*	65-128	13	30
Methoxychlor	0.080	U	0.080	0.024	ug/l	55	67	46-134	19	30
Mirex	0.20	U	0.20	0.068	ug/l					
Toxaphene	2.4	U	2.4	0.80	ug/l					
Batch number: 132470006A	Sample number(s): 7179334-7179335									
EFH (C12-C14)	0.10	U	0.10	0.050	mg/l	83	87	70-130	5	30
EFH (C15-C20)	0.10	U	0.10	0.050	mg/l	90	93	70-130	4	30
EFH (C21-C30)	0.10	U	0.10	0.050	mg/l	90	93	70-130	4	30
EFH (C30 - C40)	0.50	U	0.50	0.10	mg/l	127	114	70-130	11	30
EFH (C8-C11)	0.10	U	0.10	0.050	mg/l	67*	74	70-130	10	30
Batch number: 132470022A	Sample number(s): 7179337-7179339									
EFH (C12-C14)	5.0	U	5.0	2.0	mg/kg	98		70-123		
EFH (C15-C20)	5.0	U	5.0	2.0	mg/kg	97		75-128		
EFH (C21-C30)	5.0	U	5.0	2.0	mg/kg	99		64-134		
EFH (C30-C40)	10	U	10.	4.0	mg/kg	97		65-128		
EFH (C8-C11)	5.0	U	5.0	2.0	mg/kg	81		49-107		
Batch number: 132410635001	Sample number(s): 7179334-7179335									
Aluminum	0.400	U	0.400	0.0828	mg/l	106	104	80-120	2	20
Antimony	0.0400	U	0.0400	0.0053	mg/l	106	105	80-120	0	20
Arsenic	0.0400	U	0.0400	0.0068	mg/l	102	103	80-120	1	20
Barium	0.0100	U	0.0100	0.00033	mg/l	102	100	80-120	2	20
Beryllium	0.0100	U	0.0100	0.00067	mg/l	100	99	80-120	2	20
Boron	0.100	U	0.100	0.0084	mg/l	97	97	80-120	1	20
Cadmium	0.0100	U	0.0100	0.00076	mg/l	103	103	80-120	0	20
Calcium	0.0748	J	0.400	0.0334	mg/l	102	101	80-120	1	20
Chromium	0.0300	U	0.0300	0.0016	mg/l	103	102	80-120	1	20
Cobalt	0.0100	U	0.0100	0.0013	mg/l	103	103	80-120	0	20
Copper	0.0200	U	0.0200	0.0027	mg/l	102	102	80-120	1	20
Iron	0.400	U	0.400	0.0430	mg/l	101	101	80-120	0	20
Lead	0.0300	U	0.0300	0.0047	mg/l	104	104	80-120	0	20
Lithium	0.0400	U	0.0400	0.0047	mg/l	104	102	80-120	1	20
Magnesium	0.200	U	0.200	0.0167	mg/l	102	102	80-120	1	20
Manganese	0.0100	U	0.0100	0.00083	mg/l	103	102	80-120	1	20
Molybdenum	0.0200	U	0.0200	0.0017	mg/l	104	104	80-120	1	20
Nickel	0.0200	U	0.0200	0.0015	mg/l	105	105	80-120	1	20
Phosphorus	0.200	U	0.200	0.0418	mg/l	103	102	80-120	0	20
Potassium	1.00	U	1.00	0.0980	mg/l	102	101	80-120	1	20
Sodium	2.00	U	2.00	0.167	mg/l	101	100	80-120	1	20
Tin	0.0400	U	0.0400	0.0029	mg/l	102	102	80-120	1	20
Titanium	0.0200	U	0.0200	0.0017	mg/l	106	105	80-120	1	20
Vanadium	0.0100	U	0.0100	0.0020	mg/l	100	98	80-120	2	20
Zinc	0.0400	U	0.0400	0.0020	mg/l	102	102	80-120	0	20
Zirconium	0.100	U	0.100	0.0084	mg/l	105	105	80-120	0	20
Batch number: 132410639001A	Sample number(s): 7179334-7179335									
Silver	0.0010	U	0.0010	0.00011	mg/l	110	103	90-115	6	20
Strontium	0.0020	U	0.0020	0.00034	mg/l	108	95	80-120	12	20
Thallium	0.0010	U	0.0010	0.00015	mg/l	104	101	80-120	3	20
Batch number: 132410639001B	Sample number(s): 7179334-7179335									

*- 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: 1415082
Reported: 09/17/13 at 09:38 AM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Selenium	0.0040	U	0.0040	0.00050	mg/l	107	106	80-120	0	20
Batch number: 132420637001	Sample number(s): 7179337-7179339									
Aluminum	40.0	U	40.0	7.21	mg/kg	106		80-120		
Antimony	4.00	U	4.00	0.740	mg/kg	107		80-120		
Arsenic	4.00	U	4.00	0.700	mg/kg	104		80-120		
Barium	1.00	U	1.00	0.0330	mg/kg	102		80-120		
Beryllium	1.00	U	1.00	0.0670	mg/kg	102		80-120		
Boron	10.0	U	10.0	0.840	mg/kg	100		80-120		
Cadmium	1.00	U	1.00	0.0760	mg/kg	104		80-120		
Calcium	9.35	J	20.0	3.34	mg/kg	103		80-120		
Chromium	3.00	U	3.00	0.160	mg/kg	105		80-120		
Cobalt	1.00	U	1.00	0.0990	mg/kg	104		80-120		
Copper	2.00	U	2.00	0.290	mg/kg	104		80-120		
Iron	40.0	U	40.0	3.62	mg/kg	102		80-120		
Lead	3.00	U	3.00	0.500	mg/kg	106		80-120		
Lithium	4.0	U	4.0	0.34	mg/kg	104		80-120		
Magnesium	10.0	U	10.0	1.67	mg/kg	102		80-120		
Manganese	1.00	U	1.00	0.0830	mg/kg	103		80-120		
Molybdenum	2.00	U	2.00	0.170	mg/kg	105		80-120		
Nickel	2.00	U	2.00	0.130	mg/kg	106		80-120		
Phosphorus	10.0	U	10.0	2.89	mg/kg	106		80-120		
Potassium	100 U		100.	8.34	mg/kg	102		80-120		
Sodium	100 U		100.	16.7	mg/kg	101		80-120		
Tin	1.64	J	10.0	0.220	mg/kg	105		80-120		
Titanium	1.00	U	1.00	0.170	mg/kg	106		80-120		
Vanadium	1.00	U	1.00	0.130	mg/kg	101		80-120		
Zinc	0.416	J	4.00	0.200	mg/kg	104		80-120		
Zirconium	5.00	U	5.00	0.840	mg/kg	105		80-120		
Batch number: 132420637001A	Sample number(s): 7179337-7179339									
Silver	0.200	U	0.200	0.0260	mg/kg	107		80-120		
Strontium	0.400	U	0.400	0.0680	mg/kg	104		80-120		
Thallium	0.200	U	0.200	0.0300	mg/kg	110		80-120		
Batch number: 132420637001B	Sample number(s): 7179337-7179339									
Selenium	0.400	U	0.400	0.100	mg/kg	108		80-120		
Batch number: 132420638001	Sample number(s): 7179337-7179339									
3a Mercury 7471A	0.0167	U	0.0167	0.0100	mg/kg	110		85-120		
Batch number: 132425713008	Sample number(s): 7179334-7179335									
3b Mercury 7470A	0.00020	U	0.00020	0.00006 0	mg/l	101	99	90-115	2	20
Batch number: 13241655121A	Sample number(s): 7179335									
1b Anions by 300.0-Fluoride	0.10	U	0.10	0.080	mg/l	99	95	90-110	4	20
1b Anions by 300.0-Nitrate	0.10	U	0.10	0.050	mg/l	96	101	90-110	5	20
1b Anions by 300.0-Nitrite	0.10	U	0.10	0.080	mg/l	96	100	90-110	5	20
Batch number: 13241655123A	Sample number(s): 7179335									
1b Anions by 300.0-Sulfate	1.0	U	1.0	0.30	mg/l	96	102	90-110	6	20
Batch number: 13241006101A	Sample number(s): 7179334-7179335									

*- 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: 1415082
Reported: 09/17/13 at 09:38 AM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
28b pH (9040B and 9040C)						99		99-103		
Batch number: 13241039401A	Sample number(s): 7179337-7179339									
15a pH by 9045D						99		95-105		
Batch number: 13242022901A	Sample number(s): 7179335									
29b Sulfite in Water EPA377.1	5.0	U	5.0	1.5	mg/l	96		65-110		
Batch number: 13242162401B	Sample number(s): 7179337-7179339									
14a Moisture Content by 160.3						100		80-120		

Analysis Name	Blank Result		Blank MRL**	Blank EDL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 13248004	Sample number(s): 7179334-7179335									
2378-TCDD	2.00	U	2.00	0.325	pg/l	101		60-150		
12378-PeCDD	0.622	J	10.0	0.411	pg/l	104		60-150		
123478-HxCDD	0.461	J	10.0	0.244	pg/l	102		60-150		
123678-HxCDD	0.533	J	10.0	0.265	pg/l	102		60-150		
123789-HxCDD	0.529	J	10.0	0.248	pg/l	101		60-150		
1234678-HpCDD	0.888	J	10.0	0.394	pg/l	101		60-150		
OCDD	1.12	J	20.0	0.330	pg/l	96		60-150		
2378-TCDF	2.00	U	2.00	0.298	pg/l	108		60-150		
12378-PeCDF	0.765	J	10.0	0.195	pg/l	106		60-150		
23478-PeCDF	0.542	J	10.0	0.183	pg/l	107		60-150		
123478-HxCDF	0.471	J	10.0	0.133	pg/l	101		60-150		
123678-HxCDF	0.575	J	10.0	0.134	pg/l	101		60-150		
123789-HxCDF	0.668	J	10.0	0.149	pg/l	103		60-150		
234678-HxCDF	0.483	J	10.0	0.128	pg/l	102		60-150		
1234678-HpCDF	0.503	J	10.0	0.108	pg/l	100		60-150		
1234789-HpCDF	0.549	J	10.0	0.132	pg/l	97		60-150		
OCDF	2.39	J	20.0	0.452	pg/l	95		60-150		
TEQ WHO 2005 - EDLx0.0	0.857				pg/l					

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: 13243SLC026	Sample number(s): 7179337-7179339 UNSPK: P177750								
Acenaphthene	92	81	48-127	13	30				
Acenaphthylene	92	82	49-121	12	30				
Anthracene	96	81	52-126	17	30				
Benzo(a)anthracene	102	87	44-143	16	30				
Benzo(a)pyrene	104	87	44-140	18	30				
Benzo(b)fluoranthene	125	107	26-142	16	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 / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1415082
Reported: 09/17/13 at 09:38 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(e)pyrene	96	82	70-130	16	30				
Benzo(g,h,i)perylene	70	58	33-141	19	30				
Benzo(k)fluoranthene	101	85	54-142	18	30				
Butylbenzylphthalate	124	106	49-151	16	30				
Di-n-butylphthalate	104	89	52-147	16	30				
Chrysene	100	86	29-148	15	30				
Dibenz(a,h)anthracene	82	69	20-137	17	30				
Diethylphthalate	93	84	43-145	11	30				
Dimethylphthalate	93	81	58-129	14	30				
Bis(2-Ethylhexyl)phthalate	120	97	39-167	22	30				
Fluoranthene	94	81	40-148	15	30				
Fluorene	95	84	51-137	13	30				
Indeno(1,2,3-cd)pyrene	80	67	17-136	18	30				
1-Methylnaphthalene	96	84	50-131	13	30				
2-Methylnaphthalene	97	86	35-152	12	30				
Naphthalene	93	83	31-148	12	30				
N-Nitrosodimethylamine	76	69	48-113	11	30				
Di-n-octylphthalate	130	112	52-162	15	30				
Phenanthrene	95	81	29-142	16	30				
Pyrene	96	83	26-143	15	30				
Batch number: 13242A16A	Sample number(s): 7179337-7179339 UNSPK: P177750								
11a TPH by EPA 8015B GRO	76	76	69-123	7	30				
Batch number: 132460019A	Sample number(s): 7179337-7179339 UNSPK: P177750								
2,4-D	105	111	42-143	5	35				
Dalapon	38	35	19-109	7	50				
2,4-DB	161	164	10-179	2	50				
Dicamba	115	119	45-147	4	50				
Dinoseb	36	40	10-52	12	35				
2,4-DP (Dichlorprop)	113	116	32-171	2	50				
MCPA	88	91	23-169	4	50				
MCPP (Mecoprop)	83	83	24-164	0	50				
2,4,5-T	133	139	12-172	4	35				
2,4,5-TP	109	113	10-142	4	35				
Batch number: 132420008A	Sample number(s): 7179337-7179339 UNSPK: P177750								
Aldrin	78	81	16-126	4	50				
Alpha BHC	93	98	14-140	5	50				
Beta BHC	-58*	-59*	10-173	4	50				
Gamma BHC - Lindane	90	94	30-137	4	50				
p,p-DDD	105	105	43-149	1	50				
p,p-DDE	88	90	18-161	2	50				
p,p-DDT	100	103	12-193	3	50				
Delta BHC	78	86	13-153	10	50				
Dieldrin	103	104	19-154	1	50				
Endosulfan I	101	101	16-137	0	50				
Endosulfan II	89	89	10-156	0	50				
Endosulfan Sulfate	87	89	10-181	2	50				
Endrin	96	97	30-152	1	50				
Endrin Aldehyde	81	81	10-152	0	35				
Endrin Ketone	87	89	10-160	2	50				

*- 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: 1415082
Reported: 09/17/13 at 09:38 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
Heptachlor	94	96	16-152	2	50						
Heptachlor Epoxide	84	85	17-167	1	50						
Methoxychlor	94	98	34-168	5	50						
Batch number: 132430008A	Sample number(s): 7179337-7179339 UNSPK: P177750										
PCB-1016	98	97	16-146	0	50						
PCB-1260	110	111	40-134	2	50						
Batch number: 132470022A	Sample number(s): 7179337-7179339 UNSPK: P180879										
EFH (C12-C14)	96	95	49-123	1	20						
EFH (C15-C20)	117	114	49-123	3	20						
EFH (C21-C30)	123	121	49-123	2	20						
EFH (C30-C40)	116	119	49-123	2	20						
EFH (C8-C11)	86	84	49-123	2	20						
Batch number: 132420637001	Sample number(s): 7179337-7179339 UNSPK: P180868 BKG: P180868										
Aluminum	772 (2)	769 (2)	75-125	0	20	1,970		2,600		28*	20
Antimony	111	108	75-125	1	20	3.96	U	3.96	U	0 (1)	20
Arsenic	114	118	75-125	5	20	1.96	J	1.44	J	31* (1)	20
Barium	96	95	75-125	0	20	59.1		59.0		0	20
Beryllium	95	94	75-125	1	20	0.990	U	0.990	U	0 (1)	20
Boron	103	102	75-125	1	20	4.62	J	5.07	J	9 (1)	20
Cadmium	95	94	75-125	0	20	0.109	J	0.139	J	24* (1)	20
Calcium	263 (2)	7244 (2)	75-125	7	20	356,000		344,000		4	20
Chromium	100	99	75-125	0	20	2.87	J	3.79		28* (1)	20
Cobalt	94	94	75-125	0	20	0.580	J	0.906	J	44* (1)	20
Copper	110	108	75-125	0	20	2.09	J	2.82	J	29* (1)	20
Iron	737 (2)	804 (2)	75-125	3	20	1,740		2,500		36*	20
Lead	98	100	75-125	2	20	3.45	J	2.77	J	22* (1)	20
Lithium	113	112	75-125	0	20	3.7	J	3.3	J	12 (1)	20
Magnesium	51 (2)	21 (2)	75-125	3	20	1,920		1,960		2	20
Manganese	114	114	75-125	1	20	31.7		40.7		25*	20
Molybdenum	101	100	75-125	0	20	0.339	J	0.169	J	67* (1)	20
Nickel	95	94	75-125	0	20	2.13		2.80		27* (1)	20
Phosphorus	113	86	75-125	10	20	146		141		3 (1)	20
Potassium	155*	146*	75-125	4	20	324		418		25* (1)	20
Sodium	113	111	75-125	0	20	151		145		4 (1)	20
Tin	96	96	75-125	0	20	1.83	J	1.70	J	7 (1)	20
Titanium	164*	156*	75-125	3	20	72.6		100		32*	20
Vanadium	100	100	75-125	1	20	5.24		7.00		29*	20
Zinc	114	111	75-125	1	20	6.40	J	8.49	J	28* (1)	20
Zirconium	101	102	75-125	2	20	1.26	J	1.51	J	18 (1)	20
Batch number: 132420637001A	Sample number(s): 7179337-7179339 UNSPK: P180868 BKG: P180868										
Silver	94	93	75-125	0	20	0.198	U	0.0297	J	200* (1)	20
Strontium	-469 (2)	-813 (2)	75-125	20	20	188		179		5	20
Thallium	111	102	75-125	8	20	0.198	U	0.198	U	0 (1)	20
Batch number: 132420637001B	Sample number(s): 7179337-7179339 UNSPK: P180868 BKG: P180868										
Selenium	109	106	75-125	1	20	0.396	U	0.100	J	200* (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: 1415082
Reported: 09/17/13 at 09:38 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: 132420638001	Sample number(s): 7179337-7179339 UNSPK: P180868 BKG: P180868								
3a Mercury 7471A	120	116	65-135	3	20	0.0164 U	0.0164 U	0 (1)	20
Batch number: 13241006101A	Sample number(s): 7179334-7179335 BKG: P179136								
28b pH (9040B and 9040C)						7.6	7.6	1	3
Batch number: 13241039401A	Sample number(s): 7179337-7179339 BKG: P179322								
15a pH by 9045D						7.32	7.32	0	3
Batch number: 13242022901A	Sample number(s): 7179335 UNSPK: P179156 BKG: P179156								
29b Sulfite in Water EPA377.1	83	75*	81-105	8*	5	11.5	10.5	9 (1)	20
Batch number: 13242162401B	Sample number(s): 7179337-7179339 BKG: P177754								
14a Moisture Content by 160.3						11.3	10.8	5	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: 7a SVOC SIM EPA 8270D
Batch number: 13243SLC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7179337	85	98	99
7179338	87	101	101
7179339	89	102	102
Blank	83	97	99
LCS	83	94	96
MS	86	100	99
MSD	74	84	89
Limits:	54-129	59-125	61-125

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13243WAJ026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7179334	95	103	107
7179335	100	101	109
Blank	81	86	95
LCS	88	85	103
LCSD	89	99	103
Limits:	44-137	62-141	51-136

*- 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: 1415082
Reported: 09/17/13 at 09:38 AM

Surrogate Quality Control

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13242A16A

	Trifluorotoluene-F
7179337	68
7179338	73
7179339	60
Blank	76
LCS	76
MS	72
MSD	70
Limits:	50-142

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13242A20A

	Trifluorotoluene-F
7179334	88
7179336	86
Blank	89
LCS	121
LCSD	121
Limits:	63-135

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 132420008A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7179337	82	86
7179338	84	90
7179339	80	86
Blank	78	87
LCS	85	92
MS	79	87
MSD	83	91
Limits:	50-130	20-120

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 132430008A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7179337	110	113
7179338	116	114
7179339	114	111
Blank	116	112
LCS	112	116
LCSD	123*	120
MS	108	109
MSD	101	108
Limits:	45-120	45-120

*- 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: 1415082
Reported: 09/17/13 at 09:38 AM

Surrogate Quality Control

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 132460019A

	2,4-Dichlorophenylacetic acid
7179337	57
7179338	58
7179339	59
Blank	56
LCS	73
MS	71
MSD	72
Limits:	50-150

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 132470014A

	2,4-Dichlorophenylacetic acid
7179334	62
Blank	54
LCS	73
LCSD	77
Limits:	50-150

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 132470019A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7179334	98	75
7179335	118	110
Blank	101	103
LCS	113	113
LCSD	124*	119
Limits:	45-120	45-120

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 132470020A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7179334	103	81
Blank	106	111
LCS	56*	53
LCSD	61	64
Limits:	60-140	20-120

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 132470006A

	Chlorobenzene	Orthoterphenyl
7179334	85	90

*- 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: 1415082
Reported: 09/17/13 at 09:38 AM

Surrogate Quality Control

7179335	88	97
Blank	93	94
LCS	86	91
LCSD	91	93
Limits:	45-126	69-119

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 132470022A

	Chlorobenzene	Orthoterphenyl
7179337	89	84
7179338	92	92
7179339	91	94
Blank	86	91
LCS	95	100
MS	94	95
MSD	95	99
Limits:	37-125	66-123

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13248004

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
7179334	71	90	69	71	69	71
7179335	71	83	66	64	67	67
Blank	74	98	88	87	88	88
OPR	67	90	81	81	80	80
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
7179334	66	62	45	85	76	78
7179335	57	57	53	80	76	76
Blank	85	81	75	85	78	78
OPR	79	76	70	81	73	73
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
7179334	76	71	56	79	89
7179335	75	68	58	75	78
Blank	78	76	71	85	99
OPR	73	71	68	78	90
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 1415082 7179334-39

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 8/28/2013
CarrierName: FedEx
AirbillNo: 796569341835

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130828-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate Confirm 6850/6860	Perchlorate 314.0/331	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
EB3-082813	8/28/13 15:00	WQ	HCl	2 - 1 L Amber	10 day																					X											Subarea 8
EB3-082813	8/28/13 15:00	WQ	None	4 - 1 L Amber	10 day									X							X																Subarea 8

Special Instructions:

Sampler: Pam Hartman

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
[illegible]	08/28/2013	1600									
									[illegible]	8-29-13	0910

COC Rev 2

COC: 20130828-03, Page 1 of 1

1 of 1

13013 1415082 7179334-39

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 8/28/2013
CarrierName: FedEx
AirbillNo: 796569341835

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130828-04
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate Confirm 6850/6860	Perchlorate 314.0/331	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
EB4-082813	8/28/13 15:30	WQ	HCl	2 - 1 L Amber	10 day																					X											Subarea 8
EB4-082813	8/28/13 15:30	WQ	None	2 - 1 L Amber	10 day										X																						Subarea 8
EB3-082813	8/28/13 15:00	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	X		X																													Subarea 8
EB3-082813	8/28/13 15:00	WQ	None	3 - 250 mL Amber	10 day							X			X							X															Subarea 8
EB3-082813	8/28/13 15:00	WQ	None	1 - 250 mL Poly	10 day														X																		Subarea 8
EB3-082813	8/28/13 15:00	WQ	HCl	3 - 40 mL Vial	10 day																			X													Subarea 8
EB4-082813	8/28/13 15:30	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	X		X																													Subarea 8
EB4-082813	8/28/13 15:30	WQ	None	2 - 250 mL Amber	10 day							X			X																						Subarea 8
EB4-082813	8/28/13 15:30	WQ	None	1 - 250 mL Poly	10 day														X																		Subarea 8
EB4-082813	8/28/13 15:30	WQ	None	2 - 250 mL Poly	10 day				X																												Inorganics method EPA 300.0 for Nitrite
EB4-082813	8/28/13 15:30	WQ	None	2 - 40 mL Vial	10 day				X																												as NO3, fluoride, sulfate, sulfite.(Subarea 8

Special Instructions:

Sampler: Pat Hart

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
[illegible]	08/28/2013	1600									
									[illegible]	8-29-13	0915

COC Rev 2

COC: 20130828-04, Page 1 of 1

13013 1415082 7179334-39

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 8/28/2013
CarrierName: FedEx
AirbillNo: 796569341835

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130828-06
Cooler #: 4
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate 314.0/331	Perchlorate Confirm 6850/6860	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
TB1-082813	8/28/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day																				X												Subarea 8
SL-553-SA8-SB-9.0-10.0	8/28/13 07:30	SO	None	2 - 16 oz glass	10 day	X	X					X			X			X			X	X				X											Subarea 8
SL-553-SA8-SB-9.0-10.0	8/28/13 07:30	SO	None	2 - Encore	10 day																				X												Subarea 8
SL-553-SA8-SB-14.0-15.0	8/28/13 07:40	SO	None	2 - 16 oz glass	10 day	X	X					X			X			X			X	X				X											Subarea 8
SL-553-SA8-SB-14.0-15.0	8/28/13 07:40	SO	None	2 - Encore	10 day																				X												Subarea 8
SL-553-SA8-SB-18.0-19.0	8/28/13 07:50	SO	None	2 - 16 oz glass	10 day	X	X					X			X			X			X	X				X											Subarea 8
SL-553-SA8-SB-18.0-19.0	8/28/13 07:50	SO	None	2 - Encore	10 day																				X												Subarea 8

Special Instructions:

Sampler: V. Gardner

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
[illegible]	8/28/2013	1600									
									[illegible]	8-29-13	0915

COC Rev 2

COC: 20130828-06, Page 1 of 1

eurofins | Lancaster Laboratories

Environmental Sample Administration Receipt Documentation Log

1415082

Client/Project: CDM Smith

Date of Receipt: 8-29-13

Time of Receipt: 0915

Source Code: So

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT146	1.3	TB	WI	Y	B	
2	↓	1.9	↓	↓	↓	↓	
3	↓	0.7	↓	↓	↓	↓	
4	↓	1.4	↓	↓	↓	↓	
5	↓	1.5	↓	↓	↓	↓	
6							

Number of Trip Blanks received NOT listed on chain of custody: Ø

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 5200 **Date/Time:** 8-29-13 1200

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories Environmental

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)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< 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

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 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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC 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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL 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 Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

SAMPLE DELIVERY GROUP

PH097

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

September 12, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 08/30/2013
Group Number: 1415397
SDG: PH097
PO Number: 1204-002-001-AL
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
SL-604-SA8-SB-0.0-0.5 Soil	7180868
SL-604-SA8-SB-0.0-0.5MS Soil	7180869
SL-604-SA8-SB-0.0-0.5MSD Soil	7180870
SL-604-SA8-SB-0.0-0.5DUP Soil	7180871
SL-904-SA8-SB-0.0-0.5 Soil	7180872
SL-605-SA8-SB-0.0-0.5 Soil	7180873

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

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180868
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	1,980		39.8	7.18	1
06944	Antimony	7440-36-0	3.98	U	3.98	0.737	1
06935	Arsenic	7440-38-2	1.97	J	3.98	0.697	1
06946	Barium	7440-39-3	59.4		0.996	0.0329	1
06947	Beryllium	7440-41-7	0.996	U	0.996	0.0667	1
07914	Boron	7440-42-8	4.65	J	9.96	0.837	1
06949	Cadmium	7440-43-9	0.110	J	0.996	0.0757	1
01650	Calcium	7440-70-2	358,000		199	33.3	10
06951	Chromium	7440-47-3	2.89	J	2.99	0.159	1
06952	Cobalt	7440-48-4	0.584	J	0.996	0.0986	1
06953	Copper	7440-50-8	2.11	J	9.96	1.44	5
01654	Iron	7439-89-6	1,750		39.8	3.61	1
06955	Lead	7439-92-1	3.47	J	14.9	2.49	5
01656	Lithium	7439-93-2	3.8	J	19.9	1.7	5
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01657	Magnesium	7439-95-4	1,930		9.96	1.66	1
06958	Manganese	7439-96-5	31.9		0.996	0.0827	1
06960	Molybdenum	7439-98-7	0.341	J	1.99	0.169	1
06961	Nickel	7440-02-0	2.14		1.99	0.129	1
10145	Phosphorus	7723-14-0	146		49.8	14.4	5
01662	Potassium	7440-09-7	325		99.6	8.31	1
01667	Sodium	7440-23-5	152		99.6	16.6	1
06969	Tin	7440-31-5	1.84	J	9.96	0.219	1
06970	Titanium	7440-32-6	73.0		0.996	0.169	1
06971	Vanadium	7440-62-2	5.27		0.996	0.129	1
06972	Zinc	7440-66-6	6.43	J	19.9	0.996	5
10146	Zirconium	7440-67-7	1.26	J	4.98	0.837	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.398	U	0.398	0.0996	2
06142	Silver	7440-22-4	0.199	U	0.199	0.0259	2
06144	Strontium	7440-24-6	189		1.99	0.339	10
06145	Thallium	7440-28-0	0.199	U	0.199	0.0299	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0165	U	0.0165	0.0099	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	1a Anions by 300.0-Fluoride	16984-48-8	0.87	J	1.0	0.40	1
07334	1a Anions by 300.0-Nitrite	14797-65-0	1.0	U	1.0	0.80	1
07338	1a Anions by 300.0-Sulfate	14808-79-8	10.7		5.0	5.0	1
	EPA 377.1		**mg/kg**		**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	101	U	101	30.2	1
	SW-846 9045D modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.88		0.0100	0.0100	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180868
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**	**Std. Units**	**Std. Units**	
	The pH was measured in water at 21.8 C.					
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	0.60	0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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
01643	Aluminum	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013	18:36	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013	18:11	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013	18:11	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013	18:11	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013	18:11	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013	18:11	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013	04:35	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013	00:18	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013	00:18	David K Beck	2
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013	21:12	David K Beck	10

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180868
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013 00:18	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013 10:04	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013 10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013 13:20	Denise K Conners	1
07332	1a Anions by 300.0-Fluoride	EPA 300.0	1	13254254201A	09/11/2013 23:34	Sandra J Miller	1
07334	1a Anions by 300.0-Nitrite	EPA 300.0	1	13254254201A	09/11/2013 23:34	Sandra J Miller	1
07338	1a Anions by 300.0-Sulfate	EPA 300.0	1	13254254201A	09/11/2013 23:34	Sandra J Miller	1
01352	1b Anions by 300.0 - Extract.	EPA 300.0	2	13254254201A	09/11/2013 06:40	Nancy J Shoop	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013 19:30	Michelle L Lalli	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13242039402A	08/30/2013 20:40	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	Scott W Freisher	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180869
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	3,500	39.5	7.11	1
06944	Antimony	7440-36-0	54.5	3.95	0.730	1
06935	Arsenic	7440-38-2	18.8	3.95	0.690	1
06946	Barium	7440-39-3	249	0.986	0.0325	1
06947	Beryllium	7440-41-7	4.66	0.986	0.0661	1
07914	Boron	7440-42-8	207	9.86	0.829	1
06949	Cadmium	7440-43-9	4.79	0.986	0.0750	1
01650	Calcium	7440-70-2	359,000	197	32.9	10
06951	Chromium	7440-47-3	22.7	2.96	0.158	1
06952	Cobalt	7440-48-4	47.1	0.986	0.0976	1
06953	Copper	7440-50-8	29.1	9.86	1.43	5
01654	Iron	7439-89-6	2,480	39.5	3.57	1
06955	Lead	7439-92-1	18.0	14.8	2.47	5
01656	Lithium	7439-93-2	115	19.7	1.7	5
01657	Magnesium	7439-95-4	2,030	9.86	1.65	1
06958	Manganese	7439-96-5	88.0	0.986	0.0819	1
06960	Molybdenum	7439-98-7	200	1.97	0.168	1
06961	Nickel	7440-02-0	49.1	1.97	0.128	1
10145	Phosphorus	7723-14-0	258	49.3	14.3	5
01662	Potassium	7440-09-7	1,860	98.6	8.23	1
01667	Sodium	7440-23-5	1,260	98.6	16.5	1
06969	Tin	7440-31-5	381	9.86	0.217	1
06970	Titanium	7440-32-6	235	0.986	0.168	1
06971	Vanadium	7440-62-2	54.5	0.986	0.128	1
06972	Zinc	7440-66-6	62.4	19.7	0.986	5
10146	Zirconium	7440-67-7	101	4.93	0.829	1
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	2.15	0.395	0.0986	2
06142	Silver	7440-22-4	9.29	0.197	0.0256	2
06144	Strontium	7440-24-6	152	1.97	0.335	10
06145	Thallium	7440-28-0	0.439	0.197	0.0296	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.191	0.0160	0.0096	1
Wet Chemistry	**EPA 300.0**		**mg/kg**	**mg/kg**	**mg/kg**	
07332	1a Anions by 300.0-Fluoride	16984-48-8	3.5	1.0	0.40	1
07334	1a Anions by 300.0-Nitrite	14797-65-0	5.5	1.0	0.80	1
07338	1a Anions by 300.0-Sulfate	14808-79-8	38.2	5.0	5.0	1
	EPA 377.1		**mg/kg**	**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	785	101	30.2	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	14a Moisture Content by 160.3	n.a.	0.60	0.10	0.10	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180869
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01MS

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 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013 18:56	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013 18:23	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013 18:23	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013 18:23	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013 18:23	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013 18:23	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013 04:47	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013 00:25	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013 00:25	David K Beck	2
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013 21:17	David K Beck	10
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013 00:25	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013 10:10	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013 10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013 13:20	Denise K Conners	1
07332	1a Anions by 300.0-Fluoride	EPA 300.0	1	13254254201A	09/12/2013 00:06	Sandra J Miller	1
07334	1a Anions by 300.0-Nitrite	EPA 300.0	1	13254254201A	09/12/2013 00:06	Sandra J Miller	1
07338	1a Anions by 300.0-Sulfate	EPA 300.0	1	13254254201A	09/12/2013 00:06	Sandra J Miller	1
01352	1b Anions by 300.0 - Extract.	EPA 300.0	2	13254254201A	09/11/2013 06:40	Nancy J Shoop	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013 19:30	Michelle L Lalli	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180869
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11625	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	Scott W Freisher	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180870
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	3,510	39.8	7.18	1
06944	Antimony	7440-36-0	53.7	3.98	0.737	1
06935	Arsenic	7440-38-2	19.7	3.98	0.697	1
06946	Barium	7440-39-3	250	0.996	0.0329	1
06947	Beryllium	7440-41-7	4.70	0.996	0.0667	1
07914	Boron	7440-42-8	208	9.96	0.837	1
06949	Cadmium	7440-43-9	4.80	0.996	0.0757	1
01650	Calcium	7440-70-2	387,000	199	33.3	10
06951	Chromium	7440-47-3	22.7	2.99	0.159	1
06952	Cobalt	7440-48-4	47.3	0.996	0.0986	1
06953	Copper	7440-50-8	29.1	9.96	1.44	5
01654	Iron	7439-89-6	2,550	39.8	3.61	1
06955	Lead	7439-92-1	18.4	14.9	2.49	5
01656	Lithium	7439-93-2	115	19.9	1.7	5
01657	Magnesium	7439-95-4	1,970	9.96	1.66	1
06958	Manganese	7439-96-5	88.6	0.996	0.0827	1
06960	Molybdenum	7439-98-7	200	1.99	0.169	1
06961	Nickel	7440-02-0	49.1	1.99	0.129	1
10145	Phosphorus	7723-14-0	232	49.8	14.4	5
01662	Potassium	7440-09-7	1,780	99.6	8.31	1
01667	Sodium	7440-23-5	1,260	99.6	16.6	1
06969	Tin	7440-31-5	382	9.96	0.219	1
06970	Titanium	7440-32-6	228	0.996	0.169	1
06971	Vanadium	7440-62-2	55.2	0.996	0.129	1
06972	Zinc	7440-66-6	61.7	19.9	0.996	5
10146	Zirconium	7440-67-7	102	4.98	0.837	1
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	2.11	0.398	0.0996	2
06142	Silver	7440-22-4	9.29	0.199	0.0259	2
06144	Strontium	7440-24-6	124	1.99	0.339	10
06145	Thallium	7440-28-0	0.406	0.199	0.0299	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.185	0.0160	0.0096	1
Wet Chemistry	**EPA 377.1**		**mg/kg**	**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	775	101	30.2	1
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	14a Moisture Content by 160.3	n.a.	0.60	0.10	0.10	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.

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

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180870
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
01643	Aluminum	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013	19:00	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013	18:27	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013	18:27	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013	18:27	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013	18:27	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013	18:27	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013	04:52	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013	00:27	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013	00:27	David K Beck	2
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013	21:19	David K Beck	10
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013	00:27	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013	10:12	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013	10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013	13:20	Denise K Conners	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013	19:30	Michelle L Lalli	1
11625	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013	21:50	Scott W Freisher	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5DUP Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180871
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01DUP

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	2,620		39.8	7.18	1
06944	Antimony	7440-36-0	3.98	U	3.98	0.737	1
06935	Arsenic	7440-38-2	1.44	J	3.98	0.697	1
06946	Barium	7440-39-3	59.4		0.996	0.0329	1
06947	Beryllium	7440-41-7	0.996	U	0.996	0.0667	1
07914	Boron	7440-42-8	5.10	J	9.96	0.837	1
06949	Cadmium	7440-43-9	0.139	J	0.996	0.0757	1
01650	Calcium	7440-70-2	346,000		199	33.3	10
06951	Chromium	7440-47-3	3.82		2.99	0.159	1
06952	Cobalt	7440-48-4	0.911	J	0.996	0.0986	1
06953	Copper	7440-50-8	2.83	J	9.96	1.44	5
01654	Iron	7439-89-6	2,520		39.8	3.61	1
06955	Lead	7439-92-1	2.78	J	14.9	2.49	5
01656	Lithium	7439-93-2	3.3	J	19.9	1.7	5
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01657	Magnesium	7439-95-4	1,970		9.96	1.66	1
06958	Manganese	7439-96-5	41.0		0.996	0.0827	1
06960	Molybdenum	7439-98-7	0.170	J	1.99	0.169	1
06961	Nickel	7440-02-0	2.82		1.99	0.129	1
10145	Phosphorus	7723-14-0	142		49.8	14.4	5
01662	Potassium	7440-09-7	420		99.6	8.31	1
01667	Sodium	7440-23-5	146		99.6	16.6	1
06969	Tin	7440-31-5	1.71	J	9.96	0.219	1
06970	Titanium	7440-32-6	101		0.996	0.169	1
06971	Vanadium	7440-62-2	7.04		0.996	0.129	1
06972	Zinc	7440-66-6	8.54	J	19.9	0.996	5
10146	Zirconium	7440-67-7	1.52	J	4.98	0.837	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.101	J	0.398	0.0996	2
06142	Silver	7440-22-4	0.0299	J	0.199	0.0259	2
06144	Strontium	7440-24-6	180		1.99	0.339	10
06145	Thallium	7440-28-0	0.199	U	0.199	0.0299	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0165	U	0.0165	0.0099	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	1a Anions by 300.0-Fluoride	16984-48-8	0.82	J	1.0	0.40	1
07334	1a Anions by 300.0-Nitrite	14797-65-0	1.0	U	1.0	0.80	1
07338	1a Anions by 300.0-Sulfate	14808-79-8	9.0		5.0	5.0	1
	EPA 377.1		**mg/kg**		**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	101	U	101	30.2	1
	SW-846 9045D modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.80		0.0100	0.0100	1

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

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5DUP Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180871
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01DUP

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**	**Std. Units**	**Std. Units**	
	The pH was measured in water at 21.7 C.					
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11625	14a Moisture Content by 160.3	n.a.	0.60	0.10	0.10	1
11626	14a Moisture Content by 160.3	n.a.	0.56	0.10	0.10	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.					

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 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013	18:44	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013	18:19	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013	18:19	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013	18:19	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013	18:19	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013	18:19	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013	04:43	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013	00:23	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013	00:23	David K Beck	2

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-604-SA8-SB-0.0-0.5DUP Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180871
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:40 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60400 SDG#: PH097-01DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013 21:15	David K Beck	10
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013 00:23	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013 10:08	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013 10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013 13:20	Denise K Conners	1
07332	1a Anions by 300.0-Fluoride	EPA 300.0	1	13254254201A	09/11/2013 23:50	Sandra J Miller	1
07334	1a Anions by 300.0-Nitrite	EPA 300.0	1	13254254201A	09/11/2013 23:50	Sandra J Miller	1
07338	1a Anions by 300.0-Sulfate	EPA 300.0	1	13254254201A	09/11/2013 23:50	Sandra J Miller	1
01352	1b Anions by 300.0 - Extract.	EPA 300.0	2	13254254201A	09/11/2013 06:40	Nancy J Shoop	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013 19:30	Michelle L Lalli	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13242039402A	08/30/2013 20:40	Luz M Groff	1
11625	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	Scott W Freisher	1
11626	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	Scott W Freisher	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-904-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180872
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:45 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

90400 SDG#: PH097-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	3,310		39.1	7.05	1
06944	Antimony	7440-36-0	3.91	U	3.91	0.724	1
06935	Arsenic	7440-38-2	2.78	J	3.91	0.685	1
06946	Barium	7440-39-3	58.6		0.978	0.0323	1
06947	Beryllium	7440-41-7	0.978	U	0.978	0.0655	1
07914	Boron	7440-42-8	5.52	J	9.78	0.822	1
06949	Cadmium	7440-43-9	0.174	J	0.978	0.0743	1
01650	Calcium	7440-70-2	305,000		196	32.7	10
06951	Chromium	7440-47-3	4.73		2.93	0.157	1
06952	Cobalt	7440-48-4	1.43		0.978	0.0968	1
06953	Copper	7440-50-8	3.39	J	9.78	1.42	5
01654	Iron	7439-89-6	3,540		39.1	3.54	1
06955	Lead	7439-92-1	2.97	J	14.7	2.45	5
01656	Lithium	7439-93-2	5.5	J	19.6	1.7	5
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01657	Magnesium	7439-95-4	2,160		9.78	1.63	1
06958	Manganese	7439-96-5	59.1		0.978	0.0812	1
06960	Molybdenum	7439-98-7	1.96	U	1.96	0.166	1
06961	Nickel	7440-02-0	3.83		1.96	0.127	1
10145	Phosphorus	7723-14-0	140		48.9	14.1	5
01662	Potassium	7440-09-7	480		97.8	8.16	1
01667	Sodium	7440-23-5	132		97.8	16.3	1
06969	Tin	7440-31-5	1.72	J	9.78	0.215	1
06970	Titanium	7440-32-6	120		0.978	0.166	1
06971	Vanadium	7440-62-2	9.27		0.978	0.127	1
06972	Zinc	7440-66-6	11.8	J	19.6	0.978	5
10146	Zirconium	7440-67-7	0.963	J	4.89	0.822	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.114	J	0.391	0.0978	2
06142	Silver	7440-22-4	0.0382	J	0.196	0.0254	2
06144	Strontium	7440-24-6	185		1.96	0.333	10
06145	Thallium	7440-28-0	0.0378	J	0.196	0.0293	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0164	U	0.0164	0.0098	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	1a Anions by 300.0-Fluoride	16984-48-8	1.4		1.0	0.40	1
07334	1a Anions by 300.0-Nitrite	14797-65-0	1.0	U	1.0	0.80	1
07338	1a Anions by 300.0-Sulfate	14808-79-8	13.3		5.0	5.0	1
	EPA 377.1		**mg/kg**		**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	101	U	101	30.2	1
	SW-846 9045D modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.99		0.0100	0.0100	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-904-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180872
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:45 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

90400 SDG#: PH097-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**	**Std. Units**	**Std. Units**	
	The pH was measured in water at 21.6 C.					
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	0.75	0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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
01643	Aluminum	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013	19:24	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013	19:20	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013	19:20	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013	19:20	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013	19:20	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013	19:20	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013	05:46	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013	00:58	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013	00:58	David K Beck	2
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013	21:24	David K Beck	10

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-904-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180872
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:45 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

90400 SDG#: PH097-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013 00:58	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013 10:14	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013 10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013 13:20	Denise K Conners	1
07332	1a Anions by 300.0-Fluoride	EPA 300.0	1	13254254201A	09/12/2013 00:22	Sandra J Miller	1
07334	1a Anions by 300.0-Nitrite	EPA 300.0	1	13254254201A	09/12/2013 00:22	Sandra J Miller	1
07338	1a Anions by 300.0-Sulfate	EPA 300.0	1	13254254201A	09/12/2013 00:22	Sandra J Miller	1
01352	1b Anions by 300.0 - Extract.	EPA 300.0	2	13254254201A	09/11/2013 06:40	Nancy J Shoop	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013 19:30	Michelle L Lalli	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13242039402A	08/30/2013 20:40	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	Scott W Freisher	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-605-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180873
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:30 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60500 SDG#: PH097-03*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	2,680		40.3	7.26	1
06944	Antimony	7440-36-0	4.03	U	4.03	0.745	1
06935	Arsenic	7440-38-2	2.05	J	4.03	0.705	1
06946	Barium	7440-39-3	69.2		1.01	0.0332	1
06947	Beryllium	7440-41-7	1.01	U	1.01	0.0674	1
07914	Boron	7440-42-8	5.77	J	10.1	0.845	1
06949	Cadmium	7440-43-9	0.211	J	1.01	0.0765	1
01650	Calcium	7440-70-2	323,000		201	33.6	10
06951	Chromium	7440-47-3	4.11		3.02	0.161	1
06952	Cobalt	7440-48-4	0.961	J	1.01	0.0996	1
06953	Copper	7440-50-8	4.91	J	10.1	1.46	5
01654	Iron	7439-89-6	2,840		40.3	3.64	1
06955	Lead	7439-92-1	4.73	J	15.1	2.52	5
01656	Lithium	7439-93-2	4.3	J	20.1	1.7	5
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01657	Magnesium	7439-95-4	2,460		10.1	1.68	1
06958	Manganese	7439-96-5	47.0		1.01	0.0835	1
06960	Molybdenum	7439-98-7	2.01	U	2.01	0.171	1
06961	Nickel	7440-02-0	3.08		2.01	0.131	1
10145	Phosphorus	7723-14-0	186		50.3	14.5	5
01662	Potassium	7440-09-7	621		101	8.39	1
01667	Sodium	7440-23-5	168		101	16.8	1
06969	Tin	7440-31-5	2.10	J	10.1	0.221	1
06970	Titanium	7440-32-6	126		1.01	0.171	1
06971	Vanadium	7440-62-2	7.62		1.01	0.131	1
06972	Zinc	7440-66-6	19.5	J	20.1	1.01	5
10146	Zirconium	7440-67-7	5.03	U	5.03	0.845	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.124	J	0.403	0.101	2
06142	Silver	7440-22-4	0.227		0.201	0.0262	2
06144	Strontium	7440-24-6	209		2.01	0.342	10
06145	Thallium	7440-28-0	0.0469	J	0.201	0.0302	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0162	U	0.0162	0.0097	1
Wet Chemistry	**EPA 300.0**		**mg/kg**		**mg/kg**	**mg/kg**	
07332	1a Anions by 300.0-Fluoride	16984-48-8	1.1		1.0	0.40	1
07334	1a Anions by 300.0-Nitrite	14797-65-0	1.0	U	1.0	0.80	1
07338	1a Anions by 300.0-Sulfate	14808-79-8	9.8		5.0	5.0	1
	EPA 377.1		**mg/kg**		**mg/kg**	**mg/kg**	
00229	32a Sulfite in Soil EPA 377.1	14265-45-3	101	U	101	30.2	1
	SW-846 9045D modified		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.89		0.0100	0.0100	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-605-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180873
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:30 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60500 SDG#: PH097-03*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**	**Std. Units**	**Std. Units**	
	The pH was measured in water at 21.7 C.					
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	0.65	0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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
01643	Aluminum	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06944	Antimony	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06935	Arsenic	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06946	Barium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06947	Beryllium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
07914	Boron	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06949	Cadmium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
01650	Calcium	SW-846 6010C	1	132420637001	09/04/2013	19:33	John P Hook	10
06951	Chromium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06952	Cobalt	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06953	Copper	SW-846 6010C	1	132420637001	09/04/2013	19:28	John P Hook	5
01654	Iron	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06955	Lead	SW-846 6010C	1	132420637001	09/04/2013	19:28	John P Hook	5
01656	Lithium	SW-846 6010C	1	132420637001	09/04/2013	19:28	John P Hook	5
01657	Magnesium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06958	Manganese	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06960	Molybdenum	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06961	Nickel	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
10145	Phosphorus	SW-846 6010C	1	132420637001	09/04/2013	19:28	John P Hook	5
01662	Potassium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
01667	Sodium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06969	Tin	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06970	Titanium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06971	Vanadium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06972	Zinc	SW-846 6010C	1	132420637001	09/04/2013	19:28	John P Hook	5
10146	Zirconium	SW-846 6010C	1	132420637001	09/04/2013	05:50	Tara L Snyder	1
06141	Selenium	SW-846 6020A	1	132420637001B	09/05/2013	01:00	David K Beck	2
06142	Silver	SW-846 6020A	1	132420637001A	09/05/2013	01:00	David K Beck	2
06144	Strontium	SW-846 6020A	1	132420637001A	09/10/2013	21:26	David K Beck	10

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-605-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7180873
LL Group # 1415397
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 08/29/2013 07:30 by VC

Submitted: 08/30/2013 09:15
Reported: 09/12/2013 16:29

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60500 SDG#: PH097-03*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132420637001A	09/05/2013 01:00	David K Beck	2
00159	3a Mercury 7471A	SW-846 7471B	1	132420638001	09/04/2013 10:17	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132420637001	09/03/2013 10:15	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132420638001	09/03/2013 13:20	Denise K Conners	1
07332	1a Anions by 300.0-Fluoride	EPA 300.0	1	13254254201A	09/12/2013 00:39	Sandra J Miller	1
07334	1a Anions by 300.0-Nitrite	EPA 300.0	1	13254254201A	09/12/2013 00:39	Sandra J Miller	1
07338	1a Anions by 300.0-Sulfate	EPA 300.0	1	13254254201A	09/12/2013 00:39	Sandra J Miller	1
01352	1b Anions by 300.0 - Extract.	EPA 300.0	2	13254254201A	09/11/2013 06:40	Nancy J Shoop	1
00229	32a Sulfite in Soil EPA 377.1	EPA 377.1	1	13242022902A	08/30/2013 19:30	Michelle L Lalli	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13242039402A	08/30/2013 20:40	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13248162401A	09/06/2013 21:50	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: 1415397
Reported: 09/12/13 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 LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132420637001	Sample number(s): 7180868-7180873									
Aluminum	40.0	U	40.0	7.21	mg/kg	106		80-120		
Antimony	4.00	U	4.00	0.740	mg/kg	107		80-120		
Arsenic	4.00	U	4.00	0.700	mg/kg	104		80-120		
Barium	1.00	U	1.00	0.0330	mg/kg	102		80-120		
Beryllium	1.00	U	1.00	0.0670	mg/kg	102		80-120		
Boron	10.0	U	10.0	0.840	mg/kg	100		80-120		
Cadmium	1.00	U	1.00	0.0760	mg/kg	104		80-120		
Calcium	9.35	J	20.0	3.34	mg/kg	103		80-120		
Chromium	3.00	U	3.00	0.160	mg/kg	105		80-120		
Cobalt	1.00	U	1.00	0.0990	mg/kg	104		80-120		
Copper	2.00	U	2.00	0.290	mg/kg	104		80-120		
Iron	40.0	U	40.0	3.62	mg/kg	102		80-120		
Lead	3.00	U	3.00	0.500	mg/kg	106		80-120		
Lithium	4.0	U	4.0	0.34	mg/kg	104		80-120		
Magnesium	10.0	U	10.0	1.67	mg/kg	102		80-120		
Manganese	1.00	U	1.00	0.0830	mg/kg	103		80-120		
Molybdenum	2.00	U	2.00	0.170	mg/kg	105		80-120		
Nickel	2.00	U	2.00	0.130	mg/kg	106		80-120		
Phosphorus	10.0	U	10.0	2.89	mg/kg	106		80-120		
Potassium	100 U		100.	8.34	mg/kg	102		80-120		
Sodium	100 U		100.	16.7	mg/kg	101		80-120		
Tin	1.64	J	10.0	0.220	mg/kg	105		80-120		
Titanium	1.00	U	1.00	0.170	mg/kg	106		80-120		
Vanadium	1.00	U	1.00	0.130	mg/kg	101		80-120		
Zinc	0.416	J	4.00	0.200	mg/kg	104		80-120		
Zirconium	5.00	U	5.00	0.840	mg/kg	105		80-120		
Batch number: 132420637001A	Sample number(s): 7180868-7180873									
Silver	0.200	U	0.200	0.0260	mg/kg	107		80-120		
Strontium	0.400	U	0.400	0.0680	mg/kg	104		80-120		
Thallium	0.200	U	0.200	0.0300	mg/kg	110		80-120		
Batch number: 132420637001B	Sample number(s): 7180868-7180873									
Selenium	0.400	U	0.400	0.100	mg/kg	108		80-120		
Batch number: 132420638001	Sample number(s): 7180868-7180873									
3a Mercury 7471A	0.0167	U	0.0167	0.0100	mg/kg	110		85-120		
Batch number: 13254254201A	Sample number(s): 7180868-7180869,7180871-7180873									
1a Anions by 300.0-Fluoride	1.0	U	1.0	0.40	mg/kg	105		90-110		
1a Anions by 300.0-Nitrite	1.0	U	1.0	0.80	mg/kg	105		90-110		

*- 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: 1415397
Reported: 09/12/13 at 04:29 PM

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1a Anions by 300.0-Sulfate	5.0 U	5.0	5.0	mg/kg	109		90-110		
Batch number: 13242022902A	Sample number(s): 7180868-7180873								
32a Sulfite in Soil EPA 377.1	100 U	100.	30.0	mg/kg	91		80-120		
Batch number: 13242039402A	Sample number(s): 7180868,7180871-7180873								
15a pH by 9045D					100		95-105		
Batch number: 13248162401A	Sample number(s): 7180868-7180873								
14a Moisture Content by 160.3					100		80-120		
14a Moisture Content by 160.3					100		80-120		
14a 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: 132420637001	Sample number(s): 7180868-7180873 UNSPK: 7180868 BKG: 7180868								
Aluminum	772 (2)	769 (2)	75-125	0	20	1,970	2,600	28*	20
Antimony	111	108	75-125	1	20	3.96 U	3.96 U	0 (1)	20
Arsenic	114	118	75-125	5	20	1.96 J	1.44 J	31* (1)	20
Barium	96	95	75-125	0	20	59.1	59.0	0	20
Beryllium	95	94	75-125	1	20	0.990 U	0.990 U	0 (1)	20
Boron	103	102	75-125	1	20	4.62 J	5.07 J	9 (1)	20
Cadmium	95	94	75-125	0	20	0.109 J	0.139 J	24* (1)	20
Calcium	263 (2)	7244 (2)	75-125	7	20	356,000	344,000	4	20
Chromium	100	99	75-125	0	20	2.87 J	3.79	28* (1)	20
Cobalt	94	94	75-125	0	20	0.580 J	0.906 J	44* (1)	20
Copper	110	108	75-125	0	20	2.09 J	2.82 J	29* (1)	20
Iron	737 (2)	804 (2)	75-125	3	20	1,740	2,500	36*	20
Lead	98	100	75-125	2	20	3.45 J	2.77 J	22* (1)	20
Lithium	113	112	75-125	0	20	3.7 J	3.3 J	12 (1)	20
Magnesium	51 (2)	21 (2)	75-125	3	20	1,920	1,960	2	20
Manganese	114	114	75-125	1	20	31.7	40.7	25*	20
Molybdenum	101	100	75-125	0	20	0.339 J	0.169 J	67* (1)	20
Nickel	95	94	75-125	0	20	2.13	2.80	27* (1)	20
Phosphorus	113	86	75-125	10	20	146	141	3 (1)	20
Potassium	155*	146*	75-125	4	20	324	418	25* (1)	20
Sodium	113	111	75-125	0	20	151	145	4 (1)	20
Tin	96	96	75-125	0	20	1.83 J	1.70 J	7 (1)	20
Titanium	164*	156*	75-125	3	20	72.6	100	32*	20
Vanadium	100	100	75-125	1	20	5.24	7.00	29*	20
Zinc	114	111	75-125	1	20	6.40 J	8.49 J	28* (1)	20
Zirconium	101	102	75-125	2	20	1.26 J	1.51 J	18 (1)	20
Batch number: 132420637001A	Sample number(s): 7180868-7180873 UNSPK: 7180868 BKG: 7180868								
Silver	94	93	75-125	0	20	0.198 U	0.0297 J	200* (1)	20
Strontium	-469	-813	75-125	20	20	188	179	5	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: 1415397
Reported: 09/12/13 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 (2)	MSD %REC (2)	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Thallium	111	102	75-125	8	20	0.198 U	0.198 U	0 (1)	20
Batch number: 132420637001B	Sample number(s): 7180868-7180873 UNSPK: 7180868 BKG: 7180868								
Selenium	109	106	75-125	1	20	0.396 U	0.100 J	200* (1)	20
Batch number: 132420638001	Sample number(s): 7180868-7180873 UNSPK: 7180868 BKG: 7180868								
3a Mercury 7471A	120	116	65-135	3	20	0.0164 U	0.0164 U	0 (1)	20
Batch number: 13254254201A	Sample number(s): 7180868-7180869,7180871-7180873 UNSPK: 7180868 BKG: 7180868								
1a Anions by 300.0-Fluoride	52*		80-120			0.87 J	0.82 J	6 (1)	20
1a Anions by 300.0-Nitrite	109		80-120			1.0 U	1.0 U	0 (1)	20
1a Anions by 300.0-Sulfate	110		80-120			10.6	9.0	17 (1)	20
Batch number: 13242022902A	Sample number(s): 7180868-7180873 UNSPK: 7180868 BKG: 7180868								
32a Sulfite in Soil EPA 377.1	78*	77*	81-105	1	5	100 U	100 U	0 (1)	20
Batch number: 13242039402A	Sample number(s): 7180868,7180871-7180873 BKG: 7180868								
15a pH by 9045D						7.88	7.80	1	3
Batch number: 13248162401A	Sample number(s): 7180868-7180873 BKG: 7180868								
14a Moisture Content by 160.3						0.60	0.56	6	20
14a Moisture Content by 160.3						0.60	0.56	6	20
14a Moisture Content by 160.3						0.60	0.56	6	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.

SSFL Phase 3 Chain of Custody

13013 1415397 7180868-73

CDM Smith

DateShipped: 8/29/2013
CarrierName: FedEx
AirbillNo: 796579709926

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130829-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate 314.0/331	Perchlorate Confirm 6850/6860	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
SL-604-SA8-SB-0.0-0.5MS	8/29/13 07:40	SO	None	3 - 16 oz glass	10 day	X	X		X										X																		MS/MSD. Fluoride represents
SL-904-SA8-SB-0.0-0.5	8/29/13 07:45	SO	None	1 - 16 oz glass	10 day	X	X		X										X																		inorganics analysis EPA method 300.0 for
SL-605-SA8-SB-0.0-0.5	8/29/13 07:30	SO	None	1 - 16 oz glass	10 day	X	X		X										X																		Nitrite as NO3, fluoride, sulfate, sulfite.

Special Instructions:

Sampler: V. Cortes

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
Sky Mypel	08/29/2013	1600									
										8-30-13	0915

Subarea 8

eurofins | Lancaster Laboratories

Environmental Sample Administration Receipt Documentation Log

1415397

Client/Project: ODM Smith

Date of Receipt: 8-30-13

Time of Receipt: 0915

Source Code: 5.

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	D131	1.1	TB	WI	Y	B	
2	↓	1.7	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: Ø

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 3200 **Date/Time:** 8-30-13 1025

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories Environmental

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)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< 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

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 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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC 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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL 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 Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

SAMPLE DELIVERY GROUP

PH115

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

October 09, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 09/26/2013
Group Number: 1421812
SDG: PH115
PO Number: 1204-002-001-AL
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EB2-092513 Water	7213953

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

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins | Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
12971	Acenaphthene	83-32-9	0.051	U	0.051	0.010	1
12971	Acenaphthylene	208-96-8	0.051	U	0.051	0.010	1
12971	Anthracene	120-12-7	0.051	U	0.051	0.010	1
12971	Benzo(a)anthracene	56-55-3	0.051	U	0.051	0.010	1
12971	Benzo(a)pyrene	50-32-8	0.051	U	0.051	0.010	1
12971	Benzo(b)fluoranthene	205-99-2	0.051	U	0.051	0.010	1
12971	Benzo(e)pyrene	192-97-2	0.051	U	0.051	0.010	1
12971	Benzo(g,h,i)perylene	191-24-2	0.051	U	0.051	0.010	1
12971	Benzo(k)fluoranthene	207-08-9	0.051	U	0.051	0.010	1
12971	Butylbenzylphthalate	85-68-7	1.0	U	1.0	0.051	1
12971	Di-n-butylphthalate	84-74-2	0.15	J	1.0	0.051	1
12971	Chrysene	218-01-9	0.051	U	0.051	0.010	1
12971	Dibenz(a,h)anthracene	53-70-3	0.051	U	0.051	0.010	1
12971	Diethylphthalate	84-66-2	0.77	J	1.0	0.051	1
12971	Dimethylphthalate	131-11-3	1.0	U	1.0	0.051	1
12971	Bis(2-Ethylhexyl)phthalate	117-81-7	1.0	U	1.0	0.051	1
12971	Fluoranthene	206-44-0	0.051	U	0.051	0.010	1
12971	Fluorene	86-73-7	0.051	U	0.051	0.010	1
12971	Indeno(1,2,3-cd)pyrene	193-39-5	0.051	U	0.051	0.010	1
12971	1-Methylnaphthalene	90-12-0	0.051	U	0.051	0.010	1
12971	2-Methylnaphthalene	91-57-6	0.051	U	0.051	0.010	1
12971	Naphthalene	91-20-3	0.051	U	0.051	0.030	1
12971	N-Nitrosodimethylamine	62-75-9	0.051	U	0.051	0.010	1
12971	Di-n-octylphthalate	117-84-0	1.0	U	1.0	0.051	1
12971	Phenanthrene	85-01-8	0.051	U	0.051	0.030	1
12971	Pyrene	129-00-0	0.051	U	0.051	0.010	1
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	50	U	50	20	1
Herbicides	**SW-846 8151A**		**ug/l**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	0.48	U	0.48	0.15	1
10407	Dalapon	75-99-0	1.2	U	1.2	0.24	1
10407	2,4-DB	94-82-6	0.95	U	0.95	0.29	1
10407	Dicamba	1918-00-9	0.29	U	0.29	0.076	1
10407	Dinoseb	88-85-7	0.48	U	0.48	0.11	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10407	2,4-DP (Dichlorprop)	120-36-5	0.48	U	0.48	0.15	1
10407	MCPA	94-74-6	190	U	190	48	1
10407	MCPP	93-65-2	190	U	190	48	1
10407	2,4,5-T	93-76-5	0.048	U	0.048	0.014	1
10407	2,4,5-TP	93-72-1	0.048	U	0.048	0.0095	1
Pesticides/PCBs	**SW-846 8081B**		**ug/l**		**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	0.0083	U	0.0083	0.0017	1
10589	Alpha BHC	319-84-6	0.0083	U	0.0083	0.0025	1
10589	Beta BHC	319-85-7	0.0083	U	0.0083	0.0028	1
10589	Gamma BHC - Lindane	58-89-9	0.0083	U	0.0083	0.0017	1
10589	Chlordane	57-74-9	0.41	U	0.41	0.13	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/l**		**ug/l**	**ug/l**	
10589	p,p-DDD	72-54-8	0.017	U	0.017	0.0041	1
10589	p,p-DDE	72-55-9	0.017	U	0.017	0.0041	1
10589	p,p-DDT	50-29-3	0.017	U	0.017	0.0043	1
10589	Delta BHC	319-86-8	0.0083	U	0.0083	0.0028	1
10589	Dieldrin	60-57-1	0.017	U	0.017	0.0044	1
10589	Endosulfan I	959-98-8	0.0083	U	0.0083	0.0036	1
10589	Endosulfan II	33213-65-9	0.017	U	0.017	0.012	1
10589	Endosulfan Sulfate	1031-07-8	0.017	U	0.017	0.0048	1
10589	Endrin	72-20-8	0.017	U	0.017	0.0067	1
10589	Endrin Aldehyde	7421-93-4	0.083	U	0.083	0.017	1
10589	Endrin Ketone	53494-70-5	0.017	U	0.017	0.0041	1
10589	Heptachlor	76-44-8	0.0083	U	0.0083	0.0017	1
10589	Heptachlor Epoxide	1024-57-3	0.0083	U	0.0083	0.0019	1
10589	Methoxychlor	72-43-5	0.083	U	0.083	0.025	1
10589	Mirex	2385-85-5	0.041	U	0.041	0.0083	1
10589	Toxaphene	8001-35-2	2.5	U	2.5	0.83	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 the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Pesticides/PCBs	**SW-846 8082A**		**ug/l**		**ug/l**	**ug/l**	
13092	Aroclor 5432	63496-31-1	0.41	U	0.41	0.083	1
13092	Aroclor 5442	12642-23-8	0.41	U	0.41	0.083	1
13092	Aroclor 5460	11126-42-4	0.41	U	0.41	0.091	1
13092	PCB-1016	12674-11-2	0.41	U	0.41	0.083	1
13092	PCB-1221	11104-28-2	0.41	U	0.41	0.083	1
13092	PCB-1232	11141-16-5	0.41	U	0.41	0.17	1
13092	PCB-1242	53469-21-9	0.41	U	0.41	0.083	1
13092	PCB-1248	12672-29-6	0.41	U	0.41	0.083	1
13092	PCB-1254	11097-69-1	0.41	U	0.41	0.083	1
13092	PCB-1260	11096-82-5	0.41	U	0.41	0.12	1
13092	PCB-1262	37324-23-5	0.41	U	0.41	0.17	1
13092	PCB-1268	11100-14-4	0.41	U	0.41	0.13	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/l**		**mg/l**	**mg/l**	
10365	EFH (C12-C14)	n.a.	0.096	U	0.096	0.048	1
10365	EFH (C15-C20)	n.a.	0.096	U	0.096	0.048	1
10365	EFH (C21-C30)	n.a.	0.096	U	0.096	0.048	1
10365	EFH (C30 - C40)	n.a.	0.48	U	0.48	0.096	1
10365	EFH (C8-C11)	n.a.	0.096	U	0.096	0.048	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.400 U	0.400	0.0828	1
07044	Antimony	7440-36-0	0.0400 U	0.0400	0.0053	1
07035	Arsenic	7440-38-2	0.0400 U	0.0400	0.0068	1
07046	Barium	7440-39-3	0.0100 U	0.0100	0.00033	1
07047	Beryllium	7440-41-7	0.0100 U	0.0100	0.00067	1
08014	Boron	7440-42-8	0.100 U	0.100	0.0084	1
07049	Cadmium	7440-43-9	0.0100 U	0.0100	0.00076	1
01750	Calcium	7440-70-2	0.0676 J	0.400	0.0334	1
07051	Chromium	7440-47-3	0.0300 U	0.0300	0.0016	1
07052	Cobalt	7440-48-4	0.0100 U	0.0100	0.0013	1
07053	Copper	7440-50-8	0.0200 U	0.0200	0.0027	1
01754	Iron	7439-89-6	0.400 U	0.400	0.0430	1
07055	Lead	7439-92-1	0.0300 U	0.0300	0.0047	1
01756	Lithium	7439-93-2	0.0400 U	0.0400	0.0047	1
01757	Magnesium	7439-95-4	0.200 U	0.200	0.0167	1
07058	Manganese	7439-96-5	0.0100 U	0.0100	0.00083	1
07060	Molybdenum	7439-98-7	0.0200 U	0.0200	0.0017	1
07061	Nickel	7440-02-0	0.0200 U	0.0200	0.0015	1
10143	Phosphorus	7723-14-0	0.200 U	0.200	0.0418	1
01762	Potassium	7440-09-7	1.00 U	1.00	0.0980	1
01767	Sodium	7440-23-5	2.00 U	2.00	0.167	1
07069	Tin	7440-31-5	0.0400 U	0.0400	0.0029	1
07070	Titanium	7440-32-6	0.0200 U	0.0200	0.0017	1
07071	Vanadium	7440-62-2	0.0100 U	0.0100	0.0020	1
07072	Zinc	7440-66-6	0.0400 U	0.0400	0.0020	1
10144	Zirconium	7440-67-7	0.100 U	0.100	0.0084	1
	SW-846 6020A		**mg/l**	**mg/l**	**mg/l**	
06041	Selenium	7782-49-2	0.0040 U	0.0040	0.00050	1
06042	Silver	7440-22-4	0.0010 U	0.0010	0.00011	1
06044	Strontium	7440-24-6	0.0020 U	0.0020	0.00034	1
06045	Thallium	7440-28-0	0.0010 U	0.0010	0.00015	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	3b Mercury 7470A	7439-97-6	0.00020 U	0.00020	0.000060	1
Wet Chemistry	**SW-846 9040C**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	28b pH (9040B and 9040C)	n.a.	6.0	0.010	0.010	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received MRL*	As Received EDL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**pg/l**		**pg/l**	**pg/l**	
10915	2378-TCDD	1746-01-6	1.92	U	1.92	0.233	1
10915	12378-PeCDD	40321-76-4	0.189	JBQ	9.60	0.154	1
10915	123478-HxCDD	39227-28-6	0.124	JBQ	9.60	0.124	1
10915	123678-HxCDD	57653-85-7	0.202	JBQ	9.60	0.129	1
10915	123789-HxCDD	19408-74-3	9.60	U	9.60	0.116	1
10915	1234678-HpCDD	35822-46-9	0.621	JBQ	9.60	0.131	1
10915	OCDD	3268-87-9	1.54	JBQ	19.2	0.147	1
10915	2378-TCDF	51207-31-9	1.92	U	1.92	0.157	1
10915	12378-PeCDF	57117-41-6	0.456	JBQ	9.60	0.0766	1
10915	23478-PeCDF	57117-31-4	0.359	JBQ	9.60	0.0704	1
10915	123478-HxCDF	70648-26-9	0.134	JBQ	9.60	0.0716	1
10915	123678-HxCDF	57117-44-9	0.213	JB	9.60	0.0716	1
10915	123789-HxCDF	72918-21-9	0.200	JBQ	9.60	0.0713	1
10915	234678-HxCDF	60851-34-5	0.232	JBQ	9.60	0.0664	1
10915	1234678-HpCDF	67562-39-4	0.415	JB	9.60	0.0550	1
10915	1234789-HpCDF	55673-89-7	0.232	JBQ	9.60	0.0598	1
10915	OCDF	39001-02-0	0.772	JBQ	19.2	0.143	1
Toxic Equivalents	**EPA 1613B**		**pg/l**		**pg/l**	**pg/l**	
10915	TEQ WHO 2005 - EDLx0.0	n.a.	0.0255				1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	70	25 - 181
13C12-123478-HxCDD	81	32 - 141
13C12-123678-HxCDD	79	28 - 130
13C12-123789-HxCDD	80	28 - 130
13C12-1234678-HpCDD	82	23 - 140
13C12-OCDD	86	17 - 157
13C12-2378-TCDF	70	24 - 169
13C12-12378-PeCDF	71	24 - 185
13C12-23478-PeCDF	72	21 - 178
13C12-123478-HxCDF	79	26 - 152
13C12-123678-HxCDF	79	26 - 123
13C12-234678-HxCDF	80	28 - 136
13C12-123789-HxCDF	85	29 - 147
13C12-1234678-HpCDF	81	28 - 143
13C12-1234789-HpCDF	83	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

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

eurofins
Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

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

F *Interference is present*
S *Saturation of detection signal*

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

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
12971	7b SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13274WAK026	10/08/2013 14:38	Chad A Moline	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	13274WAK026	10/02/2013 10:20	Anna E Stager	1
08229	11b TPH by EPA 8015B GRO	TPH GRO SW-8015B	1	13269B94A	09/27/2013 14:42	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13269B94A	09/27/2013 14:42	Catherine J Schwarz	1
10407	24b Herbicides by EPA 8151A	SW-846 8151A	1	132740011A	10/02/2013 14:25	Melissa McDermott	1
10589	22b Pesticides by EPA 8081B	SW-846 8081B	1	132730010A	10/01/2013 12:43	Lisa A Reinert	1
13092	21b PCBs and PCTs 8082A	SW-846 8082A	1	132730011A	10/02/2013 23:21	Monica M Souders	1
13093	PCB/PCT Waters Update IV	SW-846 3510C	1	132730011A	09/30/2013 16:00	Seth A Farrier	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	132730010A	09/30/2013 16:00	Seth A Farrier	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	132740011A	10/01/2013 20:00	Elaine F Stoltzfus	1
10365	10b TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730022A	10/02/2013 08:54	Heather E Williams	1
11203	EFH Waters Extraction	SW-846 3510C	1	132730022A	10/01/2013 03:00	Sherry L Morrow	1
10915	17b Dioxin/Furan by EPA 1613B	EPA 1613B	1	13276002	10/07/2013 17:57	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B	1	13276002	10/03/2013 10:30	Deborah M Zimmerman	1
01743	Aluminum	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07044	Antimony	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07035	Arsenic	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07046	Barium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07047	Beryllium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
08014	Boron	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07049	Cadmium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
01750	Calcium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07051	Chromium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07052	Cobalt	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07053	Copper	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
01754	Iron	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07055	Lead	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
01756	Lithium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
01757	Magnesium	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07058	Manganese	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07060	Molybdenum	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1
07061	Nickel	SW-846 6010C	1	132700635002	09/30/2013 15:21	Eric L Eby	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EB2-092513 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7213953
LL Group # 1421812
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/25/2013 15:30 by PH

Submitted: 09/26/2013 09:05
Reported: 10/09/2013 15:06

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

25EB2 SDG#: PH115-01EB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10143	Phosphorus	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
01762	Potassium	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
01767	Sodium	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
07069	Tin	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
07070	Titanium	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
07071	Vanadium	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
07072	Zinc	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
10144	Zirconium	SW-846 6010C	1	132700635002	09/30/2013	15:21	Eric L Eby	1
06041	Selenium	SW-846 6020A	1	132700639001B	09/30/2013	13:45	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	132700639001A	09/30/2013	13:45	Choon Y Tian	1
06044	Strontium	SW-846 6020A	1	132700639001A	09/30/2013	13:45	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	132700639001A	09/30/2013	13:45	Choon Y Tian	1
00259	3b Mercury 7470A	SW-846 7470A	1	132735713006	10/01/2013	09:09	Damary Valentin	1
10635	WW SW846(IV) ICP Dig (tot rec)	SW-846 3005A	1	132700635002	09/29/2013	22:30	Annamaria Stipkovits	1
10639	ICP/MS SW846 (IV) Water Digest	SW-846 3010A modified	1	132700639001	09/29/2013	22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713006	09/30/2013	15:30	Nelli S Markaryan	1
12152	28b pH (9040B and 9040C)	SW-846 9040C	1	13270003102A	09/27/2013	16:11	Susan A Engle	1

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

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1421812
Reported: 10/09/13 at 03:06 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 LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13274WAK026	Sample number(s): 7213953									
Acenaphthene	0.050	U	0.050	0.010	ug/l	103	100	77-118	2	30
Acenaphthylene	0.050	U	0.050	0.010	ug/l	102	101	80-123	1	30
Anthracene	0.050	U	0.050	0.010	ug/l	105	103	78-123	2	30
Benzo(a)anthracene	0.050	U	0.050	0.010	ug/l	107	106	73-127	1	30
Benzo(a)pyrene	0.050	U	0.050	0.010	ug/l	106	105	72-120	1	30
Benzo(b)fluoranthene	0.050	U	0.050	0.010	ug/l	136	133	79-136	2	30
Benzo(e)pyrene	0.050	U	0.050	0.010	ug/l	110	109	70-130	1	30
Benzo(g,h,i)perylene	0.050	U	0.050	0.010	ug/l	119	118	64-130	1	30
Benzo(k)fluoranthene	0.050	U	0.050	0.010	ug/l	115	115	73-131	0	30
Butylbenzylphthalate	1.0	U	1.0	0.050	ug/l	114	115	40-138	0	30
Di-n-butylphthalate	1.0	U	1.0	0.050	ug/l	92	91	64-141	1	30
Chrysene	0.050	U	0.050	0.010	ug/l	109	109	76-125	0	30
Dibenz(a,h)anthracene	0.050	U	0.050	0.010	ug/l	120	119	58-131	1	30
Diethylphthalate	1.0	U	1.0	0.050	ug/l	100	100	64-128	1	30
Dimethylphthalate	1.0	U	1.0	0.050	ug/l	85	86	23-139	1	30
Bis(2-Ethylhexyl)phthalate	1.0	U	1.0	0.050	ug/l	185*	73	70-143	87*	30
Fluoranthene	0.050	U	0.050	0.010	ug/l	107	107	79-124	0	30
Fluorene	0.050	U	0.050	0.010	ug/l	102	101	74-115	2	30
Indeno(1,2,3-cd)pyrene	0.050	U	0.050	0.010	ug/l	119	119	62-130	0	30
1-Methylnaphthalene	0.050	U	0.050	0.010	ug/l	110	107	80-126	3	30
2-Methylnaphthalene	0.050	U	0.050	0.010	ug/l	108	104	81-124	4	30
Naphthalene	0.050	U	0.050	0.030	ug/l	102	99	75-120	2	30
N-Nitrosodimethylamine	0.050	U	0.050	0.010	ug/l	72	67	36-120	8	30
Di-n-octylphthalate	1.0	U	1.0	0.050	ug/l	121	110	57-145	9	30
Phenanthrene	0.050	U	0.050	0.030	ug/l	103	102	75-120	1	30
Pyrene	0.050	U	0.050	0.010	ug/l	115	115	71-130	0	30
Batch number: 13269B94A	Sample number(s): 7213953									
TPH-GRO S.CA water C5-C12	50	U	50.	20	ug/l	106	102	75-135	4	30
Batch number: 132740011A	Sample number(s): 7213953									
2,4-D	0.50	U	0.50	0.16	ug/l	122	123	68-155	2	30
Dalapon	1.3	U	1.3	0.25	ug/l	59	76	25-119	25	30
2,4-DB	1.0	U	1.0	0.30	ug/l	121	120	50-163	1	30
Dicamba	0.30	U	0.30	0.080	ug/l	108	111	64-163	3	30
Dinoseb	0.50	U	0.50	0.12	ug/l	159	153	16-163	4	30
2,4-DP (Dichlorprop)	0.50	U	0.50	0.16	ug/l	134	133	89-162	1	30
MCPA	200 U		200.	50	ug/l	98	101	68-154	2	30
MCPP	200 U		200.	50	ug/l	108	110	46-173	2	30
2,4,5-T	0.050	U	0.050	0.015	ug/l	122	119	71-174	2	30
2,4,5-TP	0.050	U	0.050	0.010	ug/l	123	122	58-155	1	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 / MRL.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1421812
Reported: 10/09/13 at 03:06 PM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132730010A	Sample number(s): 7213953									
Aldrin	0.0080	U	0.0080	0.0016	ug/l	77	77	45-125	0	30
Alpha BHC	0.0080	U	0.0080	0.0024	ug/l	97	94	51-139	3	30
Beta BHC	0.0080	U	0.0080	0.0027	ug/l	87	85	57-127	2	30
Gamma BHC - Lindane	0.0080	U	0.0080	0.0016	ug/l	89	86	57-133	3	30
Chlordane	0.40	U	0.40	0.13	ug/l					
p,p-DDD	0.016	U	0.016	0.0040	ug/l	88	86	55-145	3	30
p,p-DDE	0.016	U	0.016	0.0040	ug/l	88	85	58-130	2	30
p,p-DDT	0.016	U	0.016	0.0042	ug/l	87	88	45-140	0	30
Delta BHC	0.0080	U	0.0080	0.0027	ug/l	89	88	52-133	2	30
Dieldrin	0.016	U	0.016	0.0042	ug/l	90	89	60-135	1	30
Endosulfan I	0.0080	U	0.0080	0.0034	ug/l	82	80	56-128	2	30
Endosulfan II	0.016	U	0.016	0.012	ug/l	90	88	53-123	3	30
Endosulfan Sulfate	0.016	U	0.016	0.0046	ug/l	97	95	51-130	2	30
Endrin	0.016	U	0.016	0.0065	ug/l	24*	80	43-139	107*	30
Endrin Aldehyde	0.080	U	0.080	0.016	ug/l	109	92	50-122	17	20
Endrin Ketone	0.016	U	0.016	0.0040	ug/l	136*	92	51-133	38*	30
Heptachlor	0.0080	U	0.0080	0.0016	ug/l	82	81	48-130	2	30
Heptachlor Epoxide	0.0080	U	0.0080	0.0018	ug/l	87	87	65-128	0	30
Methoxychlor	0.080	U	0.080	0.024	ug/l	87	86	40-150	2	30
Mirex	0.040	U	0.040	0.0080	ug/l					
Toxaphene	2.4	U	2.4	0.80	ug/l					
Batch number: 132730011A	Sample number(s): 7213953									
Aroclor 5432	0.40	U	0.40	0.080	ug/l					
Aroclor 5442	0.40	U	0.40	0.080	ug/l	69	83	35-84	19	30
Aroclor 5460	0.40	U	0.40	0.088	ug/l					
PCB-1016	0.40	U	0.40	0.080	ug/l	89	89	67-117	0	30
PCB-1221	0.40	U	0.40	0.080	ug/l					
PCB-1232	0.40	U	0.40	0.16	ug/l					
PCB-1242	0.40	U	0.40	0.080	ug/l					
PCB-1248	0.40	U	0.40	0.080	ug/l					
PCB-1254	0.40	U	0.40	0.080	ug/l					
PCB-1260	0.40	U	0.40	0.12	ug/l	110	111	67-128	0	30
PCB-1262	0.40	U	0.40	0.16	ug/l					
PCB-1268	0.40	U	0.40	0.13	ug/l					
Batch number: 132730022A	Sample number(s): 7213953									
EFH (C12-C14)	0.10	U	0.10	0.050	mg/l	90	85	70-130	6	30
EFH (C15-C20)	0.10	U	0.10	0.050	mg/l	97	92	70-130	6	30
EFH (C21-C30)	0.10	U	0.10	0.050	mg/l	94	88	70-130	6	30
EFH (C30 - C40)	0.50	U	0.50	0.10	mg/l	67*	69*	70-130	3	30
EFH (C8-C11)	0.10	U	0.10	0.050	mg/l	64*	61*	70-130	6	30
Batch number: 132700635002	Sample number(s): 7213953									
Aluminum	0.400	U	0.400	0.0828	mg/l	104	104	80-120	0	20
Antimony	0.0400	U	0.0400	0.0053	mg/l	104	102	80-120	2	20
Arsenic	0.0400	U	0.0400	0.0068	mg/l	103	102	80-120	1	20
Barium	0.0100	U	0.0100	0.00033	mg/l	101	100	80-120	1	20
Beryllium	0.0100	U	0.0100	0.00067	mg/l	97	96	80-120	1	20
Boron	0.100	U	0.100	0.0084	mg/l	96	94	80-120	2	20
Cadmium	0.0100	U	0.0100	0.00076	mg/l	105	103	80-120	2	20
Calcium	0.0618	J	0.400	0.0334	mg/l	103	101	80-120	2	20
Chromium	0.0300	U	0.0300	0.0016	mg/l	102	101	80-120	1	20
Cobalt	0.0100	U	0.0100	0.0013	mg/l	105	104	80-120	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: 1421812
Reported: 10/09/13 at 03:06 PM

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Copper	0.0200 U	0.0200	0.0027	mg/l	102	102	80-120	1	20
Iron	0.400 U	0.400	0.0430	mg/l	101	99	80-120	2	20
Lead	0.0300 U	0.0300	0.0047	mg/l	109	107	80-120	2	20
Lithium	0.0400 U	0.0400	0.0047	mg/l	105	103	80-120	2	20
Magnesium	0.200 U	0.200	0.0167	mg/l	102	100	80-120	2	20
Manganese	0.0100 U	0.0100	0.00083	mg/l	102	101	80-120	1	20
Molybdenum	0.0200 U	0.0200	0.0017	mg/l	103	102	80-120	1	20
Nickel	0.0200 U	0.0200	0.0015	mg/l	106	105	80-120	1	20
Phosphorus	0.200 U	0.200	0.0418	mg/l	103	102	80-120	1	20
Potassium	1.00 U	1.00	0.0980	mg/l	103	101	80-120	2	20
Sodium	2.00 U	2.00	0.167	mg/l	102	100	80-120	2	20
Tin	0.0400 U	0.0400	0.0029	mg/l	101	100	80-120	1	20
Titanium	0.0200 U	0.0200	0.0017	mg/l	104	102	80-120	2	20
Vanadium	0.0100 U	0.0100	0.0020	mg/l	103	102	80-120	1	20
Zinc	0.0400 U	0.0400	0.0020	mg/l	102	101	80-120	1	20
Zirconium	0.100 U	0.100	0.0084	mg/l	105	103	80-120	2	20
Batch number: 132700639001A	Sample number(s): 7213953								
Silver	0.0010 U	0.0010	0.00011	mg/l	103	101	90-115	2	20
Strontium	0.0020 U	0.0020	0.00034	mg/l	103	102	80-120	1	20
Thallium	0.0010 U	0.0010	0.00015	mg/l	100	102	80-120	2	20
Batch number: 132700639001B	Sample number(s): 7213953								
Selenium	0.0040 U	0.0040	0.00050	mg/l	105	102	80-120	3	20
Batch number: 132735713006	Sample number(s): 7213953								
3b Mercury 7470A	0.00020 U	0.00020	0.00006 0	mg/l	94	95	90-115	1	20
Batch number: 13270003102A	Sample number(s): 7213953								
28b pH (9040B and 9040C)					99		99-103		

Analysis Name	Blank Result	Blank MRL**	Blank EDL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 13276002	Sample number(s): 7213953								
2378-TCDD	0.346 J	2.00	0.273	pg/l	98		60-150		
12378-PeCDD	0.345 J	10.0	0.163	pg/l	101		60-150		
123478-HxCDD	0.207 J	10.0	0.125	pg/l	98		60-150		
123678-HxCDD	0.126 J	10.0	0.126	pg/l	101		60-150		
123789-HxCDD	0.369 J	10.0	0.109	pg/l	99		60-150		
1234678-HpCDD	0.518 J	10.0	0.114	pg/l	98		60-150		
OCDD	2.28 J	20.0	0.138	pg/l	96		60-150		
2378-TCDF	2.00 U	2.00	0.148	pg/l	98		60-150		
12378-PeCDF	0.494 J	10.0	0.0867	pg/l	100		60-150		
23478-PeCDF	0.155 J	10.0	0.0784	pg/l	100		60-150		
123478-HxCDF	0.225 J	10.0	0.0574	pg/l	100		60-150		
123678-HxCDF	0.268 J	10.0	0.0566	pg/l	101		60-150		
123789-HxCDF	0.383 J	10.0	0.0504	pg/l	101		60-150		
234678-HxCDF	0.369 J	10.0	0.0536	pg/l	101		60-150		
1234678-HpCDF	0.528 J	10.0	0.0451	pg/l	99		60-150		
1234789-HpCDF	0.306 J	10.0	0.0521	pg/l	100		60-150		
OCDF	0.989 J	20.0	0.138	pg/l	99		60-150		
TEQ WHO 2005 - EDLx0.0	0.00310			pg/l					

*- 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: 1421812
Reported: 10/09/13 at 03:06 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
Batch number: 13270003102A	Sample number(s): 7213953			BKG: P214407					
28b pH (9040B and 9040C)						7.1	7.1	1	3

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: 7b SVOC SIM EPA 8270D
Batch number: 13274WAK026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7213953	81	83	79
Blank	93	98	102
LCS	97	108	105
LCSD	97	106	102
Limits:	44-137	62-141	51-136

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13269B94A

	Trifluorotoluene-F
7213953	75
Blank	72
LCS	78
LCSD	77
Limits:	63-135

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 132730010A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7213953	83	83
Blank	95	106
LCS	91	96
LCSD	88	97
Limits:	60-140	20-120

*- 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: 1421812
Reported: 10/09/13 at 03:06 PM

Surrogate Quality Control

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 132730011A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7213953	96	90
Blank	96	112
LCS	105	106
LCSD	106	101
Limits:	45-120	45-120

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 132740011A

	2,4-Dichlorophenylacetic acid
7213953	99
Blank	91
LCS	105
LCSD	105
Limits:	50-150

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 132730022A

	Chlorobenzene	Orthoterphenyl
7213953	135*	91
Blank	122	81
LCS	121	95
LCSD	112	85
Limits:	45-126	69-119

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13276002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
7213953	69	72	79	79	80	85
Blank	79	92	94	93	95	109
OPR	73	82	79	79	79	85
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
7213953	81	83	86	70	81	79
Blank	104	103	100	87	91	97
OPR	81	80	77	80	80	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

*- 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: 1421812
Reported: 10/09/13 at 03:06 PM

Surrogate Quality Control

7213953	80	82	86	70	71
Blank	104	102	99	85	89
OPR	80	81	78	75	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.

13013 ~~1421713~~ AHO 9/25/13 ~~7213403-16~~
1421812 7213953

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 9/25/2013
CarrierName: FedEx
AirbillNo: 796770904674

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130925-04
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate 314.0/331	Perchlorate Confirm 6850/6860	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
EB2-092513	9/25/13 15:30	WQ	HCl	2 - 1 L Amber	10 day																					X											

Special Instructions:

Sampler: [signature]

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
[signature]	09/25/2013	1600									
									[signature]	9-26-13	0905

Subarea 8

COC Rev 2

COC 20130925-04, Page 1 of 1

13013 1421812 7213953

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 9/25/2013
CarrierName: FedEx
AirbillNo: 796770904674

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130925-05
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate 314.0/331	Perchlorate Confirm 6850/6860	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
EB2-092513	9/25/13 15:30	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	X		X																													
EB2-092513	9/25/13 15:30	WQ	None	3 - 250 mL Amber	10 day							X			X							X															
EB2-092513	9/25/13 15:30	WQ	None	4 - 1 L Amber	10 day									X							X																
EB2-092513	9/25/13 15:30	WQ	None	1 - 250 mL Poly	10 day														X																		
EB2-092513	9/25/13 15:30	WQ	HCl	3 - 40 mL Vial	10 day																				X												

Special Instructions:

Sampler: Pa Hart

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
Steve Myers	09/25/2013	1600									
										9-26-13	0905

eurofins | Lancaster Laboratories

Environmental Sample Administration Receipt Documentation Log

1421812

Client/Project: CDM Smith

Date of Receipt: 9-26-13

Time of Receipt: 09.5

Source Code: 5.

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT131	2.3	TB	WI	Y	B	
2		1.3					
3		1.4					
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 5700 **Date/Time:** 9-26-13 1115

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories Environmental

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)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< 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

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 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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC 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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL 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 Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

SAMPLE DELIVERY GROUP

PH117

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

October 08, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 09/27/2013
Group Number: 1422081
SDG: PH117
PO Number: 1204-002-001-AL
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
TB2-092613 Water	7215514
SL-542-SA8-SB-0.0-0.5 Soil	7215515
SL-542-SA8-SB-4.0-5.0 Soil	7215516
SL-542-SA8-SB-9.0-10.0 Soil	7215517
SL-542-SA8-SB-14.0-15.0 Soil	7215518
SL-542-SA8-SB-17.5-18.5 Soil	7215519

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

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: TB2-092613 Water
SSFL Phase 3 Subarea 8

LL Sample # WW 7215514
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 08:00

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542TB SDG#: PH117-01TB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**TPH GRO SW-8015B**		**ug/l**		**ug/l**	**ug/l**	
08229	TPH-GRO S.CA water C5-C12	n.a.	50	U	50	20	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	11b TPH by EPA 8015B GRO	TPH GRO SW-8015B	1	13275A20A	10/04/2013 13:37	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13275A20A	10/04/2013 13:37	Marie D Beamenderfer	1

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

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
12969	Acenaphthene	83-32-9	1.8	U	1.8	0.70	1
12969	Acenaphthylene	208-96-8	1.8	U	1.8	0.35	1
12969	Anthracene	120-12-7	1.8	U	1.8	0.35	1
12969	Benzo(a)anthracene	56-55-3	1.8	U	1.8	0.70	1
12969	Benzo(a)pyrene	50-32-8	1.8	U	1.8	0.70	1
12969	Benzo(b)fluoranthene	205-99-2	0.81	J	1.8	0.70	1
12969	Benzo(e)pyrene	192-97-2	18	U	18	3.5	1
12969	Benzo(g,h,i)perylene	191-24-2	1.8	U	1.8	0.70	1
12969	Benzo(k)fluoranthene	207-08-9	1.8	U	1.8	0.70	1
12969	Butylbenzylphthalate	85-68-7	19	U	19	6.3	1
12969	Di-n-butylphthalate	84-74-2	19	U	19	6.3	1
12969	Chrysene	218-01-9	0.57	J	1.8	0.35	1
12969	Dibenz(a,h)anthracene	53-70-3	1.8	U	1.8	0.70	1
12969	Diethylphthalate	84-66-2	19	U	19	6.3	1
12969	Dimethylphthalate	131-11-3	19	U	19	6.3	1
12969	Bis(2-Ethylhexyl)phthalate	117-81-7	19	U	19	6.3	1
12969	Fluoranthene	206-44-0	1.8	U	1.8	0.70	1
12969	Fluorene	86-73-7	1.8	U	1.8	0.70	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	1.8	U	1.8	0.70	1
12969	1-Methylnaphthalene	90-12-0	1.8	U	1.8	0.70	1
12969	2-Methylnaphthalene	91-57-6	1.0	J	1.8	0.70	1
12969	Naphthalene	91-20-3	1.2	J	1.8	0.70	1
12969	N-Nitrosodimethylamine	62-75-9	1.8	U	1.8	0.70	1
12969	Di-n-octylphthalate	117-84-0	19	U	19	6.3	1
12969	Phenanthrene	85-01-8	1.8	U	1.8	0.70	1
12969	Pyrene	129-00-0	1.8	U	1.8	0.70	1
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	
10401	2,4-D	94-75-7	38	U	38	13	1
10401	Dalapon	75-99-0	95	U	95	46	1
10401	2,4-DB	94-82-6	18	U	18	6.5	1
10401	Dicamba	1918-00-9	13	U	13	4.2	1
10401	Dinoseb	88-85-7	25	U	25	9.5	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10401	2,4-DP (Dichlorprop)	120-36-5	18	U	18	9.5	1
10401	MCPA	94-74-6	2,600	U	2,600	800	1
10401	MCPP (Mecoprop)	93-65-2	2,600	U	2,600	790	1
10401	2,4,5-T	93-76-5	1.8	U	1.8	0.87	1
10401	2,4,5-TP	93-72-1	1.8	U	1.8	0.79	1
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.88	U	0.88	0.18	1
10590	Alpha BHC	319-84-6	0.88	U	0.88	0.18	1
10590	Beta BHC	319-85-7	2.0	U	2.0	1.0	1
10590	Gamma BHC - Lindane	58-89-9	0.88	U	0.88	0.18	1
10590	Chlordane	57-74-9	18	U	18	4.2	1
10590	p,p-DDD	72-54-8	1.8	U	1.8	0.35	1
10590	p,p-DDE	72-55-9	1.8	U	1.8	0.35	1
10590	p,p-DDT	50-29-3	1.8	U	1.8	0.37	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Delta BHC	319-86-8	0.88	U	0.88	0.48	1
10590	Dieldrin	60-57-1	1.8	U	1.8	0.35	1
10590	Endosulfan I	959-98-8	0.88	U	0.88	0.23	1
10590	Endosulfan II	33213-65-9	1.8	U	1.8	0.35	1
10590	Endosulfan Sulfate	1031-07-8	1.8	U	1.8	0.35	1
10590	Endrin	72-20-8	1.8	U	1.8	0.35	1
10590	Endrin Aldehyde	7421-93-4	1.8	U	1.8	0.35	1
10590	Endrin Ketone	53494-70-5	1.9	U	1.9	0.64	1
10590	Heptachlor	76-44-8	0.88	U	0.88	0.18	1
10590	Heptachlor Epoxide	1024-57-3	0.88	U	0.88	0.18	1
10590	Methoxychlor	72-43-5	7.1	U	7.1	1.8	1
10590	Mirex	2385-85-5	1.8	U	1.8	0.37	1
10590	Toxaphene	8001-35-2	35	U	35	15	1
Pesticides/PCBs	**SW-846 8082A**		**ug/kg**		**ug/kg**	**ug/kg**	
10592	Aroclor 5432	63496-31-1	35	U	35	11	1
10592	Aroclor 5442	12642-23-8	35	U	35	11	1
10592	Aroclor 5460	11126-42-4	35	U	35	11	1
10592	PCB-1016	12674-11-2	18	U	18	3.5	1
10592	PCB-1221	11104-28-2	18	U	18	5.4	1
10592	PCB-1232	11141-16-5	18	U	18	4.3	1
10592	PCB-1242	53469-21-9	18	U	18	4.3	1
10592	PCB-1248	12672-29-6	18	U	18	3.5	1
10592	PCB-1254	11097-69-1	18	U	18	4.7	1
10592	PCB-1260	11096-82-5	18	U	18	4.1	1
10592	PCB-1262	37324-23-5	18	U	18	3.5	1
10592	PCB-1268	11100-14-4	18	U	18	3.5	1

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
12952	EFH (C12-C14)	n.a.	5.2	U	5.2	2.1	1
12952	EFH (C15-C20)	n.a.	5.2	U	5.2	2.1	1
12952	EFH (C21-C30)	n.a.	5.7		5.2	2.1	1
12952	EFH (C30-C40)	n.a.	11		10	4.2	1
12952	EFH (C8-C11)	n.a.	5.2	U	5.2	2.1	1
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	29,000		42.4	7.64	1
06944	Antimony	7440-36-0	4.24	U	4.24	0.784	1
06935	Arsenic	7440-38-2	5.50		4.24	0.742	1
06946	Barium	7440-39-3	113		1.06	0.0350	1
06947	Beryllium	7440-41-7	0.909	J	1.06	0.0710	1
07914	Boron	7440-42-8	11.2		10.6	0.890	1
06949	Cadmium	7440-43-9	0.477	J	1.06	0.0805	1
01650	Calcium	7440-70-2	32,600		21.2	3.54	1
06951	Chromium	7440-47-3	38.1		3.18	0.169	1
06952	Cobalt	7440-48-4	9.92		1.06	0.105	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
06953	Copper	7440-50-8	23.1		2.12	0.307	1
01654	Iron	7439-89-6	36,200		84.7	7.67	2
06955	Lead	7439-92-1	10.6		3.18	0.530	1
01656	Lithium	7439-93-2	26.7		4.2	0.36	1
01657	Magnesium	7439-95-4	8,530		10.6	1.77	1
06958	Manganese	7439-96-5	428		1.06	0.0879	1
06960	Molybdenum	7439-98-7	2.12	U	2.12	0.180	1
06961	Nickel	7440-02-0	20.1		2.12	0.138	1
10145	Phosphorus	7723-14-0	675		10.6	3.06	1
01662	Potassium	7440-09-7	7,120		106	8.83	1
01667	Sodium	7440-23-5	200		106	17.7	1
06969	Tin	7440-31-5	3.45	J	10.6	0.233	1
06970	Titanium	7440-32-6	1,310		2.12	0.360	2
06971	Vanadium	7440-62-2	70.0		1.06	0.138	1
06972	Zinc	7440-66-6	83.1		4.24	0.212	1
10146	Zirconium	7440-67-7	4.64	J	5.30	0.890	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.287	J	0.424	0.106	2
06142	Silver	7440-22-4	0.0336	J	0.212	0.0275	2
06144	Strontium	7440-24-6	81.0		0.424	0.0720	2
06145	Thallium	7440-28-0	0.396		0.212	0.0318	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0174	U	0.0174	0.0104	1
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.79		0.0100	0.0100	1
	The pH was measured in water at 20 C.						
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	5.6		0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry MRL*	Dry EDL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	2378-TCDD	1746-01-6	1.01 U	1.01	0.0320	1
11031	12378-PeCDD	40321-76-4	0.0698 JBQ	5.05	0.0214	1
11031	123478-HxCDD	39227-28-6	0.0405 JBQ	5.05	0.0155	1
11031	123678-HxCDD	57653-85-7	0.0459 JBQ	5.05	0.0167	1
11031	123789-HxCDD	19408-74-3	0.0707 JBQ	5.05	0.0153	1
11031	1234678-HpCDD	35822-46-9	0.122 JBQ	5.05	0.0167	1
11031	OCDD	3268-87-9	0.425 JB	10.1	0.0157	1
11031	2378-TCDF	51207-31-9	1.01 U	1.01	0.0263	1
11031	12378-PeCDF	57117-41-6	0.121 JB	5.05	0.0111	1
11031	23478-PeCDF	57117-31-4	0.0673 JBQ	5.05	0.0112	1
11031	123478-HxCDF	70648-26-9	0.0695 JB	5.05	0.0120	1
11031	123678-HxCDF	57117-44-9	0.0605 JB	5.05	0.0109	1
11031	123789-HxCDF	72918-21-9	0.0879 JBQ	5.05	0.0119	1
11031	234678-HxCDF	60851-34-5	0.0491 JBQ	5.05	0.0113	1
11031	1234678-HpCDF	67562-39-4	0.0666 JBQ	5.05	0.00561	1
11031	1234789-HpCDF	55673-89-7	0.0424 JBQ	5.05	0.00858	1
11031	OCDF	39001-02-0	0.129 JBQ	10.1	0.0215	1
Toxic Equivalents	**EPA 1613B**		ng/kg	ng/kg	ng/kg	
11031	TEQ WHO 2005 - EDLx0.0	n.a.	0.0167			1

Labeled Compounds	%Rec	Windows
13C12-2378-TCDD	69	25 - 164
13C12-12378-PeCDD	72	25 - 181
13C12-123478-HxCDD	72	32 - 141
13C12-123678-HxCDD	71	28 - 130
13C12-123789-HxCDD	70	28 - 130
13C12-1234678-HpCDD	72	23 - 140
13C12-OCDD	69	17 - 157
13C12-2378-TCDF	62	24 - 169
13C12-12378-PeCDF	73	24 - 185
13C12-23478-PeCDF	67	21 - 178
13C12-123478-HxCDF	65	26 - 152
13C12-123678-HxCDF	70	26 - 123
13C12-234678-HxCDF	65	28 - 136
13C12-123789-HxCDF	71	29 - 147
13C12-1234678-HpCDF	79	28 - 143
13C12-1234789-HpCDF	61	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

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

eurofins
Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

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

F *Interference is present*
S *Saturation of detection signal*

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

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
12969	7a SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13273SLE026	10/02/2013	09:52	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13273SLE026	10/01/2013	08:00	Kerrie A Freeburn	1
10401	21a Herbicides by EPA 8151A	SW-846 8151A	1	132760027A	10/04/2013	16:28	Elizabeth J Marin	1
10590	20a Pesticides by EPA 8081B	SW-846 8081B	1	132760006A	10/07/2013	11:11	Jamie L Brillhart	1
10592	19a PCBs and PCTs 8082A	SW-846 8082A	1	132750029A	10/04/2013	09:25	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132750029A	10/03/2013	10:30	David S Schrum	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	132760006A	10/03/2013	16:25	JoElla L Rice	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132760027A	10/04/2013	09:15	Katheryne V Sponheimer	1
12952	10a TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730031A	10/02/2013	13:30	Heather E Williams	1
12959	EFH soil ext.(microwave)	SW-846 3546	1	132730031A	10/01/2013	08:00	Joseph S Feister	1
11031	23a Dioxin/Furan by EPA 1613B	EPA 1613B	1	13273002	10/03/2013	20:38	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	13273002	09/30/2013	12:35	Brett M Weidman	1
01643	Aluminum	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06944	Antimony	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06935	Arsenic	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06946	Barium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06947	Beryllium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
07914	Boron	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01650	Calcium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06952	Cobalt	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06953	Copper	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01654	Iron	SW-846 6010C	1	132740637001	10/04/2013	01:50	John W Yanzuk II	2
06955	Lead	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01656	Lithium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01657	Magnesium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06958	Manganese	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06960	Molybdenum	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
06961	Nickel	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
10145	Phosphorus	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01662	Potassium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1
01667	Sodium	SW-846 6010C	1	132740637001	10/03/2013	15:19	Eric L Eby	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215515
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:00 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-0 SDG#: PH117-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06969	Tin	SW-846 6010C	1	132740637001	10/03/2013 15:19	Eric L Eby	1
06970	Titanium	SW-846 6010C	1	132740637001	10/04/2013 01:50	John W Yanzuk II	2
06971	Vanadium	SW-846 6010C	1	132740637001	10/04/2013 01:46	John W Yanzuk II	1
06972	Zinc	SW-846 6010C	1	132740637001	10/03/2013 15:19	Eric L Eby	1
10146	Zirconium	SW-846 6010C	1	132740637001	10/03/2013 15:19	Eric L Eby	1
06141	Selenium	SW-846 6020A	1	132740637001B	10/03/2013 06:47	Choon Y Tian	2
06142	Silver	SW-846 6020A	1	132740637001A	10/03/2013 06:47	Choon Y Tian	2
06144	Strontium	SW-846 6020A	1	132740637001A	10/03/2013 06:47	Choon Y Tian	2
06145	Thallium	SW-846 6020A	1	132740637001A	10/03/2013 06:47	Choon Y Tian	2
00159	3a Mercury 7471A	SW-846 7471B	1	132740638001	10/03/2013 04:55	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132740637001	10/02/2013 09:39	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132740638001	10/02/2013 12:35	Denise K Conners	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13270039402A	09/27/2013 22:20	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13275162401B	10/02/2013 22:11	Scott W Freisher	1

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

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
12969	Acenaphthene	83-32-9	1.9	U	1.9	0.76	1
12969	Acenaphthylene	208-96-8	1.9	U	1.9	0.38	1
12969	Anthracene	120-12-7	1.9	U	1.9	0.38	1
12969	Benzo(a)anthracene	56-55-3	1.9	U	1.9	0.76	1
12969	Benzo(a)pyrene	50-32-8	1.9	U	1.9	0.76	1
12969	Benzo(b)fluoranthene	205-99-2	1.9	U	1.9	0.76	1
12969	Benzo(e)pyrene	192-97-2	19	U	19	3.8	1
12969	Benzo(g,h,i)perylene	191-24-2	1.9	U	1.9	0.76	1
12969	Benzo(k)fluoranthene	207-08-9	1.9	U	1.9	0.76	1
12969	Butylbenzylphthalate	85-68-7	20	U	20	6.8	1
12969	Di-n-butylphthalate	84-74-2	20	U	20	6.8	1
12969	Chrysene	218-01-9	1.9	U	1.9	0.38	1
12969	Dibenz(a,h)anthracene	53-70-3	1.9	U	1.9	0.76	1
12969	Diethylphthalate	84-66-2	20	U	20	6.8	1
12969	Dimethylphthalate	131-11-3	20	U	20	6.8	1
12969	Bis(2-Ethylhexyl)phthalate	117-81-7	20	U	20	6.8	1
12969	Fluoranthene	206-44-0	1.9	U	1.9	0.76	1
12969	Fluorene	86-73-7	1.9	U	1.9	0.76	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	1.9	U	1.9	0.76	1
12969	1-Methylnaphthalene	90-12-0	1.4	J	1.9	0.76	1
12969	2-Methylnaphthalene	91-57-6	2.1		1.9	0.76	1
12969	Naphthalene	91-20-3	3.1		1.9	0.76	1
12969	N-Nitrosodimethylamine	62-75-9	1.9	U	1.9	0.76	1
12969	Di-n-octylphthalate	117-84-0	20	U	20	6.8	1
12969	Phenanthrene	85-01-8	1.9	U	1.9	0.76	1
12969	Pyrene	129-00-0	1.9	U	1.9	0.76	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	11a TPH by EPA 8015B GRO	n.a.	1.1	U	1.1	0.2	24.51
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	
10401	2,4-D	94-75-7	41	U	41	14	1
10401	Dalapon	75-99-0	100	U	100	50	1
10401	2,4-DB	94-82-6	19	U	19	7.1	1
10401	Dicamba	1918-00-9	14	U	14	4.6	1
10401	Dinoseb	88-85-7	27	U	27	10	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10401	2,4-DP (Dichlorprop)	120-36-5	19	U	19	10	1
10401	MCPA	94-74-6	2,900	U	2,900	870	1
10401	MCPP (Mecoprop)	93-65-2	2,900	U	2,900	860	1
10401	2,4,5-T	93-76-5	1.9	U	1.9	0.94	1
10401	2,4,5-TP	93-72-1	1.9	U	1.9	0.86	1
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.95	U	0.95	0.19	1
10590	Alpha BHC	319-84-6	0.95	U	0.95	0.19	1
10590	Beta BHC	319-85-7	2.2	U	2.2	1.1	1
10590	Gamma BHC - Lindane	58-89-9	0.95	U	0.95	0.19	1

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

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Chlordane	57-74-9	19	U	19	4.6	1
10590	p,p-DDD	72-54-8	1.9	U	1.9	0.38	1
10590	p,p-DDE	72-55-9	1.9	U	1.9	0.38	1
10590	p,p-DDT	50-29-3	1.9	U	1.9	0.40	1
10590	Delta BHC	319-86-8	0.95	U	0.95	0.51	1
10590	Dieldrin	60-57-1	1.9	U	1.9	0.38	1
10590	Endosulfan I	959-98-8	0.95	U	0.95	0.25	1
10590	Endosulfan II	33213-65-9	1.9	U	1.9	0.38	1
10590	Endosulfan Sulfate	1031-07-8	1.9	U	1.9	0.38	1
10590	Endrin	72-20-8	1.9	U	1.9	0.38	1
10590	Endrin Aldehyde	7421-93-4	1.9	U	1.9	0.38	1
10590	Endrin Ketone	53494-70-5	2.1	U	2.1	0.69	1
10590	Heptachlor	76-44-8	0.95	U	0.95	0.19	1
10590	Heptachlor Epoxide	1024-57-3	0.95	U	0.95	0.19	1
10590	Methoxychlor	72-43-5	7.7	U	7.7	1.9	1
10590	Mirex	2385-85-5	1.9	U	1.9	0.40	1
10590	Toxaphene	8001-35-2	38	U	38	16	1
Pesticides/PCBs	**SW-846 8082A**		**ug/kg**		**ug/kg**	**ug/kg**	
10592	Aroclor 5432	63496-31-1	38	U	38	11	1
10592	Aroclor 5442	12642-23-8	38	U	38	11	1
10592	Aroclor 5460	11126-42-4	38	U	38	11	1
10592	PCB-1016	12674-11-2	19	U	19	3.8	1
10592	PCB-1221	11104-28-2	19	U	19	5.8	1
10592	PCB-1232	11141-16-5	19	U	19	4.7	1
10592	PCB-1242	53469-21-9	19	U	19	4.7	1
10592	PCB-1248	12672-29-6	19	U	19	3.8	1
10592	PCB-1254	11097-69-1	19	U	19	5.0	1
10592	PCB-1260	11096-82-5	19	U	19	4.5	1
10592	PCB-1262	37324-23-5	19	U	19	3.8	1
10592	PCB-1268	11100-14-4	19	U	19	3.8	1
	For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.						
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
12952	EFH (C12-C14)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C15-C20)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C21-C30)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C30-C40)	n.a.	11	U	11	4.6	1
12952	EFH (C8-C11)	n.a.	5.7	U	5.7	2.3	1
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	31,500		45.8	8.25	1
06944	Antimony	7440-36-0	4.58	U	4.58	0.847	1
06935	Arsenic	7440-38-2	6.26		4.58	0.801	1
06946	Barium	7440-39-3	138		1.14	0.0378	1
06947	Beryllium	7440-41-7	0.991	J	1.14	0.0767	1
07914	Boron	7440-42-8	10.3	J	11.4	0.961	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	0.477	J	1.14	0.0870	1
01650	Calcium	7440-70-2	36,700		22.9	3.82	1
06951	Chromium	7440-47-3	40.2		3.43	0.183	1
06952	Cobalt	7440-48-4	9.98		1.14	0.113	1
06953	Copper	7440-50-8	23.0		2.29	0.332	1
01654	Iron	7439-89-6	36,700		91.5	8.28	2
06955	Lead	7439-92-1	10.8		3.43	0.572	1
01656	Lithium	7439-93-2	31.3		4.6	0.39	1
01657	Magnesium	7439-95-4	8,430		11.4	1.91	1
06958	Manganese	7439-96-5	421		1.14	0.0950	1
06960	Molybdenum	7439-98-7	2.29	U	2.29	0.195	1
06961	Nickel	7440-02-0	20.8		2.29	0.149	1
10145	Phosphorus	7723-14-0	456		11.4	3.31	1
01662	Potassium	7440-09-7	5,680		114	9.54	1
01667	Sodium	7440-23-5	181		114	19.1	1
06969	Tin	7440-31-5	3.43	J	11.4	0.252	1
06970	Titanium	7440-32-6	1,360		2.29	0.389	2
06971	Vanadium	7440-62-2	72.7		1.14	0.149	1
06972	Zinc	7440-66-6	80.5		4.58	0.229	1
10146	Zirconium	7440-67-7	5.11	J	5.72	0.961	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.321	J	0.458	0.114	2
06142	Silver	7440-22-4	0.0480	J	0.229	0.0297	2
06144	Strontium	7440-24-6	84.9		0.458	0.0778	2
06145	Thallium	7440-28-0	0.459		0.229	0.0343	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0178	U	0.0178	0.0107	1
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.93		0.0100	0.0100	1
	The pH was measured in water at 20.5 C.						
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	12.6		0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry MRL*	Dry EDL	Dilution Factor
Dioxins/Furans	**EPA 1613B**		**ng/kg**		**ng/kg**	**ng/kg**	
11031	2378-TCDD	1746-01-6	0.0684	JQ	1.11	0.0465	1
11031	12378-PeCDD	40321-76-4	0.0781	JBQ	5.53	0.0271	1
11031	123478-HxCDD	39227-28-6	0.0848	JB	5.53	0.0176	1
11031	123678-HxCDD	57653-85-7	0.100	JBQ	5.53	0.0190	1
11031	123789-HxCDD	19408-74-3	0.124	JB	5.53	0.0172	1
11031	1234678-HpCDD	35822-46-9	0.139	JB	5.53	0.0174	1
11031	OCDD	3268-87-9	0.376	JB	11.1	0.0175	1
11031	2378-TCDF	51207-31-9	0.0670	JQ	1.11	0.0394	1
11031	12378-PeCDF	57117-41-6	0.162	JB	5.53	0.0137	1
11031	23478-PeCDF	57117-31-4	0.152	JB	5.53	0.0132	1
11031	123478-HxCDF	70648-26-9	0.124	JB	5.53	0.0130	1
11031	123678-HxCDF	57117-44-9	0.0784	JB	5.53	0.0120	1
11031	123789-HxCDF	72918-21-9	0.144	JB	5.53	0.0132	1
11031	234678-HxCDF	60851-34-5	0.0654	JBQ	5.53	0.0114	1
11031	1234678-HpCDF	67562-39-4	0.0927	JB	5.53	0.00606	1
11031	1234789-HpCDF	55673-89-7	0.0635	JBQ	5.53	0.00915	1
11031	OCDF	39001-02-0	0.148	JBQ	11.1	0.0255	1
Toxic Equivalents	**EPA 1613B**		**ng/kg**		**ng/kg**	**ng/kg**	
11031	TEQ WHO 2005 - EDLx0.0	n.a.	0.109				1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	67	25 - 164
13C12-12378-PeCDD	83	25 - 181
13C12-123478-HxCDD	75	32 - 141
13C12-123678-HxCDD	73	28 - 130
13C12-123789-HxCDD	74	28 - 130
13C12-1234678-HpCDD	76	23 - 140
13C12-OCDD	77	17 - 157
13C12-2378-TCDF	65	24 - 169
13C12-12378-PeCDF	83	24 - 185
13C12-23478-PeCDF	80	21 - 178
13C12-123478-HxCDF	69	26 - 152
13C12-123678-HxCDF	73	26 - 123
13C12-234678-HxCDF	70	28 - 136
13C12-123789-HxCDF	69	29 - 147
13C12-1234678-HpCDF	85	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

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

eurofins
Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

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

F *Interference is present*
S *Saturation of detection signal*

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

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

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
12969	7a SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13273SLE026	10/02/2013	10:25	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13273SLE026	10/01/2013	08:00	Kerrie A Freeburn	1
05551	11a TPH by EPA 8015B GRO	TPH GRO SW-846 8015B mod	1	13274A31A	10/01/2013	21:18	Laura M Krieger	24.51
06130	GC - 5 g HL Encore Prep	SW-846 5035A	1	201327032541	09/27/2013	16:39	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035A	2	201327032541	09/27/2013	16:39	Larry E Bevins	n.a.
10401	21a Herbicides by EPA 8151A	SW-846 8151A	1	132760027A	10/04/2013	16:54	Elizabeth J Marin	1
10590	20a Pesticides by EPA 8081B	SW-846 8081B	1	132760006A	10/07/2013	11:26	Jamie L Brillhart	1
10592	19a PCBs and PCTs 8082A	SW-846 8082A	1	132750029A	10/04/2013	09:43	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132750029A	10/03/2013	10:30	David S Schrum	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	132760006A	10/03/2013	16:25	JoElla L Rice	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132760027A	10/04/2013	09:15	Katheryne V Sponheimer	1
12952	10a TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730031A	10/02/2013	12:05	Heather E Williams	1
12959	EFH soil ext.(microwave)	SW-846 3546	1	132730031A	10/01/2013	08:00	Joseph S Feister	1
11031	23a Dioxin/Furan by EPA 1613B	EPA 1613B	1	13273002	10/04/2013	07:09	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	EPA 1613B	1	13273002	09/30/2013	12:35	Brett M Weidman	1
01643	Aluminum	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06944	Antimony	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06935	Arsenic	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06946	Barium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06947	Beryllium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
07914	Boron	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
01650	Calcium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06952	Cobalt	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06953	Copper	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
01654	Iron	SW-846 6010C	1	132740637001	10/04/2013	02:05	John W Yanzuk II	2
06955	Lead	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
01656	Lithium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
01657	Magnesium	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06958	Manganese	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1
06960	Molybdenum	SW-846 6010C	1	132740637001	10/03/2013	15:23	Eric L Eby	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215516
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-4 SDG#: PH117-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06961	Nickel	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
10145	Phosphorus	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
01662	Potassium	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
01667	Sodium	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
06969	Tin	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
06970	Titanium	SW-846 6010C	1	132740637001	10/04/2013 02:05	John W Yanzuk II	2
06971	Vanadium	SW-846 6010C	1	132740637001	10/04/2013 01:54	John W Yanzuk II	1
06972	Zinc	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
10146	Zirconium	SW-846 6010C	1	132740637001	10/03/2013 15:23	Eric L Eby	1
06141	Selenium	SW-846 6020A	1	132740637001B	10/03/2013 06:50	Choon Y Tian	2
06142	Silver	SW-846 6020A	1	132740637001A	10/03/2013 06:50	Choon Y Tian	2
06144	Strontium	SW-846 6020A	1	132740637001A	10/03/2013 06:50	Choon Y Tian	2
06145	Thallium	SW-846 6020A	1	132740637001A	10/03/2013 06:50	Choon Y Tian	2
00159	3a Mercury 7471A	SW-846 7471B	1	132740638001	10/03/2013 04:57	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132740637001	10/02/2013 09:39	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132740638001	10/02/2013 12:35	Denise K Conners	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13270039402A	09/27/2013 22:20	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13275162401B	10/02/2013 22:11	Scott W Freisher	1

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

Sample Description: SL-542-SA8-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215517
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-9 SDG#: PH117-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
12969	Acenaphthene	83-32-9	1.9	U	1.9	0.78	1
12969	Acenaphthylene	208-96-8	1.9	U	1.9	0.39	1
12969	Anthracene	120-12-7	1.9	U	1.9	0.39	1
12969	Benzo(a)anthracene	56-55-3	1.9	U	1.9	0.78	1
12969	Benzo(a)pyrene	50-32-8	1.9	U	1.9	0.78	1
12969	Benzo(b)fluoranthene	205-99-2	1.9	U	1.9	0.78	1
12969	Benzo(e)pyrene	192-97-2	20	U	20	3.9	1
12969	Benzo(g,h,i)perylene	191-24-2	1.9	U	1.9	0.78	1
12969	Benzo(k)fluoranthene	207-08-9	1.9	U	1.9	0.78	1
12969	Butylbenzylphthalate	85-68-7	21	U	21	7.0	1
12969	Di-n-butylphthalate	84-74-2	21	U	21	7.0	1
12969	Chrysene	218-01-9	0.39	J	1.9	0.39	1
12969	Dibenz(a,h)anthracene	53-70-3	1.9	U	1.9	0.78	1
12969	Diethylphthalate	84-66-2	21	U	21	7.0	1
12969	Dimethylphthalate	131-11-3	21	U	21	7.0	1
12969	Bis(2-Ethylhexyl)phthalate	117-81-7	15	J	21	7.0	1
12969	Fluoranthene	206-44-0	1.9	U	1.9	0.78	1
12969	Fluorene	86-73-7	1.9	U	1.9	0.78	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	1.9	U	1.9	0.78	1
12969	1-Methylnaphthalene	90-12-0	1.9	U	1.9	0.78	1
12969	2-Methylnaphthalene	91-57-6	0.97	J	1.9	0.78	1
12969	Naphthalene	91-20-3	0.90	J	1.9	0.78	1
12969	N-Nitrosodimethylamine	62-75-9	1.9	U	1.9	0.78	1
12969	Di-n-octylphthalate	117-84-0	21	U	21	7.0	1
12969	Phenanthrene	85-01-8	1.9	U	1.9	0.78	1
12969	Pyrene	129-00-0	1.9	U	1.9	0.78	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	11a TPH by EPA 8015B GRO	n.a.	1.1	U	1.1	0.2	24.27
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	
10401	2,4-D	94-75-7	42	U	42	14	1
10401	Dalapon	75-99-0	100	U	100	51	1
10401	2,4-DB	94-82-6	20	U	20	7.2	1
10401	Dicamba	1918-00-9	14	U	14	4.7	1
10401	Dinoseb	88-85-7	28	U	28	10	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10401	2,4-DP (Dichlorprop)	120-36-5	20	U	20	10	1
10401	MCPA	94-74-6	2,900	U	2,900	890	1
10401	MCPP (Mecoprop)	93-65-2	2,900	U	2,900	870	1
10401	2,4,5-T	93-76-5	2.0	U	2.0	0.96	1
10401	2,4,5-TP	93-72-1	2.0	U	2.0	0.87	1
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.97	U	0.97	0.20	1
10590	Alpha BHC	319-84-6	0.97	U	0.97	0.20	1
10590	Beta BHC	319-85-7	2.2	U	2.2	1.1	1
10590	Gamma BHC - Lindane	58-89-9	0.97	U	0.97	0.20	1

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

Sample Description: SL-542-SA8-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215517
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-9 SDG#: PH117-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Chlordane	57-74-9	20	U	20	4.7	1
10590	p,p-DDD	72-54-8	2.0	U	2.0	0.38	1
10590	p,p-DDE	72-55-9	2.0	U	2.0	0.38	1
10590	p,p-DDT	50-29-3	2.0	U	2.0	0.41	1
10590	Delta BHC	319-86-8	0.97	U	0.97	0.52	1
10590	Dieldrin	60-57-1	2.0	U	2.0	0.38	1
10590	Endosulfan I	959-98-8	0.97	U	0.97	0.26	1
10590	Endosulfan II	33213-65-9	2.0	U	2.0	0.38	1
10590	Endosulfan Sulfate	1031-07-8	2.0	U	2.0	0.38	1
10590	Endrin	72-20-8	2.0	U	2.0	0.38	1
10590	Endrin Aldehyde	7421-93-4	2.0	U	2.0	0.38	1
10590	Endrin Ketone	53494-70-5	2.1	U	2.1	0.70	1
10590	Heptachlor	76-44-8	0.97	U	0.97	0.20	1
10590	Heptachlor Epoxide	1024-57-3	0.97	U	0.97	0.20	1
10590	Methoxychlor	72-43-5	7.8	U	7.8	2.0	1
10590	Mirex	2385-85-5	2.0	U	2.0	0.41	1
10590	Toxaphene	8001-35-2	38	U	38	16	1
Pesticides/PCBs	**SW-846 8082A**		**ug/kg**		**ug/kg**	**ug/kg**	
10592	Aroclor 5432	63496-31-1	38	U	38	12	1
10592	Aroclor 5442	12642-23-8	38	U	38	12	1
10592	Aroclor 5460	11126-42-4	38	U	38	12	1
10592	PCB-1016	12674-11-2	20	U	20	3.8	1
10592	PCB-1221	11104-28-2	20	U	20	5.9	1
10592	PCB-1232	11141-16-5	20	U	20	4.8	1
10592	PCB-1242	53469-21-9	20	U	20	4.8	1
10592	PCB-1248	12672-29-6	20	U	20	3.8	1
10592	PCB-1254	11097-69-1	20	U	20	5.1	1
10592	PCB-1260	11096-82-5	20	U	20	4.5	1
10592	PCB-1262	37324-23-5	20	U	20	3.8	1
10592	PCB-1268	11100-14-4	20	U	20	3.8	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
12952	EFH (C12-C14)	n.a.	5.8	U	5.8	2.3	1
12952	EFH (C15-C20)	n.a.	5.8	U	5.8	2.3	1
12952	EFH (C21-C30)	n.a.	6.3		5.8	2.3	1
12952	EFH (C30-C40)	n.a.	11	J	12	4.6	1
12952	EFH (C8-C11)	n.a.	5.8	U	5.8	2.3	1
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	22,000		46.2	8.32	1
06944	Antimony	7440-36-0	4.62	U	4.62	0.854	1
06935	Arsenic	7440-38-2	5.52		4.62	0.808	1
06946	Barium	7440-39-3	106		1.15	0.0381	1
06947	Beryllium	7440-41-7	0.710	J	1.15	0.0773	1
07914	Boron	7440-42-8	8.19	J	11.5	0.969	1

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

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

Sample Description: SL-542-SA8-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215517
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-9 SDG#: PH117-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	0.501	J	1.15	0.0877	1
01650	Calcium	7440-70-2	86,500		46.2	7.71	2
06951	Chromium	7440-47-3	30.9		3.46	0.185	1
06952	Cobalt	7440-48-4	8.37		1.15	0.114	1
06953	Copper	7440-50-8	15.9		2.31	0.335	1
01654	Iron	7439-89-6	27,300		46.2	4.18	1
06955	Lead	7439-92-1	8.45		3.46	0.577	1
01656	Lithium	7439-93-2	26.0		4.6	0.39	1
01657	Magnesium	7439-95-4	6,890		11.5	1.93	1
06958	Manganese	7439-96-5	353		1.15	0.0958	1
06960	Molybdenum	7439-98-7	2.31	U	2.31	0.196	1
06961	Nickel	7440-02-0	16.0		2.31	0.150	1
10145	Phosphorus	7723-14-0	470		11.5	3.33	1
01662	Potassium	7440-09-7	4,080		115	9.62	1
01667	Sodium	7440-23-5	146		115	19.3	1
06969	Tin	7440-31-5	2.85	J	11.5	0.254	1
06970	Titanium	7440-32-6	936		1.15	0.196	1
06971	Vanadium	7440-62-2	55.0		1.15	0.150	1
06972	Zinc	7440-66-6	64.5		4.62	0.231	1
10146	Zirconium	7440-67-7	4.28	J	5.77	0.969	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.192	J	0.462	0.115	2
06142	Silver	7440-22-4	0.0338	J	0.231	0.0300	2
06144	Strontium	7440-24-6	146		1.15	0.196	5
06145	Thallium	7440-28-0	0.338		0.231	0.0346	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0187	U	0.0187	0.0112	1
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	7.96		0.0100	0.0100	1
	The pH was measured in water at 20.6 C.						
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	14.2		0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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-542-SA8-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215517
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-9 SDG#: PH117-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
12969	7a SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13273SLE026	10/02/2013	10:59	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13273SLE026	10/01/2013	08:00	Kerrie A Freeburn	1
05551	11a TPH by EPA 8015B GRO	TPH GRO SW-846 8015B mod	1	13274A31A	10/01/2013	21:54	Laura M Krieger	24.27
06130	GC - 5 g HL Encore Prep	SW-846 5035A	1	201327032541	09/27/2013	16:41	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035A	2	201327032541	09/27/2013	16:41	Larry E Bevins	n.a.
10401	21a Herbicides by EPA 8151A	SW-846 8151A	1	132760027A	10/04/2013	17:21	Elizabeth J Marin	1
10590	20a Pesticides by EPA 8081B	SW-846 8081B	1	132760006A	10/07/2013	11:41	Jamie L Brillhart	1
10592	19a PCBs and PCTs 8082A	SW-846 8082A	1	132750029A	10/04/2013	10:01	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132750029A	10/03/2013	10:30	David S Schrum	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	132760006A	10/03/2013	16:25	JoElla L Rice	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132760027A	10/04/2013	09:15	Katheryne V Sponheimer	1
12952	10a TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730031A	10/02/2013	13:52	Heather E Williams	1
12959	EFH soil ext.(microwave)	SW-846 3546	1	132730031A	10/01/2013	08:00	Joseph S Feister	1
01643	Aluminum	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06944	Antimony	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06935	Arsenic	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06946	Barium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06947	Beryllium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
07914	Boron	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01650	Calcium	SW-846 6010C	1	132740637001	10/04/2013	02:13	John W Yanzuk II	2
06951	Chromium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06952	Cobalt	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06953	Copper	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01654	Iron	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06955	Lead	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01656	Lithium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01657	Magnesium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06958	Manganese	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06960	Molybdenum	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06961	Nickel	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
10145	Phosphorus	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01662	Potassium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
01667	Sodium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06969	Tin	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06970	Titanium	SW-846 6010C	1	132740637001	10/04/2013	02:09	John W Yanzuk II	1
06971	Vanadium	SW-846 6010C	1	132740637001	10/04/2013	02:09	John W Yanzuk II	1
06972	Zinc	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
10146	Zirconium	SW-846 6010C	1	132740637001	10/03/2013	15:28	Eric L Eby	1
06141	Selenium	SW-846 6020A	1	132740637001B	10/03/2013	06:52	Choon Y Tian	2
06142	Silver	SW-846 6020A	1	132740637001A	10/03/2013	06:52	Choon Y Tian	2
06144	Strontium	SW-846 6020A	1	132740637001A	10/03/2013	07:41	Choon Y Tian	5

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215517
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 09:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

542-9 SDG#: PH117-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132740637001A	10/03/2013 06:52	Choon Y Tian	2
00159	3a Mercury 7471A	SW-846 7471B	1	132740638001	10/03/2013 04:59	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132740637001	10/02/2013 09:39	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132740638001	10/02/2013 12:35	Denise K Conners	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13270039402A	09/27/2013 22:20	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13275162401B	10/02/2013 22:11	Scott W Freisher	1

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

Sample Description: SL-542-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215518
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 11:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54214 SDG#: PH117-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
12969	Acenaphthene	83-32-9	1.9	U	1.9	0.78	1
12969	Acenaphthylene	208-96-8	1.9	U	1.9	0.39	1
12969	Anthracene	120-12-7	1.9	U	1.9	0.39	1
12969	Benzo(a)anthracene	56-55-3	1.9	U	1.9	0.78	1
12969	Benzo(a)pyrene	50-32-8	1.9	U	1.9	0.78	1
12969	Benzo(b)fluoranthene	205-99-2	1.9	U	1.9	0.78	1
12969	Benzo(e)pyrene	192-97-2	20	U	20	3.9	1
12969	Benzo(g,h,i)perylene	191-24-2	1.9	U	1.9	0.78	1
12969	Benzo(k)fluoranthene	207-08-9	1.9	U	1.9	0.78	1
12969	Butylbenzylphthalate	85-68-7	21	U	21	7.0	1
12969	Di-n-butylphthalate	84-74-2	21	U	21	7.0	1
12969	Chrysene	218-01-9	1.9	U	1.9	0.39	1
12969	Dibenz(a,h)anthracene	53-70-3	1.9	U	1.9	0.78	1
12969	Diethylphthalate	84-66-2	21	U	21	7.0	1
12969	Dimethylphthalate	131-11-3	21	U	21	7.0	1
12969	Bis(2-Ethylhexyl)phthalate	117-81-7	13	J	21	7.0	1
12969	Fluoranthene	206-44-0	1.9	U	1.9	0.78	1
12969	Fluorene	86-73-7	1.9	U	1.9	0.78	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	1.9	U	1.9	0.78	1
12969	1-Methylnaphthalene	90-12-0	1.9	U	1.9	0.78	1
12969	2-Methylnaphthalene	91-57-6	1.9	U	1.9	0.78	1
12969	Naphthalene	91-20-3	1.9	U	1.9	0.78	1
12969	N-Nitrosodimethylamine	62-75-9	1.9	U	1.9	0.78	1
12969	Di-n-octylphthalate	117-84-0	21	U	21	7.0	1
12969	Phenanthrene	85-01-8	1.9	U	1.9	0.78	1
12969	Pyrene	129-00-0	1.9	U	1.9	0.78	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	11a TPH by EPA 8015B GRO	n.a.	1.1	U	1.1	0.2	23.72
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	
10401	2,4-D	94-75-7	42	U	42	14	1
10401	Dalapon	75-99-0	110	U	110	51	1
10401	2,4-DB	94-82-6	20	U	20	7.3	1
10401	Dicamba	1918-00-9	14	U	14	4.7	1
10401	Dinoseb	88-85-7	28	U	28	11	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10401	2,4-DP (Dichlorprop)	120-36-5	20	U	20	11	1
10401	MCPA	94-74-6	2,900	U	2,900	890	1
10401	MCPP (Mecoprop)	93-65-2	2,900	U	2,900	880	1
10401	2,4,5-T	93-76-5	2.0	U	2.0	0.96	1
10401	2,4,5-TP	93-72-1	2.0	U	2.0	0.88	1
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.97	U	0.97	0.20	1
10590	Alpha BHC	319-84-6	0.97	U	0.97	0.20	1
10590	Beta BHC	319-85-7	2.2	U	2.2	1.1	1
10590	Gamma BHC - Lindane	58-89-9	0.97	U	0.97	0.20	1

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215518
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 11:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54214 SDG#: PH117-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Chlordane	57-74-9	20	U	20	4.7	1
10590	p,p-DDD	72-54-8	2.0	U	2.0	0.39	1
10590	p,p-DDE	72-55-9	2.0	U	2.0	0.39	1
10590	p,p-DDT	50-29-3	2.0	U	2.0	0.41	1
10590	Delta BHC	319-86-8	0.97	U	0.97	0.53	1
10590	Dieldrin	60-57-1	2.0	U	2.0	0.39	1
10590	Endosulfan I	959-98-8	0.97	U	0.97	0.26	1
10590	Endosulfan II	33213-65-9	2.0	U	2.0	0.39	1
10590	Endosulfan Sulfate	1031-07-8	2.0	U	2.0	0.39	1
10590	Endrin	72-20-8	2.0	U	2.0	0.39	1
10590	Endrin Aldehyde	7421-93-4	2.0	U	2.0	0.39	1
10590	Endrin Ketone	53494-70-5	2.1	U	2.1	0.70	1
10590	Heptachlor	76-44-8	0.97	U	0.97	0.20	1
10590	Heptachlor Epoxide	1024-57-3	0.97	U	0.97	0.20	1
10590	Methoxychlor	72-43-5	7.9	U	7.9	2.0	1
10590	Mirex	2385-85-5	2.0	U	2.0	0.41	1
10590	Toxaphene	8001-35-2	39	U	39	16	1
Pesticides/PCBs	**SW-846 8082A**		**ug/kg**		**ug/kg**	**ug/kg**	
10592	Aroclor 5432	63496-31-1	39	U	39	12	1
10592	Aroclor 5442	12642-23-8	39	U	39	12	1
10592	Aroclor 5460	11126-42-4	39	U	39	12	1
10592	PCB-1016	12674-11-2	20	U	20	3.9	1
10592	PCB-1221	11104-28-2	20	U	20	6.0	1
10592	PCB-1232	11141-16-5	20	U	20	4.8	1
10592	PCB-1242	53469-21-9	20	U	20	4.8	1
10592	PCB-1248	12672-29-6	20	U	20	3.9	1
10592	PCB-1254	11097-69-1	20	U	20	5.2	1
10592	PCB-1260	11096-82-5	20	U	20	4.6	1
10592	PCB-1262	37324-23-5	20	U	20	3.9	1
10592	PCB-1268	11100-14-4	20	U	20	3.9	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
12952	EFH (C12-C14)	n.a.	5.8	U	5.8	2.3	1
12952	EFH (C15-C20)	n.a.	5.8	U	5.8	2.3	1
12952	EFH (C21-C30)	n.a.	5.8	U	5.8	2.3	1
12952	EFH (C30-C40)	n.a.	12	U	12	4.6	1
12952	EFH (C8-C11)	n.a.	5.8	U	5.8	2.3	1
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	19,400		46.5	8.38	1
06944	Antimony	7440-36-0	4.65	U	4.65	0.860	1
06935	Arsenic	7440-38-2	5.32		4.65	0.813	1
06946	Barium	7440-39-3	106		1.16	0.0383	1
06947	Beryllium	7440-41-7	0.629	J	1.16	0.0779	1
07914	Boron	7440-42-8	6.62	J	11.6	0.976	1

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215518
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 11:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54214 SDG#: PH117-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	0.574 J	1.16	0.0883	1
01650	Calcium	7440-70-2	139,000	116	19.4	5
06951	Chromium	7440-47-3	25.4	3.49	0.186	1
06952	Cobalt	7440-48-4	6.74	1.16	0.115	1
06953	Copper	7440-50-8	14.5	2.32	0.337	1
01654	Iron	7439-89-6	23,500	46.5	4.21	1
06955	Lead	7439-92-1	7.05	3.49	0.581	1
01656	Lithium	7439-93-2	21.8	4.6	0.40	1
01657	Magnesium	7439-95-4	6,000	11.6	1.94	1
06958	Manganese	7439-96-5	284	1.16	0.0965	1
06960	Molybdenum	7439-98-7	2.32 U	2.32	0.198	1
06961	Nickel	7440-02-0	15.1	2.32	0.151	1
10145	Phosphorus	7723-14-0	343	11.6	3.36	1
01662	Potassium	7440-09-7	3,240	116	9.69	1
01667	Sodium	7440-23-5	126	116	19.4	1
06969	Tin	7440-31-5	2.67 J	11.6	0.256	1
06970	Titanium	7440-32-6	744	1.16	0.198	1
06971	Vanadium	7440-62-2	44.6	1.16	0.151	1
06972	Zinc	7440-66-6	51.4	4.65	0.232	1
10146	Zirconium	7440-67-7	4.33 J	5.81	0.976	1
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.465 U	0.465	0.116	2
06142	Silver	7440-22-4	0.0439 J	0.232	0.0302	2
06144	Strontium	7440-24-6	205	2.32	0.395	10
06145	Thallium	7440-28-0	0.291	0.232	0.0349	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0147 J	0.0194	0.0116	1
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**	**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	8.03	0.0100	0.0100	1
	The pH was measured in water at 20.2 C.					
Wet Chemistry	**EPA 160.3 modified**		**%**	**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	14.8	0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215518
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 11:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54214 SDG#: PH117-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
12969	7a SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13273SLE026	10/02/2013	11:33	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13273SLE026	10/01/2013	08:00	Kerrie A Freeburn	1
05551	11a TPH by EPA 8015B GRO	TPH GRO SW-846 8015B mod	1	13274A31A	10/01/2013	22:30	Laura M Krieger	23.72
06130	GC - 5 g HL Encore Prep	SW-846 5035A	1	201327032541	09/27/2013	16:38	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035A	2	201327032541	09/27/2013	16:38	Larry E Bevins	n.a.
10401	21a Herbicides by EPA 8151A	SW-846 8151A	1	132760027A	10/04/2013	17:47	Elizabeth J Marin	1
10590	20a Pesticides by EPA 8081B	SW-846 8081B	1	132760006A	10/07/2013	11:57	Jamie L Brillhart	1
10592	19a PCBs and PCTs 8082A	SW-846 8082A	1	132750029A	10/04/2013	10:20	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132750029A	10/03/2013	10:30	David S Schrum	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	132760006A	10/03/2013	16:25	JoElla L Rice	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132760027A	10/04/2013	09:15	Katheryne V Sponheimer	1
12952	10a TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730031A	10/02/2013	12:26	Heather E Williams	1
12959	EFH soil ext.(microwave)	SW-846 3546	1	132730031A	10/01/2013	08:00	Joseph S Feister	1
01643	Aluminum	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06944	Antimony	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06935	Arsenic	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06946	Barium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06947	Beryllium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
07914	Boron	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01650	Calcium	SW-846 6010C	1	132740637001	10/04/2013	02:21	John W Yanzuk II	5
06951	Chromium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06952	Cobalt	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06953	Copper	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01654	Iron	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06955	Lead	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01656	Lithium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01657	Magnesium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06958	Manganese	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06960	Molybdenum	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06961	Nickel	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
10145	Phosphorus	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01662	Potassium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
01667	Sodium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06969	Tin	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06970	Titanium	SW-846 6010C	1	132740637001	10/04/2013	02:17	John W Yanzuk II	1
06971	Vanadium	SW-846 6010C	1	132740637001	10/04/2013	02:17	John W Yanzuk II	1
06972	Zinc	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
10146	Zirconium	SW-846 6010C	1	132740637001	10/03/2013	15:32	Eric L Eby	1
06141	Selenium	SW-846 6020A	1	132740637001B	10/03/2013	06:54	Choon Y Tian	2
06142	Silver	SW-846 6020A	1	132740637001A	10/03/2013	06:54	Choon Y Tian	2
06144	Strontium	SW-846 6020A	1	132740637001A	10/03/2013	07:44	Choon Y Tian	10

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215518
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 11:50 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54214 SDG#: PH117-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132740637001A	10/03/2013 06:54	Choon Y Tian	2
00159	3a Mercury 7471A	SW-846 7471B	1	132740638001	10/03/2013 05:01	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132740637001	10/02/2013 09:39	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132740638001	10/02/2013 12:35	Denise K Conners	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13270039402A	09/27/2013 22:20	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13275162401B	10/02/2013 22:11	Scott W Freisher	1

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

Sample Description: SL-542-SA8-SB-17.5-18.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215519
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 12:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54217 SDG#: PH117-06*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/kg**		**ug/kg**	**ug/kg**	
12969	Acenaphthene	83-32-9	1.9	U	1.9	0.75	1
12969	Acenaphthylene	208-96-8	1.9	U	1.9	0.38	1
12969	Anthracene	120-12-7	1.9	U	1.9	0.38	1
12969	Benzo(a)anthracene	56-55-3	1.9	U	1.9	0.75	1
12969	Benzo(a)pyrene	50-32-8	1.9	U	1.9	0.75	1
12969	Benzo(b)fluoranthene	205-99-2	1.9	U	1.9	0.75	1
12969	Benzo(e)pyrene	192-97-2	19	U	19	3.7	1
12969	Benzo(g,h,i)perylene	191-24-2	1.9	U	1.9	0.75	1
12969	Benzo(k)fluoranthene	207-08-9	1.9	U	1.9	0.75	1
12969	Butylbenzylphthalate	85-68-7	20	U	20	6.8	1
12969	Di-n-butylphthalate	84-74-2	20	U	20	6.8	1
12969	Chrysene	218-01-9	1.9	U	1.9	0.38	1
12969	Dibenz(a,h)anthracene	53-70-3	1.9	U	1.9	0.75	1
12969	Diethylphthalate	84-66-2	20	U	20	6.8	1
12969	Dimethylphthalate	131-11-3	20	U	20	6.8	1
12969	Bis(2-Ethylhexyl)phthalate	117-81-7	20	U	20	6.8	1
12969	Fluoranthene	206-44-0	1.9	U	1.9	0.75	1
12969	Fluorene	86-73-7	1.9	U	1.9	0.75	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	1.9	U	1.9	0.75	1
12969	1-Methylnaphthalene	90-12-0	1.9	U	1.9	0.75	1
12969	2-Methylnaphthalene	91-57-6	1.9	U	1.9	0.75	1
12969	Naphthalene	91-20-3	1.9	U	1.9	0.75	1
12969	N-Nitrosodimethylamine	62-75-9	1.9	U	1.9	0.75	1
12969	Di-n-octylphthalate	117-84-0	20	U	20	6.8	1
12969	Phenanthrene	85-01-8	1.9	U	1.9	0.75	1
12969	Pyrene	129-00-0	1.9	U	1.9	0.75	1
GC Volatiles	**TPH GRO SW-846 8015B mod**		**mg/kg**		**mg/kg**	**mg/kg**	
05551	11a TPH by EPA 8015B GRO	n.a.	1.1	U	1.1	0.2	24.32
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	
10401	2,4-D	94-75-7	41	U	41	14	1
10401	Dalapon	75-99-0	100	U	100	50	1
10401	2,4-DB	94-82-6	19	U	19	7.0	1
10401	Dicamba	1918-00-9	14	U	14	4.5	1
10401	Dinoseb	88-85-7	27	U	27	10	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.						
10401	2,4-DP (Dichlorprop)	120-36-5	19	U	19	10	1
10401	MCPA	94-74-6	2,800	U	2,800	860	1
10401	MCPP (Mecoprop)	93-65-2	2,800	U	2,800	850	1
10401	2,4,5-T	93-76-5	1.9	U	1.9	0.93	1
10401	2,4,5-TP	93-72-1	1.9	U	1.9	0.85	1
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.95	U	0.95	0.19	1
10590	Alpha BHC	319-84-6	0.95	U	0.95	0.19	1
10590	Beta BHC	319-85-7	2.2	U	2.2	1.1	1
10590	Gamma BHC - Lindane	58-89-9	0.95	U	0.95	0.19	1

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

Sample Description: SL-542-SA8-SB-17.5-18.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215519
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 12:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54217 SDG#: PH117-06*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	
10590	Chlordane	57-74-9	19	U	19	4.6	1
10590	p,p-DDD	72-54-8	1.9	U	1.9	0.38	1
10590	p,p-DDE	72-55-9	1.9	U	1.9	0.38	1
10590	p,p-DDT	50-29-3	1.9	U	1.9	0.40	1
10590	Delta BHC	319-86-8	0.95	U	0.95	0.51	1
10590	Dieldrin	60-57-1	1.9	U	1.9	0.38	1
10590	Endosulfan I	959-98-8	0.95	U	0.95	0.25	1
10590	Endosulfan II	33213-65-9	1.9	U	1.9	0.38	1
10590	Endosulfan Sulfate	1031-07-8	1.9	U	1.9	0.38	1
10590	Endrin	72-20-8	1.9	U	1.9	0.38	1
10590	Endrin Aldehyde	7421-93-4	1.9	U	1.9	0.38	1
10590	Endrin Ketone	53494-70-5	2.1	U	2.1	0.68	1
10590	Heptachlor	76-44-8	0.95	U	0.95	0.19	1
10590	Heptachlor Epoxide	1024-57-3	0.95	U	0.95	0.19	1
10590	Methoxychlor	72-43-5	7.6	U	7.6	1.9	1
10590	Mirex	2385-85-5	1.9	U	1.9	0.40	1
10590	Toxaphene	8001-35-2	38	U	38	16	1
Pesticides/PCBs	**SW-846 8082A**		**ug/kg**		**ug/kg**	**ug/kg**	
10592	Aroclor 5432	63496-31-1	38	U	38	11	1
10592	Aroclor 5442	12642-23-8	38	U	38	11	1
10592	Aroclor 5460	11126-42-4	38	U	38	11	1
10592	PCB-1016	12674-11-2	19	U	19	3.8	1
10592	PCB-1221	11104-28-2	19	U	19	5.8	1
10592	PCB-1232	11141-16-5	19	U	19	4.7	1
10592	PCB-1242	53469-21-9	19	U	19	4.7	1
10592	PCB-1248	12672-29-6	19	U	19	3.8	1
10592	PCB-1254	11097-69-1	19	U	19	5.0	1
10592	PCB-1260	11096-82-5	19	U	19	4.4	1
10592	PCB-1262	37324-23-5	19	U	19	3.8	1
10592	PCB-1268	11100-14-4	19	U	19	3.8	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**mg/kg**		**mg/kg**	**mg/kg**	
12952	EFH (C12-C14)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C15-C20)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C21-C30)	n.a.	5.7	U	5.7	2.3	1
12952	EFH (C30-C40)	n.a.	11	U	11	4.5	1
12952	EFH (C8-C11)	n.a.	5.7	U	5.7	2.3	1
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	16,000		44.7	8.06	1
06944	Antimony	7440-36-0	4.47	U	4.47	0.827	1
06935	Arsenic	7440-38-2	6.60		4.47	0.783	1
06946	Barium	7440-39-3	76.7		1.12	0.0369	1
06947	Beryllium	7440-41-7	0.527	J	1.12	0.0749	1
07914	Boron	7440-42-8	2.26	J	11.2	0.939	1

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-17.5-18.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215519
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 12:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54217 SDG#: PH117-06*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**		**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	0.295	J	1.12	0.0850	1
01650	Calcium	7440-70-2	88,900		44.7	7.47	2
06951	Chromium	7440-47-3	20.2		3.35	0.179	1
06952	Cobalt	7440-48-4	5.30		1.12	0.111	1
06953	Copper	7440-50-8	11.8		2.24	0.324	1
01654	Iron	7439-89-6	21,400		44.7	4.05	1
06955	Lead	7439-92-1	4.44		3.35	0.559	1
01656	Lithium	7439-93-2	26.0		4.5	0.38	1
01657	Magnesium	7439-95-4	5,770		11.2	1.87	1
06958	Manganese	7439-96-5	220		1.12	0.0928	1
06960	Molybdenum	7439-98-7	2.24	U	2.24	0.190	1
06961	Nickel	7440-02-0	11.7		2.24	0.145	1
10145	Phosphorus	7723-14-0	317		11.2	3.23	1
01662	Potassium	7440-09-7	2,660		112	9.32	1
01667	Sodium	7440-23-5	95.1	J	112	18.7	1
06969	Tin	7440-31-5	2.66	J	11.2	0.246	1
06970	Titanium	7440-32-6	998		1.12	0.190	1
06971	Vanadium	7440-62-2	39.4		1.12	0.145	1
06972	Zinc	7440-66-6	49.1		4.47	0.224	1
10146	Zirconium	7440-67-7	2.88	J	5.59	0.939	1
	SW-846 6020A		**mg/kg**		**mg/kg**	**mg/kg**	
06141	Selenium	7782-49-2	0.447	U	0.447	0.112	2
06142	Silver	7440-22-4	0.224	U	0.224	0.0291	2
06144	Strontium	7440-24-6	167		2.24	0.380	10
06145	Thallium	7440-28-0	0.289		0.224	0.0335	2
	SW-846 7471B		**mg/kg**		**mg/kg**	**mg/kg**	
00159	3a Mercury 7471A	7439-97-6	0.0189	U	0.0189	0.0114	1
Wet Chemistry	**SW-846 9045D modified**		**Std. Units**		**Std. Units**	**Std. Units**	
00394	15a pH by 9045D	n.a.	8.20		0.0100	0.0100	1
	The pH was measured in water at 20.5 C.						
Wet Chemistry	**EPA 160.3 modified**		**%**		**%**	**%**	
11624	14a Moisture Content by 160.3	n.a.	12.3		0.10	0.10	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported 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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-17.5-18.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215519
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 12:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54217 SDG#: PH117-06*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
12969	7a SVOC SIM EPA 8270D	SW-846 8270D SIM	1	13273SLE026	10/02/2013	12:07	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13273SLE026	10/01/2013	08:00	Kerrie A Freeburn	1
05551	11a TPH by EPA 8015B GRO	TPH GRO SW-846 8015B mod	1	13274A31A	10/01/2013	23:06	Laura M Krieger	24.32
06130	GC - 5 g HL Encore Prep	SW-846 5035A	1	201327032541	09/27/2013	16:40	Larry E Bevins	n.a.
06130	GC - 5 g HL Encore Prep	SW-846 5035A	2	201327032541	09/27/2013	16:40	Larry E Bevins	n.a.
10401	21a Herbicides by EPA 8151A	SW-846 8151A	1	132760027A	10/04/2013	18:13	Elizabeth J Marin	1
10590	20a Pesticides by EPA 8081B	SW-846 8081B	1	132760006A	10/07/2013	12:12	Jamie L Brillhart	1
10592	19a PCBs and PCTs 8082A	SW-846 8082A	1	132750029A	10/04/2013	10:38	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132750029A	10/03/2013	10:30	David S Schrum	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	132760006A	10/03/2013	16:25	JoElla L Rice	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132760027A	10/04/2013	09:15	Katheryne V Sponheimer	1
12952	10a TPH by EPA 8015B (DRO)	SW-846 8015B modified	1	132730031A	10/02/2013	12:48	Heather E Williams	1
12959	EFH soil ext.(microwave)	SW-846 3546	1	132730031A	10/01/2013	08:00	Joseph S Feister	1
01643	Aluminum	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06944	Antimony	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06935	Arsenic	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06946	Barium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06947	Beryllium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
07914	Boron	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01650	Calcium	SW-846 6010C	1	132740637001	10/04/2013	02:29	John W Yanzuk II	2
06951	Chromium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06952	Cobalt	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06953	Copper	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01654	Iron	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06955	Lead	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01656	Lithium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01657	Magnesium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06958	Manganese	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06960	Molybdenum	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06961	Nickel	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
10145	Phosphorus	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01662	Potassium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
01667	Sodium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06969	Tin	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06970	Titanium	SW-846 6010C	1	132740637001	10/04/2013	02:25	John W Yanzuk II	1
06971	Vanadium	SW-846 6010C	1	132740637001	10/04/2013	02:25	John W Yanzuk II	1
06972	Zinc	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
10146	Zirconium	SW-846 6010C	1	132740637001	10/03/2013	15:36	Eric L Eby	1
06141	Selenium	SW-846 6020A	1	132740637001B	10/03/2013	06:57	Choon Y Tian	2
06142	Silver	SW-846 6020A	1	132740637001A	10/03/2013	06:57	Choon Y Tian	2
06144	Strontium	SW-846 6020A	1	132740637001A	10/03/2013	07:46	Choon Y Tian	10

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

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: SL-542-SA8-SB-17.5-18.5 Soil
SSFL Phase 3 Subarea 8

LL Sample # SW 7215519
LL Group # 1422081
Account # 13013

Project Name: SSFL Phase 3 Sampling

Collected: 09/26/2013 12:20 by VC

Submitted: 09/27/2013 09:15
Reported: 10/08/2013 20:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54217 SDG#: PH117-06*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06145	Thallium	SW-846 6020A	1	132740637001A	10/03/2013 06:57	Choon Y Tian	2
00159	3a Mercury 7471A	SW-846 7471B	1	132740638001	10/03/2013 05:06	Damary Valentin	1
10637	SW SW846 (IV)ICP/ICPMS Digest	SW-846 3050B	1	132740637001	10/02/2013 09:39	Denise K Conners	1
10638	SW SW846 (IV) Hg Digest	SW-846 7471B	1	132740638001	10/02/2013 12:35	Denise K Conners	1
00394	15a pH by 9045D	SW-846 9045D modified	1	13270039402A	09/27/2013 22:20	Luz M Groff	1
11624	14a Moisture Content by 160.3	EPA 160.3 modified	1	13275162401B	10/02/2013 22:11	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: 1422081
Reported: 10/08/13 at 08:01 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 LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13273SLE026	Sample number(s): 7215515-7215519									
Acenaphthene	1.7	U	1.7	0.67	ug/kg	99		77-116		
Acenaphthylene	1.7	U	1.7	0.33	ug/kg	105		78-120		
Anthracene	1.7	U	1.7	0.33	ug/kg	97		80-116		
Benzo(a)anthracene	1.7	U	1.7	0.67	ug/kg	100		83-119		
Benzo(a)pyrene	1.7	U	1.7	0.67	ug/kg	100		80-122		
Benzo(b)fluoranthene	1.7	U	1.7	0.67	ug/kg	107		82-135		
Benzo(e)pyrene	17	U	17.	3.3	ug/kg	93		81-110		
Benzo(g,h,i)perylene	1.7	U	1.7	0.67	ug/kg	98		79-121		
Benzo(k)fluoranthene	1.7	U	1.7	0.67	ug/kg	103		79-123		
Butylbenzylphthalate	18	U	18.	6.0	ug/kg	109		77-123		
Di-n-butylphthalate	18	U	18.	6.0	ug/kg	109		78-125		
Chrysene	1.7	U	1.7	0.33	ug/kg	99		84-113		
Dibenz(a,h)anthracene	1.7	U	1.7	0.67	ug/kg	100		78-124		
Diethylphthalate	18	U	18.	6.0	ug/kg	105		77-130		
Dimethylphthalate	18	U	18.	6.0	ug/kg	104		85-122		
Bis(2-Ethylhexyl)phthalate	18	U	18.	6.0	ug/kg	103		79-121		
Fluoranthene	1.7	U	1.7	0.67	ug/kg	101		85-116		
Fluorene	1.7	U	1.7	0.67	ug/kg	102		81-126		
Indeno(1,2,3-cd)pyrene	1.7	U	1.7	0.67	ug/kg	101		77-124		
1-Methylnaphthalene	1.7	U	1.7	0.67	ug/kg	108		78-119		
2-Methylnaphthalene	1.7	U	1.7	0.67	ug/kg	105		78-121		
Naphthalene	1.7	U	1.7	0.67	ug/kg	101		79-113		
N-Nitrosodimethylamine	1.7	U	1.7	0.67	ug/kg	111		71-124		
Di-n-octylphthalate	18	U	18.	6.0	ug/kg	114		76-131		
Phenanthrene	1.7	U	1.7	0.67	ug/kg	97		72-110		
Pyrene	1.7	U	1.7	0.67	ug/kg	103		79-112		
Batch number: 13274A31A	Sample number(s): 7215516-7215519									
11a TPH by EPA 8015B GRO	1.0	U	1.0	0.2	mg/kg	91		67-119		
Batch number: 13275A20A	Sample number(s): 7215514									
TPH-GRO S.CA water C5-C12	50	U	50.	20	ug/l	109	107	75-135	2	30
Batch number: 132760027A	Sample number(s): 7215515-7215519									
2,4-D	36	U	36.	12	ug/kg	108		59-122		
Dalapon	90	U	90.	44	ug/kg	72		25-100		
2,4-DB	17	U	17.	6.2	ug/kg	112		54-131		
Dicamba	12	U	12.	4.0	ug/kg	108		55-138		
Dinoseb	24	U	24.	9.0	ug/kg	9*		10-56		
2,4-DP (Dichlorprop)	17	U	17.	9.0	ug/kg	121		65-158		
MCPA	2,500	U	2,500.	760	ug/kg	100		56-133		
MCPP (Mecoprop)	2,500		2,500.	750	ug/kg	100		54-134		

*- 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: 1422081
Reported: 10/08/13 at 08:01 PM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	U									
2,4,5-T	1.7	U	1.7	0.82	ug/kg	107		58-135		
2,4,5-TP	1.7	U	1.7	0.75	ug/kg	114		63-130		
Batch number: 132750029A	Sample number(s): 7215515-7215519									
Aroclor 5432	33	U	33.	10	ug/kg					
Aroclor 5442	33	U	33.	10	ug/kg	86	80	62-87	7	30
Aroclor 5460	33	U	33.	10	ug/kg					
PCB-1016	17	U	17.	3.3	ug/kg	97		82-116		
PCB-1221	17	U	17.	5.1	ug/kg					
PCB-1232	17	U	17.	4.1	ug/kg					
PCB-1242	17	U	17.	4.1	ug/kg					
PCB-1248	17	U	17.	3.3	ug/kg					
PCB-1254	17	U	17.	4.4	ug/kg					
PCB-1260	17	U	17.	3.9	ug/kg	118		84-125		
PCB-1262	17	U	17.	3.3	ug/kg					
PCB-1268	17	U	17.	3.3	ug/kg					
Batch number: 132760006A	Sample number(s): 7215515-7215519									
Aldrin	0.83	U	0.83	0.17	ug/kg	95		60-118		
Alpha BHC	0.83	U	0.83	0.17	ug/kg	99		62-128		
Beta BHC	1.9	U	1.9	0.96	ug/kg	97		69-121		
Gamma BHC - Lindane	0.83	U	0.83	0.17	ug/kg	95		64-130		
Chlordane	17	U	17.	4.0	ug/kg					
p,p-DDD	1.7	U	1.7	0.33	ug/kg	103		69-141		
p,p-DDE	1.7	U	1.7	0.33	ug/kg	104		69-130		
p,p-DDT	1.7	U	1.7	0.35	ug/kg	103		64-139		
Delta BHC	0.83	U	0.83	0.45	ug/kg	101		51-141		
Dieldrin	1.7	U	1.7	0.33	ug/kg	106		73-135		
Endosulfan I	0.83	U	0.83	0.22	ug/kg	100		64-130		
Endosulfan II	1.7	U	1.7	0.33	ug/kg	109		68-128		
Endosulfan Sulfate	1.7	U	1.7	0.33	ug/kg	112		71-132		
Endrin	1.7	U	1.7	0.33	ug/kg	101		70-132		
Endrin Aldehyde	1.7	U	1.7	0.33	ug/kg	104		60-120		
Endrin Ketone	1.8	U	1.8	0.60	ug/kg	104		74-127		
Heptachlor	0.83	U	0.83	0.17	ug/kg	95		62-127		
Heptachlor Epoxide	0.83	U	0.83	0.17	ug/kg	103		69-125		
Methoxychlor	6.7	U	6.7	1.7	ug/kg	97		67-136		
Mirex	1.7	U	1.7	0.35	ug/kg					
Toxaphene	33	U	33.	14	ug/kg					
Batch number: 132730031A	Sample number(s): 7215515-7215519									
EFH (C12-C14)	5.0	U	5.0	2.0	mg/kg	94		70-123		
EFH (C15-C20)	5.0	U	5.0	2.0	mg/kg	99		75-128		
EFH (C21-C30)	5.0	U	5.0	2.0	mg/kg	95		64-134		
EFH (C30-C40)	10	U	10.	4.0	mg/kg	76		65-128		
EFH (C8-C11)	5.0	U	5.0	2.0	mg/kg	78		49-107		
Batch number: 132740637001	Sample number(s): 7215515-7215519									
Aluminum	40.0	U	40.0	7.21	mg/kg	104		80-120		
Antimony	4.00	U	4.00	0.740	mg/kg	104		80-120		
Arsenic	4.00	U	4.00	0.700	mg/kg	102		80-120		
Barium	1.00	U	1.00	0.0330	mg/kg	104		80-120		
Beryllium	1.00	U	1.00	0.0670	mg/kg	101		80-120		
Boron	10.0	U	10.0	0.840	mg/kg	99		80-120		
Cadmium	1.00	U	1.00	0.0760	mg/kg	103		80-120		

*- 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: 1422081
Reported: 10/08/13 at 08:01 PM

Analysis Name	Blank Result		Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Calcium	9.48	J	20.0	3.34	mg/kg	101		80-120		
Chromium	3.00	U	3.00	0.160	mg/kg	105		80-120		
Cobalt	1.00	U	1.00	0.0990	mg/kg	103		80-120		
Copper	2.00	U	2.00	0.290	mg/kg	105		80-120		
Iron	40.0	U	40.0	3.62	mg/kg	100		80-120		
Lead	3.00	U	3.00	0.500	mg/kg	107		80-120		
Lithium	4.0	U	4.0	0.34	mg/kg	103		80-120		
Magnesium	10.0	U	10.0	1.67	mg/kg	100		80-120		
Manganese	1.00	U	1.00	0.0830	mg/kg	103		80-120		
Molybdenum	2.00	U	2.00	0.170	mg/kg	100		80-120		
Nickel	2.00	U	2.00	0.130	mg/kg	104		80-120		
Phosphorus	10.0	U	10.0	2.89	mg/kg	103		80-120		
Potassium	100 U		100.	8.34	mg/kg	99		80-120		
Sodium	100 U		100.	16.7	mg/kg	99		80-120		
Tin	1.46	J	10.0	0.220	mg/kg	101		80-120		
Titanium	1.00	U	1.00	0.170	mg/kg	101		80-120		
Vanadium	1.00	U	1.00	0.130	mg/kg	103		80-120		
Zinc	0.850	J	4.00	0.200	mg/kg	102		80-120		
Zirconium	5.00	U	5.00	0.840	mg/kg	101		80-120		
Batch number: 132740637001A	Sample number(s): 7215515-7215519									
Silver	0.200	U	0.200	0.0260	mg/kg	95		80-120		
Strontium	0.400	U	0.400	0.0680	mg/kg	96		80-120		
Thallium	0.200	U	0.200	0.0300	mg/kg	96		80-120		
Batch number: 132740637001B	Sample number(s): 7215515-7215519									
Selenium	0.400	U	0.400	0.100	mg/kg	101		80-120		
Batch number: 132740638001	Sample number(s): 7215515-7215519									
3a Mercury 7471A	0.0167	U	0.0167	0.0100	mg/kg	109		85-120		
Batch number: 13270039402A	Sample number(s): 7215515-7215519									
15a pH by 9045D						100		95-105		
Batch number: 13275162401B	Sample number(s): 7215515-7215519									
14a Moisture Content by 160.3						100		80-120		

Analysis Name	Blank Result		Blank MRL**	Blank EDL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 13273002	Sample number(s): 7215515-7215516									
2378-TCDD	1.00	U	1.00	0.0390	ng/kg	100		67-158		
12378-PeCDD	0.0738	J	5.00	0.0254	ng/kg	102		70-142		
123478-HxCDD	0.0334	J	5.00	0.0169	ng/kg	101		70-164		
123678-HxCDD	0.0256	J	5.00	0.0182	ng/kg	101		76-134		
123789-HxCDD	0.0369	J	5.00	0.0172	ng/kg	99		64-162		
1234678-HpCDD	0.0965	J	5.00	0.0155	ng/kg	98		70-140		
OCDD	0.249	J	10.0	0.0199	ng/kg	97		78-144		
2378-TCDF	1.00	U	1.00	0.0244	ng/kg	103		75-158		
12378-PeCDF	0.0876	J	5.00	0.0133	ng/kg	99		80-134		
23478-PeCDF	0.0646	J	5.00	0.0127	ng/kg	101		68-160		
123478-HxCDF	0.0515	J	5.00	0.0108	ng/kg	100		72-134		
123678-HxCDF	0.0453	J	5.00	0.0101	ng/kg	102		84-130		

*- 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.

Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1422081
Reported: 10/08/13 at 08:01 PM

Analysis Name	Blank Result	Blank MRL**	Blank EDL	Report Units	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
123789-HxCDF	0.0754 J	5.00	0.0107	ng/kg	102		78-130		
234678-HxCDF	0.0332 J	5.00	0.0106	ng/kg	101		70-156		
1234678-HpCDF	0.0595 J	5.00	0.00690	ng/kg	99		82-122		
1234789-HpCDF	0.0657 J	5.00	0.00960	ng/kg	101		78-138		
OCDF	0.137 J	10.0	0.0215	ng/kg	100		63-170		
TEQ WHO 2005 - EDLx0.0	0.00400			ng/kg					

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: 13273SLE026	Sample number(s): 7215515-7215519 UNSPK: P213412								
Acenaphthene	85	84	48-127	1	30				
Acenaphthylene	90	90	49-121	0	30				
Anthracene	84	88	52-126	4	30				
Benzo(a)anthracene	84	90	44-143	6	30				
Benzo(a)pyrene	81	86	44-140	6	30				
Benzo(b)fluoranthene	86	89	26-142	4	30				
Benzo(e)pyrene	76	80	70-130	5	30				
Benzo(g,h,i)perylene	84	90	33-141	7	30				
Benzo(k)fluoranthene	81	86	54-142	7	30				
Butylbenzylphthalate	97	107	49-151	10	30				
Di-n-butylphthalate	94	97	52-147	3	30				
Chrysene	83	87	29-148	5	30				
Dibenz(a,h)anthracene	90	97	20-137	7	30				
Diethylphthalate	91	91	43-145	0	30				
Dimethylphthalate	80	89	58-129	11	30				
Bis(2-Ethylhexyl)phthalate	94	100	39-167	7	30				
Fluoranthene	84	88	40-148	5	30				
Fluorene	85	86	51-137	1	30				
Indeno(1,2,3-cd)pyrene	88	95	17-136	8	30				
1-Methylnaphthalene	78	77	50-131	1	30				
2-Methylnaphthalene	57	57	35-152	0	30				
Naphthalene	68	67	31-148	1	30				
N-Nitrosodimethylamine	93	93	48-113	1	30				
Di-n-octylphthalate	97	102	52-162	5	30				
Phenanthrene	83	85	29-142	2	30				
Pyrene	86	87	26-143	1	30				
Batch number: 13274A31A	Sample number(s): 7215516-7215519 UNSPK: P213412								
11a TPH by EPA 8015B GRO	92	86	69-123	2	30				
Batch number: 132760027A	Sample number(s): 7215515-7215519 UNSPK: P218895								
2,4-D	113	105	42-143	7	35				
Dalapon	64	54	16-98	16	50				
2,4-DB	121	116	10-179	4	50				

*- 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: 1422081
Reported: 10/08/13 at 08:01 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
Dicamba	105	94	55-133	11	50				
Dinoseb	10	11	10-52	7	35				
2,4-DP (Dichlorprop)	127	117	32-171	8	50				
MCPA	102	97	23-169	5	50				
MCPP (Mecoprop)	102	99	24-164	3	50				
2,4,5-T	116	108	12-172	7	35				
2,4,5-TP	119	111	10-142	7	35				
Batch number: 132750029A	Sample number(s): 7215515-7215519 UNSPK: P213412								
PCB-1016	83	89	41-135	7	50				
PCB-1260	94	107	40-134	13	50				
Batch number: 132760006A	Sample number(s): 7215515-7215519 UNSPK: P215511								
Aldrin	89	88	16-126	1	50				
Alpha BHC	90	90	14-140	0	50				
Beta BHC	110	109	42-133	1	50				
Gamma BHC - Lindane	88	87	30-137	0	50				
p,p-DDD	94	92	43-149	2	50				
p,p-DDE	96	94	35-152	2	50				
p,p-DDT	95	93	12-193	2	50				
Delta BHC	93	92	13-153	2	50				
Dieldrin	96	94	41-153	1	50				
Endosulfan I	91	89	26-146	2	50				
Endosulfan II	100	97	34-141	3	50				
Endosulfan Sulfate	101	100	10-181	1	50				
Endrin	92	91	30-152	1	50				
Endrin Aldehyde	93	92	23-138	2	50				
Endrin Ketone	94	93	30-148	2	50				
Heptachlor	87	86	16-152	2	50				
Heptachlor Epoxide	93	92	33-144	1	50				
Methoxychlor	91	90	41-161	2	50				
Batch number: 132730031A	Sample number(s): 7215515-7215519 UNSPK: P213412								
EFH (C12-C14)	90	84	49-123	8	20				
EFH (C15-C20)	98	92	49-123	7	20				
EFH (C21-C30)	91	87	49-123	6	20				
EFH (C30-C40)	90	93	49-123	3	20				
EFH (C8-C11)	73	71	49-123	2	20				
Batch number: 132740637001	Sample number(s): 7215515-7215519 UNSPK: P208982 BKG: P208982								
Aluminum	-136 (2)	-131 (2)	75-125	0	20	20,500	13,200	43*	20
Antimony	44*	42*	75-125	6	20	4.00 U	3.96 U	0 (1)	20
Arsenic	97	104	75-125	4	20	4.06	3.28 J	21* (1)	20
Barium	94	92	75-125	3	20	95.6	88.7	8	20
Beryllium	97	98	75-125	0	20	0.565 J	0.412 J	31* (1)	20
Boron	97	100	75-125	1	20	9.44 J	6.97 J	30* (1)	20
Cadmium	94	97	75-125	2	20	0.321 J	0.442 J	32* (1)	20
Calcium	1949 (2)	2450 (2)	75-125	4	20	37,100	42,800	14	20
Chromium	123	109	75-125	6	20	31.3	27.9	12	20
Cobalt	89	90	75-125	0	20	7.96	5.90	30*	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: 1422081
Reported: 10/08/13 at 08:01 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
Copper	97	98	75-125	0	20	16.0	13.1	20	20
Iron	-5142 (2)	-6500 (2)	75-125	6	20	26,000	17,500	39*	20
Lead	88	91	75-125	1	20	7.08	6.86	3 (1)	20
Lithium	91	92	75-125	0	20	32.9	18.4	56* (1)	20
Magnesium	-455 (2)	-524 (2)	75-125	2	20	7,180	5,120	33*	20
Manganese	230 (2)	342 (2)	75-125	13	20	266	355	29*	20
Molybdenum	93	94	75-125	1	20	2.00 U	0.388 J	200* (1)	20
Nickel	89	87	75-125	3	20	17.4	14.8	16	20
Phosphorus	173 (2)	168 (2)	75-125	1	20	439	503	14	20
Potassium	48*	64*	75-125	4	20	3,370	2,470	31*	20
Sodium	94	94	75-125	2	20	187	146	25* (1)	20
Tin	84	86	75-125	1	20	3.09 J	2.55 J	19 (1)	20
Titanium	177 (2)	236 (2)	75-125	4	20	1,100	652	51*	20
Vanadium	103	111	75-125	3	20	56.4	41.7	30*	20
Zinc	57*	66*	75-125	4	20	78.2	54.7	35*	20
Zirconium	95	99	75-125	2	20	4.25 J	5.63	28* (1)	20
Batch number: 132740637001A	Sample number(s): 7215515-7215519 UNSPK: P208982 BKG: P208982								
Silver	111	114	75-125	0	20	0.0327 J	0.0359 J	9 (1)	20
Strontium	145 (2)	98 (2)	75-125	4	20	89.7	84.5	6	20
Thallium	123	117	75-125	4	20	0.283	0.251	12 (1)	20
Batch number: 132740637001B	Sample number(s): 7215515-7215519 UNSPK: P208982 BKG: P208982								
Selenium	106	113	75-125	4	20	0.183 J	0.238 J	26* (1)	20
Batch number: 132740638001	Sample number(s): 7215515-7215519 UNSPK: P208982 BKG: P208982								
3a Mercury 7471A	115	103	65-135	11	20	0.0115 J	0.0111 J	4 (1)	20
Batch number: 13270039402A	Sample number(s): 7215515-7215519 BKG: P215511								
15a pH by 9045D						7.89	7.91	0	3
Batch number: 13275162401B	Sample number(s): 7215515-7215519 BKG: P213412								
14a Moisture Content by 160.3						7.4	7.6	1	20
Batch number: 13273002	Sample number(s): 7215515-7215516 UNSPK: P211497								
2378-TCDD	97	102	40-135	4	20				
12378-PeCDD	102	103	40-135	0	20				
123478-HxCDD	99	100	40-135	1	20				
123678-HxCDD	104	102	40-135	3	20				
123789-HxCDD	97	100	40-135	2	20				
1234678-HpCDD	99	100	40-135	0	20				
OCDD	97	100	40-135	2	20				
2378-TCDF	103	105	40-135	0	20				
12378-PeCDF	101	100	40-135	2	20				
23478-PeCDF	100	103	40-135	2	20				
123478-HxCDF	100	103	40-135	2	20				
123678-HxCDF	103	104	40-135	1	20				
123789-HxCDF	101	104	40-135	1	20				
234678-HxCDF	101	102	40-135	0	20				
1234678-HpCDF	99	101	40-135	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: 1422081
Reported: 10/08/13 at 08:01 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
1234789-HpCDF	102	102	40-135	1	20				
OCDF	100	103	40-135	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: 7a SVOC SIM EPA 8270D
Batch number: 13273SLE026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7215515	88	94	106
7215516	91	93	107
7215517	90	96	108
7215518	90	96	107
7215519	86	94	106
Blank	89	96	108
LCS	92	100	110
MS	78	83	97
MSD	82	86	95
Limits:	54-129	59-125	61-125

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13274A31A

	Trifluorotoluene-F
7215516	78
7215517	75
7215518	87
7215519	80
Blank	92
LCS	95
MS	70
MSD	77
Limits:	50-142

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13275A20A

	Trifluorotoluene-F
7215514	96
Blank	92
LCS	98
LCSD	99

*- 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: 1422081
Reported: 10/08/13 at 08:01 PM

Surrogate Quality Control

Limits: 63-135

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 132750029A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7215515	106	111
7215516	104	112
7215517	102	111
7215518	108	115
7215519	106	111
Blank	117	117
LCS	117	122*
LCSD	109	120
MS	100	105
MSD	106	113
Limits:	45-120	45-120

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 132760006A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7215515	92	106
7215516	94	104
7215517	121	136*
7215518	92	107
7215519	92	107
Blank	94	109
LCS	96	111
MS	92	101
MSD	91	100
Limits:	50-130	20-120

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 132760027A

	2,4-Dichlorophenylacetic acid
7215515	84
7215516	95
7215517	86
7215518	87
7215519	94
Blank	92
LCS	101
MS	101
MSD	97
Limits:	50-150

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 132730031A

	Chlorobenzene	Orthoterphenyl

*- 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: 1422081
Reported: 10/08/13 at 08:01 PM

Surrogate Quality Control

7215515	99	87
7215516	93	82
7215517	111	95
7215518	106	90
7215519	106	90
Blank	112	90
LCS	109	88
MS	104	84
MSD	100	81
Limits:	37-125	66-123

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13273002

	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
7215515	69	67	65	70	65	71
7215516	67	80	69	73	70	69
Blank	69	71	70	73	71	74
MS	67	68	69	75	71	68
MSD	69	69	69	76	70	71
OPR	65	69	68	75	72	68
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
7215515	79	61	58	72	72	71
7215516	85	67	65	83	75	73
Blank	89	73	73	74	77	77
MS	90	68	66	72	77	76
MSD	94	67	64	73	79	76
OPR	93	70	68	75	80	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
7215515	70	72	69	62	73
7215516	74	76	77	65	83
Blank	77	81	85	65	72
MS	77	79	80	63	72
MSD	76	81	80	64	74
OPR	81	84	83	59	73
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 Cup#1422081 sample#7215514-19

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 9/26/2013
CarrierName: FedEx
AirbillNo: 796780309074

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130926-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Metals 6010 and 6020	Mercury 7471 (Soil)	Mercury 7470 (Water)	Fluoride 300.0/9056	SVOC 8270	TIC 8270	PAHs 8270 SIM	1,4 Dioxane 8270 SIM	Dioxins 1613	PCBs/PCTs 8082	Perchlorate 314.0/331	Perchlorate Confirm 6850/6860	pH 9045 (Soil)	pH 9040 (Water)	Hex Cr 7196/7199	Herbicides 8151	Pesticides 8081	VOCs 8260	1,4 Dioxane 8260 SIM	TPH-GRO 8015	TPH-EFH 8015	Glycols 8015	Alcohols 8015	Terphenyls 8015	Nitrates 300.0/9056	Energetics 8330	Cyanide 9012	Formaldehyde 8315	NDMA 1625	Organotin	Methyl Mercury 1630	Other Analysis/Notes
TB2-092613	9/26/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day																				X												
SL-542-SA8-SB-0.0-0.5	9/26/13 09:00	SO	None	2 - SS-Sleeve	10 day	X	X					X		X	X						X	X				X											
SL-542-SA8-SB-0.0-0.5	9/26/13 09:00	SO	None	1 - 4 oz glass	10 day													X																			
SL-542-SA8-SB-4.0-5.0	9/26/13 09:20	SO	None	2 - SS-Sleeve	10 day	X	X					X		X	X						X	X				X											
SL-542-SA8-SB-4.0-5.0	9/26/13 09:20	SO	None	1 - 4 oz glass	10 day													X																			
SL-542-SA8-SB-4.0-5.0	9/26/13 09:20	SO	None	2 - Encore	10 day																				X												
SL-542-SA8-SB-9.0-10.0	9/26/13 09:50	SO	None	2 - SS-Sleeve	10 day	X	X					X			X						X	X				X											
SL-542-SA8-SB-9.0-10.0	9/26/13 09:50	SO	None	1 - 4 oz glass	10 day													X																			
SL-542-SA8-SB-9.0-10.0	9/26/13 09:50	SO	None	2 - Encore	10 day																				X												
SL-542-SA8-SB-14.0-15.0	9/26/13 11:50	SO	None	2 - SS-Sleeve	10 day	X	X					X			X						X	X				X											
SL-542-SA8-SB-14.0-15.0	9/26/13 11:50	SO	None	1 - 4 oz glass	10 day													X																			
SL-542-SA8-SB-14.0-15.0	9/26/13 11:50	SO	None	2 - Encore	10 day																				X												
SL-542-SA8-SB-17.5-18.5	9/26/13 12:20	SO	None	2 - SS-Sleeve	10 day	X	X					X			X						X	X				X											
SL-542-SA8-SB-17.5-18.5	9/26/13 12:20	SO	None	1 - 4 oz glass	10 day													X																			
SL-542-SA8-SB-17.5-18.5	9/26/13 12:20	SO	None	2 - Encore	10 day																				X												

Special Instructions:

Sampler: V. Cortes

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
Steve Myers	09/26/2013	1600									
										9-27-13	915

COC Rev 2

Subarea 8

COC 20130926-01, Page 1 of 1

eurofins | Lancaster Laboratories

C# 1422081

Environmental Sample Administration
Receipt Documentation Log

Client/Project: CDM

Date of Receipt: 9.27.13

Time of Receipt: 915

Source Code: 50-1

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT146	1.2	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 2299 **Date/Time:** 9.27.13 1112

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories Environmental

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)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< 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

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 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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC 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 EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL 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 Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Appendix C
Data Usability Assessment Report and Data Validation Reports
(On CD)

Appendix C
Data Usability Assessment Report

The purpose of this data usability and assessment report (DUAR) is to summarize the data validation performed on the data sets for Subarea 5D and Subarea 8 samples collected, and determine whether the sample results meet the Data Quality Objectives (DQOs) outlined in the *Master Field Sampling Plan for Chemical Data Gap Investigation Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Federal Programs Corporation [CDM Smith] 2012a) (Master FSP) and *Addendum No. 7 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 8* (CDM Smith 2013a) (Addendum to the Master FSP), and *Addendum No. 8 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 5D* (CDM Smith 2013b) (Addendum to the Master FSP).

The Master FSP is Appendix A of *Work Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2012b) (Work Plan), which also includes Appendix B, Quality Assurance Project Plan (QAPP); Appendix C, Worker Safety and Health Program; and Appendix D, Standard Operating Procedures (SOPs).

C.1 Usability Summary

For this data usability assessment, 28 data sets were reviewed for Subarea 5D and 34 data sets were reviewed for Subarea 8. 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 (SDG). The analyses performed are discussed in Section 2.5 of the Subareas 5D and 8 Technical Memorandum (TM).

Samples were collected and analyzed in accordance with the Master FSP (CDM Smith 2012a). Deviations were encountered during the field investigation for the Subareas 5D and 8 sampling activities and are discussed in detail in Section 2.7 of the Subareas 5D and 8 TM.

The validated data for Subarea 5D samples are usable as reported except for the rejected data. Seven herbicide results (dinitrobutyl phenol) were rejected due to laboratory control sample criteria. For all Subarea 5D data, 0.039 percent of the results were rejected. For Subarea 8, ten herbicide results (2,4,5-TP, 2,4,5-T, 2,4-D, 2,4-DB, 2,2-dichloropropionic acid and dinitrobutyl phenol) and four SVOC results (benzidine) were rejected. For all Subarea 8 data, 0.062 percent of the results were rejected.

The validated data for Phase 3 Subareas 5D and 8 samples are usable as reported with the exception of the rejected data. These rejected data and any impact to project objectives and goals are being evaluated in the data gap review process. Specific details are provided in the validation reports in this appendix and below.

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 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. The Level IV determination also included reviewing 10 percent for each laboratory and each method. In order to achieve this, the validators chose appropriate samples in each SDG. Hence, not all samples in some of the SDGs were Level IV validated but they received a mixture of Level IV and Level III review.

Table C-1 shows all SDGs that include Subarea 5D and Subarea 8 samples and which SDGs were validated as Level III or Level IV. Some SDGs contain samples from other subareas 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 5D and Subarea 8 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 Master FSP (CDM Smith 2012a) have been met. The following data measurement tasks were evaluated:

- Specification and adherence to analytical method and reporting limit requirements
- Identification of the appropriate laboratory analytical QC requirements and verification that QC requirements were met
- Verification that measurement performance criteria (representativeness and completeness) for the data were 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 to support their intended use.

C.4 Summary of Field and Laboratory QA Activities

CDM Smith completed sampling activities in Subareas 5D and 8 in accordance with the approved Master FSP (CDM Smith 2012a) and discussed in the Subareas 5D and 8 TM. A total of 273 soil samples in Subarea 5D and 241 samples in Subarea 8 were collected and analyzed from the locations in Subareas 5D and 8. Tables 2-1 and 2-2 in the Subareas 5D and 8 TM provides a summary of the samples collected and the laboratory analyses requested.

An index of samples associated with each SDG is presented at the beginning of the data validation reports presented in this appendix. The Master FSP (CDM Smith 2012a) defined the procedures to be followed and the data quality requirements for the field sampling events.

C.5 Field Quality QA/QC

The MS/MSDs and field duplicates field QC samples were collected at a frequency of approximately 1 per 20 samples (5 percent). During sampling in Subarea 5D, a total of 16 field duplicate/MS/MSD samples were collected equating to approximately six percent. On an individual method basis, the five percent goal was met or exceeded for all analyses.

In Subarea 8, a total of 13 field QC samples (field duplicate and MS/MSD samples) were collected equating to approximately six percent. On an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a).

Twenty-five equipment rinsate blank samples were collected for Subareas 5D and 8. The equipment rinsate blank results are presented in Tables C-2 and C-3.

One field blank was collected during sampling for Subareas 5D and 8. Other field blanks are associated with these Subareas and associated samples have been qualified accordingly. The results for these samples are presented in Tables C-4 and C-5.

Fifty-nine trip blank samples were shipped with the Subareas 5D and 8 samples. The results for these samples are presented in Tables C-6 and C-7. Data qualifications based on blank detections are discussed in Section C.7.3 and in the Appendix C validation reports.

Temperature blanks were included with each shipment of samples. Based on validation results, all temperature blanks for Subareas 5D and 8 met criteria.

As stated previously, on an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a) for the Phase 3 Subareas 5D and 8 sampling program except for the methods listed above. Further, field QA/QC objectives

were attained through the use of appropriate sampling techniques and collection of the required number and frequency of QC samples.

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. Twenty-one analyte results were rejected and are discussed below.

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 Master FSP (CDM Smith 2012a). 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:

$$\textbf{RPD = absolute value [(C1-C2)/\{(C1+C2)/2)\}] x 100\%}$$

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 Work Plan (CDM Smith 2012c) 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. Tables C-8 and C-9 show the field duplicate pairs and RPD results for Subareas 5D and 8. RPD results outside of criteria are highlighted.

The following Subarea 5D individual analyte results were qualified as estimated "J/UJ" based on precision criteria:

- 244 metal analyte results and 10 fluoride results due to laboratory precision criteria

The following Subarea 8 individual analyte results were qualified as estimated "J/UJ" based on precision criteria:

- 296 metal analyte results, and 5 hexavalent chromium results due to laboratory precision criteria

Field duplicate precision criteria for Phase 3 Subarea 5D samples required the qualification of the following analytes:

- 53 dioxin results
- 2 fluoride results
- 11 metal results
- 1 hexavalent chromium result
- 4 mercury results
- 11 TPH GRO/EFH results
- 1 pesticide result
- 1 PCB/PCT result
- 20 SVOC SIM results

For Phase 3 Subarea 8 samples the following analytes were qualified due to field duplicate precision:

- 99 dioxins results
- 30 metals results
- 1 perchlorate result

- 1 hexavalent chromium result
- 1 mercury result
- 5 five TPH GRO/EFH results
- 1 pesticide result
- 3 PCB/PCT results
- 1 herbicide result
- 2 SVOC results
- 34 SVOC SIM results

No results were rejected based on field duplicate precision criteria. All field duplicate RPD results are presented in Appendix C. In summary, sample results that have been qualified as estimated "J/UJ" due to precision criteria are usable for project decisions with a degree of caution.

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.

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:

$$\textbf{Percent Recovery} = \frac{(\textbf{Total Analyte Found} - \textbf{Analyte Originally Present})}{\textbf{Analyte Added}} \times 100$$

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 approved analytical method and 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 Subarea 5D individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- 1 dioxin result, 88 fluoride results, 473 metal results, 1 perchlorate result, 13 TPH GRO/EFH results, and 9 SVOC SIM results due to MS recoveries
- 203 metal analyte results due to serial dilutions
- 4 pesticide results, 32 PCB/PCT results, and 5 herbicide results for calibration recoveries
- 1 PCB/PCT result and 7 herbicide results for LCS recoveries
- 5 TPH GRO/EFH results and 2 PCB/PCT results for surrogate recoveries
- 4 TPH GRO/EFH results due to holding time criteria

The following individual analyte results were rejected "R" based on accuracy criteria:

- 7 herbicide results (dinitrobutyl phenol) based on LCSs

The following Subarea 8 individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- 3 dioxins, 2 fluoride results, 2 sulfite results, 572 metals, 12 TPH GRO/EFH results, 1 pesticide result, 5 herbicides, 5 SVOC results, and 3 SVOC SIM results due to MSs
- 2 PCB/PCT results, 5 herbicide results, 6 SVOC results, and 10 SVOC SIM results due to LCSs
- 7 pesticide results, and 10 herbicide results due to surrogates
- 208 metal analyte results due to serial dilutions
- 3 PCB/PCT results due to confirmation column results
- 18 herbicide results, 1 VOC result, and 6 SVOC results based on calibration criteria

The following individual analyte results were rejected "R" based on accuracy criteria:

- 10 herbicide results (2,4,5-TP [silvex], 2,4,5-T, 2,4-D, 2,4-DB, 2,2-dichloroporpionic acid, dinitrobutyl phenol) based on MSs and LCSs
- 4 SVOC SIM results (benzidine) based on MSs

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 as indicated previously.

Sample results that have been qualified as estimated "J/UJ" due to accuracy criteria are usable for project decisions. Sample results that have been rejected are not usable for project decisions.

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 5D samples:

- 682 dioxin results (40% of all dioxin results)
- 198 metal results (4.1% of all metal results)
- 12 SVOC SIM results (0.25% of all SVOC SIM results)

The following individual analyte results were qualified as nondetect "U" based on blank contamination for the Subarea 8 samples:

- 1,186 dioxin results (35% of all dioxin results)
- 258 metal results (5% of all metal results)

For the dioxins, MDLs for this analysis are very low, reported in nanogram per kilogram (ng/kg) or parts per trillion, resulting in numerous results qualified as estimated "J." Many of these estimated values have been subsequently qualified as non-detect "U" because the compound was detected in related laboratory blanks. In the 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 are well below site-related action levels. Therefore, the resulting qualification of associated sample results as not detected or "U" does not falsely diminish identification of site-related contaminants.

Tables C-2 through C-7 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. ASTM International 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 Phase 3 equipment blanks for Subarea 5D and Subarea 8 was also performed. In general, a variety of analytes were detected above their respective RLs. All Phase 3 equipment blanks will continue to be monitored to determine if these low level detections are consistent, thus indicating a possible deficiency in decontamination procedures and/or source water impacts that need to be addressed and corrected.

For Subarea 5D, 102 metal results and 10 SVOC SIM results were qualified based on field/equipment blanks results. For Subarea 8, 126 metal results, 1 VOC result and 17 SVOC

SIM results, were also qualified based on field/equipment blank criteria. To date, chemical detections in equipment blank samples appear to be random occurrences.

Trip blank results are presented in Tables C-6 and C-7. All the trip blank results were nondetect.

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 Work Plan (CDM Smith 2012c) 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 Master FSP (CDM Smith 2012a) 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 Master FSP (CDM Smith 2012a) 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 Smith. The sample analyses were performed by Eurofins Lancaster Laboratories. 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 samples:

- Method 1613B (Dioxins)
  - 619 individual analyte results
- Method 300 (Fluoride)
  - 15 individual analyte results
- Methods 6010C/6020A (Metals)
  - 908 individual analyte results
- Methods 6850 (Perchlorate)
  - 1 individual analyte result
- Methods 7199 (Hexavalent Chromium)
  - 6 individual analyte results
- Methods 7471B (Mercury)
  - 58 individual analyte results
- Method 8015B (TPH GRO/EFH)
  - 61 individual analyte results
- Method 8081B (Pesticides)
  - 36 individual analyte results
- Method 8082A (PCBs)
  - 12 individual analyte results
- Method 8270C SIM (SVOCs)
  - 374 individual analyte results

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 8 samples:

- Method 1613B (Dioxins)
  - 1, 347 individual analyte results
- Method 300 (Fluoride)
  - 1 individual analyte result
- Methods 6010C/6020A (Metals)
  - 1,174 individual analyte results
- Methods 6850 (Perchlorate)
  - 3 individual analyte results
- Methods 7199 (Hexavalent Chromium)
  - 7 individual analyte results

- Methods 7471B (Mercury)
  - 53 individual analyte results

- Method 8015M (TPH GRO/EFH)
  - 91 individual analyte results

- Method 8081B (Pesticides)
  - 14 individual analyte results

- Method 8082A (PCBs)
  - 35 individual analyte results

- Method 8151A (Herbicides)
  - 5 individual analyte results

- Method 8270D (SVOCs)
  - 22 individual analyte results

- Method 8270C SIM (SVOCs)
  - 589 individual analyte results

For the data validated in the Subareas 5D and 8 TM, RLs for a majority of the sample results were low enough to compare to the RLs stated in the Master FSP (CDM Smith 2012a). RLs above those stated in the Master FSP (CDM Smith 2012a) will be evaluated on a case by case basis to see if resampling is required.

C.8 Review of Selected Validation Reports

CDM Smith 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 Master FSP (CDM Smith 2012a) 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. $$\%\text{Completeness} = C \times \frac{100}{n}$$

Where:

C = actual number of samples collected
n = total number of samples planned

B. $$\%\text{Completeness} = V x \frac{100}{n'}$$

Where:

V = number of measurements judged valid
n' = total number of measurements made

The overall completeness goal, as defined in the Master FSP (CDM Smith 2012a), for these sampling events was 90 percent for each analytical test for all project data.

A total of 273 soil samples including the field duplicates were collected and analyzed for Subarea 5D and 241 soil samples for Subarea 8. Two mineral grab samples were collected from the hill slope south of ESADA in Subarea 8 to evaluate a potential source of elevated strontium. Four split samples collected with DTSC are also included in the total sample number for Subarea 8. Some locations required only a subsurface sample while other locations required both a surface and a subsurface sample. The number of subsurface samples to be collected at each location was not pre-determined because the total depth of each boring varies depending on the local geology. No subsurface samples were collected at one location due to shallow refusal at less than 2.5 feet bgs in Subarea 8. Two locations in Subarea 5D and 11 locations in Subarea 8 were not sampled because they are planned to be completed as trenches and/or test pits as noted in Section 2.7.1.

The completeness goal for the actual number of samples collected compared to the number of samples planned is considered acceptable as a sample was collected from each location (depending on shallow refusal) and locations for trench samples and near active transformers will be collected during future Phase 3 sampling activities.

The completeness goal achieved for acceptable data was 99.96 percent for Subarea 5D and 99.94 percent for Subarea 8 for the number of measurements judged to be valid versus the total number of measurements made for all samples analyzed.

The following Phase 3 Subarea 5D individual analyte results were rejected per analyses:

- Method 8151A
  - 7 out of 390 individual herbicide analyte results (1.79 %)

The following Phase 3 Subarea 8 individual analyte results were rejected per analyses:

- Method 8151A
  - 10 out of 330 individual herbicide analyte results (3.03 %)
  - 4 out of 1,083 individual SVOC results (0.37 %)

Tables C-10 and C-11 summarize all results that were estimated or rejected for Phase 3 Subarea 5D and 8 respectively.

The completeness goals for both the locations sampled and the number of measurements judged to be valid were met or are planned to be met.

Sampling deviations from procedures described in the Master FSP (CDM Smith 2012a) are discussed in Section 2.7 of the Subareas 5D and 8 Phase 3 TM. Deviations did not impact DQOs for this sampling event. The data reported are suitable for their intended use for characterization of Area IV of SSFL. The DQIs identified in the Master FSP (CDM Smith 2012a) met appropriate criteria. The completeness goals for both the locations sampled and the number of measurements judged to be valid were met or will be met. The achievement of the completeness goals for the data indicates a sufficient amount of usable data has been generated for project decisions.

C.10 Assessment of Data Usability and Reconciliation with WP/FSAP Goals

Over 99 percent of the data validated for Subarea 5D and Subarea 8 Phase 3, are suitable for their intended use for site characterization. Sample results that were qualified as estimated are usable for project decisions. Rejected sample results are not suitable for project use. The rejected analyte results do not impact achievement of the overall project objectives. The RLs reported generally met the expected limits proposed by the analytical laboratories in their subcontract agreements with CDM Smith.

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.

THIS PAGE INTENTIONALLY LEFT BLANK

Table C-1 Sample Delivery Groups and Validation Levels for Subarea 5D and Subarea 8

Subarea 5D SDGs		
Sample Delivery Group	Level of Validation Performed	CDM Smith Review
PH093	Level III	
PH095	Level III	X
PH098	Level IV	
PH099	Level III	
PH100	Level III	
PH101	Level III	
PH102	Level IV	X
PH103	Level III	
PH104	Level III	
PH105	Level III	
PH106	Level III	
PH107	Level III	
PH108	Level III	
PH109	Level III	
PH110	Level III	X
PH111	Level III	
PH112	Level III	
PH113	Level III	
PH114	Level III	
PH116	Level III	
PH118	Level III	X
PH119	Level IV	
PH120	Level III	
PH122	Level III	
PH123	Level III	
PH127	Level III	
PH130	Level III	
Subarea 8 SDGs		
Sample Delivery Group	Level of Validation Performed	CDM Smith Review
PH062	Level IIII	
PH063	Level III	
PH064	Level III	
PH065	Level III	
PH066	Level III	X
PH067	Level III	
PH068	Level III	
PH069	Level IV	
PH070	Level III	

Table C-1 Sample Delivery Groups and Validation Levels for Subarea 5D and Subarea 8

Subarea 8 SDGs		
Sample Delivery Group	Level of Validation Performed	CDM Smith Review
PH071	Level III	
PH072	Level III	
PH073	Level III	
PH074	Level III	X
PH075	Level IV	
PH076	Level III	
PH078	Level III	
PH080	Level III	
PH081	Level III	
PH082	Level III	
PH083	Level IV	X
PH084	Level III	
PH085	Level III	
PH086	Level III	
PH087	Level III	
PH088	Level III	
PH089	Level III	
PH090	Level IV	
PH091	Level III	X
PH092	Level III	
PH094	Level III	
PH096	Level III	
PH097	Level IV	
PH115	Level III	
PH117	Level III	

Note: Some SDGs may contain samples from other subareas, but all samples in an SDG were validated together.

Table C-2 - Subarea 5D - Equipment Rinsate Samples

		Sample Name:	EB-090413		EB-091113		EB-091213		EB-100813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	09/04/2013		09/11/2013		09/12/2013		10/08/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1'-Biphenyl	8270D	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	0.614	J	9.62	U	9.71	U	9.67	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trichlorobenzene	8270D	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichlorobenzene	8270D	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,2-Diphenylhydrazine	8270D	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichlorobenzene	8270D	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1,4-Dichlorobenzene	8270D	µg/L								
1,4-Dioxane	8260B SIM	µg/L								
1-Chlorohexane	8260B	µg/L								
1-Methylnaphthalene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
2,2-Dichloropropane	8260B	µg/L								
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U	1.2	U	1.2	U	1.2	U
2,3,4,6,7,8-HXCDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
2,3,4,7,8-PECDF	1613B	pg/L	10.1	U	9.62	U	9.71	U	9.67	U
2,3,7,8-TCDD	1613B	pg/L	2.01	U	0.813	J	1.94	U	1.93	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	2.01	U	1.92	U	1.94	U	1.93	U
2,4,5-T	8151A	µg/L	0.049	U	0.049	U	0.048	U	0.048	U
2,4,5-Trichlorophenol	8270D	µg/L								
2,4,6-Trichlorophenol	8270D	µg/L								
2,4-D	8151A	µg/L	0.49	U	0.49	U	0.48	U	0.48	U
2,4-DB	8151A	µg/L	0.98	U	0.99	U	0.95	U	0.95	U
2,4-Dichlorophenol	8270D	µg/L								
2,4-Dimethylphenol	8270D	µg/L								
2,4-Dinitrophenol	8270D	µg/L								
2,6-Dichlorophenol	8270D	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chloronaphthalene	8270D	µg/L								
2-Chlorophenol	8270D	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Methylnaphthalene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
2-Methylphenol	8270D	µg/L								
2-Nitroaniline	8270D	µg/L								
2-Nitrophenol	8270D	µg/L								
2-Phenylbutane	8260B	µg/L								
2-Propanol	8015C	µg/L								
3,3'-Dichlorobenzidine	8270D	µg/L								
3,5-Dimethylphenol	8270D	µg/L								
3-Nitroaniline	8270D	µg/L								
4,4'-DDD	8081B	µg/L	0.018	U	0.017	U			0.017	U
4,4'-DDE	8081B	µg/L	0.018	U	0.017	U			0.017	U
4,4'-DDT	8081B	µg/L	0.018	U	0.017	U			0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L								
4-Bromophenyl-phenylether	8270D	µg/L								
4-Chloro-3-methylphenol	8270D	µg/L								
4-Chloroaniline	8270D	µg/L								
4-Chlorophenyl-phenylether	8270D	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
4-Methylphenol	8270D	µg/L								
4-Nitroaniline	8270D	µg/L								
4-Nitrophenol	8270D	µg/L								
Acenaphthene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Acenaphthylene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Aldrin	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Alpha-Bhc	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L								
Anthracene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U

		Sample Name:	EB-090413		EB-091113		EB-091213		EB-100813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	09/04/2013		09/11/2013		09/12/2013		10/08/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1221	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1232	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1242	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1248	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1254	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1260	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1262	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 1268	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 5432	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 5442	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Aroclor 5460	8082A	µg/L	0.41	U	0.41	UJ	0.44	U	0.42	U
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.0004	J	0.01	U	0.01	U	0.01	U
Benzene	8260B	µg/L								
Benzidine	8270D	µg/L								
Benzo(a)anthracene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzo(a)pyrene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzo(e)pyrene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Benzoic Acid	8270D	µg/L								
Benzyl Alcohol	8270D	µg/L								
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
bis(2-chloroethoxy)methane	8270D	µg/L								
bis(2-chloroethyl) ether	8270D	µg/L								
bis(2-chloroisopropyl) ether	8270D	µg/L								
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1.6	J	0.21	J	4.1	UJ	1	U
Boron	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Butylbenzylphthalate	8270D SIM	µg/L	1	UJ	1	UJ	4.1	UJ	1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Carbazole	8270D	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlordane	8081B	µg/L	0.45	U	0.41	U			0.42	U
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L	10	U	10	U	10	U	10	U
Chrysene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Cymene	8260B	µg/L								
Delta-Bhc	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Di isopropyl Ether	8260B	µg/L								
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Dibenzofuran	8270D	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dicamba	8151A	µg/L	0.29	U	0.3	U	0.29	U	0.29	U
Dichlorodifluoromethane	8260B	µg/L								
Dichlorprop	8151A	µg/L	0.49	U	0.49	U	0.48	U	0.48	U
Dieldrin	8081B	µg/L	0.018	U	0.017	U			0.017	U
Diethylphthalate	8270D SIM	µg/L	0.3	J	0.24	J	4.1	UJ	0.29	J
Dimethylphthalate	8270D SIM	µg/L	1	UJ	1	UJ	4.1	UJ	1	U
Di-n-butylphthalate	8270D SIM	µg/L	0.11	J	0.2	J	4.1	UJ	0.17	J
Dinitrobutyl Phenol	8151A	µg/L	0.49	U	0.49	U	0.48	U	0.48	U
Di-n-octylphthalate	8270D SIM	µg/L	1	UJ	1	U	4.1	UJ	1	U
Diphenylamine	8270D	µg/L								
EFH (C12-C14)	8015M	mg/L	0.096	U	0.097	U	0.097	U	0.096	U
EFH (C15-C20)	8015M	mg/L	0.096	U	0.097	U	0.097	U	0.096	U
EFH (C21-C30)	8015M	mg/L	0.096	U	0.097	U	0.097	U	0.096	U
EFH (C30-C40)	8015M	mg/L	0.48	U	0.48	U	0.49	U	0.48	U
EFH (C8-C11)	8015M	mg/L	0.096	UJ	0.097	U	0.097	U	0.096	UJ
Endosulfan I	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Endosulfan II	8081B	µg/L	0.018	U	0.017	U			0.017	U
Endosulfan Sulfate	8081B	µg/L	0.018	U	0.017	U			0.017	U
Endrin	8081B	µg/L	0.018	U	0.017	U			0.017	U
Endrin Aldehyde	8081B	µg/L	0.09	U	0.083	U			0.084	U
Endrin Ketone	8081B	µg/L	0.018	U	0.017	U			0.017	U
Ethanol	8015C	µg/L								
Ethylbenzene	8260B	µg/L								
Fluoranthene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Fluorene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Fluoride	300.0	mg/L	0.1	U	0.1	U	0.1	U	0.1	U
Formaldehyde	8315A	µg/L								
Gamma-Bhc (Lindane)	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U			50	U
Heptachlor	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Heptachlor Epoxide	8081B	µg/L	0.009	U	0.0083	U			0.0084	U
Hexachloro-1,3-butadiene	8260B	µg/L								
Hexachlorobenzene	8270D	µg/L								
Hexachlorobutadiene	8270D	µg/L								
Hexachlorocyclopentadiene	8270D	µg/L								
Hexachloroethane	8270D	µg/L								

		Sample Name:	EB-090413		EB-091113		EB-091213		EB-100813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	09/04/2013		09/11/2013		09/12/2013		10/08/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L								
Isopropylbenzene	8260B	µg/L								
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L								
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.0011	J	0.0019	J	0.01	U	0.01	U
MCPA	8151A	µg/L	200	U	200	U	190	U	190	U
MCPP	8151A	µg/L	200	U	200	U	190	U	190	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methanol	8015C	µg/L								
Methoxychlor	8081B	µg/L	0.09	U	0.083	U			0.084	U
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
Mirex	8081B	µg/L	0.22	U	0.21	U			0.042	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Morpholine	8270D SIM	µg/L								
Naphthalene	8270D SIM	µg/L	0.032	J	0.038	J	0.2	UJ	0.052	U
n-Butylbenzene	8260B	µg/L								
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrobenzene	8270D	µg/L								
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
N-Nitroso-di-n-propylamine	8270D	µg/L								
N-Nitrosodiphenylamine	8270D	µg/L								
n-Propylbenzene	8260B	µg/L								
OCDD	1613B	pg/L	20.1	U	19.2	U	19.4	U	19.3	U
OCDF	1613B	pg/L	20.1	U	19.2	U	19.4	U	19.3	U
o-Xylene	8260B	µg/L								
Pentachlorophenol	8270D	µg/L								
Perchlorate	6850	µg/L	1	U	1	U	1	U		
pH	9040C	pH	6		6.2		6		6.5	
Phenanthrene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Phenol	8270D	µg/L								
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L	0.051	UJ	0.051	U	0.2	UJ	0.052	U
Pyridine	8270D	µg/L								
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.049	U	0.049	U	0.048	U	0.048	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L								
TCDD TEQ	1613B	pg/L	0.0266		0.0111		1.61		0.15	
Technical Toxaphene	8081B	µg/L	2.7	U	2.5	U			2.5	U
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

		Sample Name:	EB1-082813		EB1-091813		EB1-092513		EB1-100213	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	08/28/2013		09/18/2013		09/25/2013		10/02/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1'-Biphenyl	8270D	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trichlorobenzene	8270D	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichlorobenzene	8270D	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,2-Diphenylhydrazine	8270D	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichlorobenzene	8270D	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1,4-Dichlorobenzene	8270D	µg/L								
1,4-Dioxane	8260B SIM	µg/L								
1-Chlorohexane	8260B	µg/L								
1-Methylnaphthalene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
2,2-Dichloropropane	8260B	µg/L								
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U	1.2	U	1.2	U	1.2	U
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
2,3,4,7,8-PECDF	1613B	pg/L	9.67	U	9.65	U	9.78	U	9.7	U
2,3,7,8-TCDD	1613B	pg/L	1.93	U	1.93	U	1.96	U	1.94	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.93	U	1.93	U	1.96	U	0.237	J
2,4,5-T	8151A	µg/L	0.049	U	0.048	U	0.048	U	0.048	U
2,4,5-Trichlorophenol	8270D	µg/L								
2,4,6-Trichlorophenol	8270D	µg/L								
2,4-D	8151A	µg/L	0.49	U	0.48	U	0.48	U	0.48	U
2,4-DB	8151A	µg/L	0.98	U	0.96	U	0.95	U	0.95	U
2,4-Dichlorophenol	8270D	µg/L								
2,4-Dimethylphenol	8270D	µg/L								
2,4-Dinitrophenol	8270D	µg/L								
2,6-Dichlorophenol	8270D	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chloronaphthalene	8270D	µg/L								
2-Chlorophenol	8270D	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Methylnaphthalene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
2-Methylphenol	8270D	µg/L								
2-Nitroaniline	8270D	µg/L								
2-Nitrophenol	8270D	µg/L								
2-Phenylbutane	8260B	µg/L								
2-Propanol	8015C	µg/L								
3,3'-Dichlorobenzidine	8270D	µg/L								
3,5-Dimethylphenol	8270D	µg/L								
3-Nitroaniline	8270D	µg/L								
4,4'-DDD	8081B	µg/L	0.017	U	0.016	U	0.016	U	0.017	U
4,4'-DDE	8081B	µg/L	0.017	UJ	0.016	U	0.016	U	0.017	U
4,4'-DDT	8081B	µg/L	0.017	U	0.016	U	0.016	U	0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L								
4-Bromophenyl-phenylether	8270D	µg/L								
4-Chloro-3-methylphenol	8270D	µg/L								
4-Chloroaniline	8270D	µg/L								
4-Chlorophenyl-phenylether	8270D	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
4-Methylphenol	8270D	µg/L								
4-Nitroaniline	8270D	µg/L								
4-Nitrophenol	8270D	µg/L								
Acenaphthene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Acenaphthylene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Aldrin	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
Alpha-Bhc	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L								
Anthracene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U

Table C-2 - Subarea 5D - Equipment Rinsate Samples

		Sample Name:	EB1-082813		EB1-091813		EB1-092513		EB1-100213	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	08/28/2013		09/18/2013		09/25/2013		10/02/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1221	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1232	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1242	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1248	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1254	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1260	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1262	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 1268	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 5432	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 5442	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Aroclor 5460	8082A	µg/L	0.43	U	0.41	UJ	0.41	U	0.42	U
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.00035	J	0.01	U	0.01	U	0.00058	J
Benzene	8260B	µg/L								
Benzidine	8270D	µg/L								
Benzo(a)anthracene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzo(a)pyrene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzo(e)pyrene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Benzoic Acid	8270D	µg/L								
Benzyl Alcohol	8270D	µg/L								
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
bis(2-chloroethoxy)methane	8270D	µg/L								
bis(2-chloroethyl) ether	8270D	µg/L								
bis(2-chloroisopropyl) ether	8270D	µg/L								
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U	1	U	1	UJ	0.059	J
Boron	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.0098	J
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Butylbenzylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	UJ
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.0427	J
Carbazole	8270D	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlordane	8081B	µg/L	0.43	U	0.41	U	0.41	U	0.42	U
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L			0.05	U			10	UJ
Chrysene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.0028	J
Cymene	8260B	µg/L								
Delta-Bhc	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
Di isopropyl Ether	8260B	µg/L								
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	U
Dibenzofuran	8270D	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dicamba	8151A	µg/L	0.29	U	0.29	U	0.29	U	0.29	U
Dichlorodifluoromethane	8260B	µg/L								
Dichlorprop	8151A	µg/L	0.49	U	0.48	U	0.48	U	0.48	U
Dieldrin	8081B	µg/L	0.017	U	0.016	U	0.016	U	0.017	U
Diethylphthalate	8270D SIM	µg/L	0.37	J	0.3	J	0.83	J	0.27	J
Dimethylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	UJ
Di-n-butylphthalate	8270D SIM	µg/L	1	U	0.2	J	0.22	J	0.18	J
Dinitrobutyl Phenol	8151A	µg/L	0.49	U	0.48	U	0.48	U	0.48	U
Di-n-octylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	U
Diphenylamine	8270D	µg/L								
EFH (C12-C14)	8015M	mg/L	0.095	U	0.098	U	0.097	U	0.097	U
EFH (C15-C20)	8015M	mg/L	0.095	U	0.098	U	0.097	U	0.097	U
EFH (C21-C30)	8015M	mg/L	0.095	U	0.098	U	0.097	U	0.097	U
EFH (C30-C40)	8015M	mg/L	0.47	U	0.49	UJ	0.49	UJ	0.48	U
EFH (C8-C11)	8015M	mg/L	0.095	UJ	0.098	U	0.097	UJ	0.097	UJ
Endosulfan I	8081B	µg/L	0.0085	U	0.0082	U	0.0081	U	0.0084	U
Endosulfan II	8081B	µg/L	0.017	U	0.016	U	0.016	U	0.017	U
Endosulfan Sulfate	8081B	µg/L	0.017	UJ	0.016	U	0.016	U	0.017	U
Endrin	8081B	µg/L	0.017	UJ	0.016	U	0.016	UJ	0.017	U
Endrin Aldehyde	8081B	µg/L	0.085	UJ	0.082	U	0.081	U	0.084	U
Endrin Ketone	8081B	µg/L	0.017	U	0.016	U	0.016	UJ	0.017	U
Ethanol	8015C	µg/L								
Ethylbenzene	8260B	µg/L								
Fluoranthene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Fluorene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Fluoride	300.0	mg/L			0.1	U	0.1	U	0.1	U
Formaldehyde	8315A	µg/L								
Gamma-Bhc (Lindane)	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Heptachlor	8081B	µg/L	0.0085	U	0.0082	U	0.0081	U	0.0084	U
Heptachlor Epoxide	8081B	µg/L	0.0085	UJ	0.0082	U	0.0081	U	0.0084	U
Hexachloro-1,3-butadiene	8260B	µg/L								
Hexachlorobenzene	8270D	µg/L								
Hexachlorobutadiene	8270D	µg/L								
Hexachlorocyclopentadiene	8270D	µg/L								
Hexachloroethane	8270D	µg/L								

		Sample Name:	EB1-082813		EB1-091813		EB1-092513		EB1-100213	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	08/28/2013		09/18/2013		09/25/2013		10/02/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L								
Isopropylbenzene	8260B	µg/L								
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L								
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
MCPA	8151A	µg/L	200	U	190	U	190	U	190	U
MCPP	8151A	µg/L	200	U	190	U	190	U	190	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methanol	8015C	µg/L								
Methoxychlor	8081B	µg/L	0.085	U	0.082	U	0.081	U	0.084	U
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
Mirex	8081B	µg/L	0.21	U	0.041	U	0.041	U	0.042	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Morpholine	8270D SIM	µg/L								
Naphthalene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
n-Butylbenzene	8260B	µg/L								
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrobenzene	8270D	µg/L								
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	U
N-Nitroso-di-n-propylamine	8270D	µg/L								
N-Nitrosodiphenylamine	8270D	µg/L								
n-Propylbenzene	8260B	µg/L								
OCDD	1613B	pg/L	19.3	U	19.3	U	19.6	U	19.4	U
OCDF	1613B	pg/L	19.3	U	19.3	U	19.6	U	19.4	U
o-Xylene	8260B	µg/L								
Pentachlorophenol	8270D	µg/L								
Perchlorate	6850	µg/L			1	U	1	U		
pH	9040C	pH	5.9		6.3		6.4		8.4	
Phenanthrene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Phenol	8270D	µg/L								
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L	0.051	U	0.05	U	0.052	U	0.051	UJ
Pyridine	8270D	µg/L								
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.049	U	0.048	U	0.048	U	0.048	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L								
TCDD TEQ	1613B	pg/L	0.0245		0.0788		0.0454		0.0004	
Technical Toxaphene	8081B	µg/L	2.6	U	2.5	U	2.4	U	2.5	U
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

		Sample Name:	EB1-111213		EB-111413		EB2-082813		EB2-091813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	11/12/2013		11/14/2013		08/28/2013		09/18/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L			5	U				
1,1,1-Trichloroethane	8260B	µg/L			5	U				
1,1,2,2-Tetrachloroethane	8260B	µg/L			5	U				
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L			5	U				
1,1,2-Trichloroethane	8260B	µg/L			5	U				
1,1'-Biphenyl	8270D	µg/L	1	U						
1,1-Dichloroethane	8260B	µg/L			5	U				
1,1-Dichloroethene	8260B	µg/L			5	U				
1,1-Dichloropropene	8260B	µg/L			5	U				
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.95	U	0.578	J	9.85	U	9.57	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
1,2,3-Trichlorobenzene	8260B	µg/L			5	U				
1,2,3-Trichloropropane	8260B	µg/L			5	U				
1,2,4-Trichlorobenzene	8260B	µg/L			5	U				
1,2,4-Trichlorobenzene	8270D	µg/L	1	U						
1,2,4-Trimethylbenzene	8260B	µg/L			5	U				
1,2-Dibromo-3-chloropropane	8260B	µg/L			5	U				
1,2-Dibromoethane	8260B	µg/L			5	U				
1,2-Dichlorobenzene	8260B	µg/L			5	U				
1,2-Dichlorobenzene	8270D	µg/L	1	U						
1,2-Dichloroethane	8260B	µg/L			5	U				
1,2-Dichloropropane	8260B	µg/L			5	U				
1,2-Diphenylhydrazine	8270D	µg/L	1	U						
1,3,5-Trimethylbenzene	8260B	µg/L			5	U				
1,3-Dichlorobenzene	8260B	µg/L			5	U				
1,3-Dichlorobenzene	8270D	µg/L	1	U						
1,3-Dichloropropane	8260B	µg/L			5	U				
1,4-Dichlorobenzene	8260B	µg/L			5	U				
1,4-Dichlorobenzene	8270D	µg/L	1	U						
1,4-Dioxane	8260B SIM	µg/L			2	U				
1-Chlorohexane	8260B	µg/L			5	U				
1-Methylnaphthalene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
2,2-Dichloropropane	8260B	µg/L			5	U				
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	UJ					1.2	U
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
2,3,4,7,8-PECDF	1613B	pg/L	9.95	U	9.78	U	9.85	U	9.57	U
2,3,7,8-TCDD	1613B	pg/L	1.99	U	1.96	U	1.97	U	1.91	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.99	U	0.366	J	1.97	U	1.91	U
2,4,5-T	8151A	µg/L	0.05	UJ					0.048	U
2,4,5-Trichlorophenol	8270D	µg/L	1	U						
2,4,6-Trichlorophenol	8270D	µg/L	1	U						
2,4-D	8151A	µg/L	0.5	UJ					0.48	U
2,4-DB	8151A	µg/L	0.99	UJ					0.97	U
2,4-Dichlorophenol	8270D	µg/L	1	U						
2,4-Dimethylphenol	8270D	µg/L	1	U						
2,4-Dinitrophenol	8270D	µg/L	31	U						
2,6-Dichlorophenol	8270D	µg/L	1	UJ						
2-Butanone (MEK)	8260B	µg/L			10	U				
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L			5	U				
2-Chloroethyl Vinyl Ether	8260B	µg/L			10	U				
2-Chloronaphthalene	8270D	µg/L	1	U						
2-Chlorophenol	8270D	µg/L	1	U						
2-Chlorotoluene	8260B	µg/L			5	U				
2-Hexanone	8260B	µg/L			10	U				
2-Methylnaphthalene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
2-Methylphenol	8270D	µg/L	1	U						
2-Nitroaniline	8270D	µg/L	1	U						
2-Nitrophenol	8270D	µg/L	1	U						
2-Phenylbutane	8260B	µg/L			5	U				
2-Propanol	8015C	µg/L			1000	U				
3,3'-Dichlorobenzidine	8270D	µg/L	5	U						
3,5-Dimethylphenol	8270D	µg/L	10	UJ						
3-Nitroaniline	8270D	µg/L	1	U						
4,4'-DDD	8081B	µg/L	0.018	U	0.016	U			0.017	U
4,4'-DDE	8081B	µg/L	0.018	U	0.016	U			0.017	U
4,4'-DDT	8081B	µg/L	0.018	U	0.016	U			0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L	15	U						
4-Bromophenyl-phenylether	8270D	µg/L	1	U						
4-Chloro-3-methylphenol	8270D	µg/L	1	U						
4-Chloroaniline	8270D	µg/L	1	U						
4-Chlorophenyl-phenylether	8270D	µg/L	1	U						
4-Chlorotoluene	8260B	µg/L			5	U				
4-Methyl-2-pentanone (MIBK)	8260B	µg/L			10	U				
4-Methylphenol	8270D	µg/L	1	U						
4-Nitroaniline	8270D	µg/L	1	U						
4-Nitrophenol	8270D	µg/L	31	U						
Acenaphthene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Acenaphthylene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Acetone	8260B	µg/L			20	U				
Acrolein	8260B	µg/L			100	U				
Acrylonitrile	8260B	µg/L			20	U				
Aldrin	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Alpha-Bhc	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L	1	U						
Anthracene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ

		Sample Name:	EB1-111213		EB-111413		EB2-082813		EB2-091813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	11/12/2013		11/14/2013		08/28/2013		09/18/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1221	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1232	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1242	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1248	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1254	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1260	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1262	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 1268	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 5432	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 5442	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Aroclor 5460	8082A	µg/L	0.46	U	0.4	U	0.42	U	0.42	UJ
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.00034	J	0.01	U	0.01	U	0.01	U
Benzene	8260B	µg/L			5	U				
Benzidine	8270D	µg/L	61	U						
Benzo(a)anthracene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzo(a)pyrene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzo(e)pyrene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Benzoic Acid	8270D	µg/L	15	U						
Benzyl Alcohol	8270D	µg/L	15	U						
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.0092	U	0.0037	J			0.0083	U
bis(2-chloroethoxy)methane	8270D	µg/L	1	U						
bis(2-chloroethyl) ether	8270D	µg/L	1	U						
bis(2-chloroisopropyl) ether	8270D	µg/L	1	U						
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U	1	U	1.1	U	1	U
Boron	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U
Bromobenzene	8260B	µg/L			5	U				
Bromochloromethane	8260B	µg/L			5	U				
Bromodichloromethane	8260B	µg/L			5	U				
Bromoform	8260B	µg/L			5	U				
Bromomethane	8260B	µg/L			5	U				
Butylbenzylphthalate	8270D SIM	µg/L	1	U	1	U	1.1	U	1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.0349	J	0.4	U	0.4	U	0.4	U
Carbazole	8270D	µg/L	1	U						
Carbon Disulfide	8260B	µg/L			5	U				
Carbon Tetrachloride	8260B	µg/L			5	U				
Chlordane	8081B	µg/L	0.46	U	0.4	U			0.42	U
Chlorobenzene	8260B	µg/L			5	U				
Chloroethane	8260B	µg/L			5	U				
Chloroform	8260B	µg/L			5	U				
Chloromethane	8260B	µg/L			5	U				
Chlorotrifluoroethylene	8260B	µg/L			5	U				
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L	10	U	10	U			0.05	U
Chrysene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
cis-1,2-Dichloroethene	8260B	µg/L			5	U				
cis-1,3-Dichloropropene	8260B	µg/L			5	U				
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Cymene	8260B	µg/L			5	U				
Delta-Bhc	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Di isopropyl Ether	8260B	µg/L			5	U				
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Dibenzofuran	8270D	µg/L	1	U						
Dibromochloromethane	8260B	µg/L			5	U				
Dibromomethane	8260B	µg/L			5	U				
Dicamba	8151A	µg/L	0.3	UJ					0.29	U
Dichlorodifluoromethane	8260B	µg/L			5	U				
Dichlorprop	8151A	µg/L	0.5	UJ					0.48	U
Dieldrin	8081B	µg/L	0.018	U	0.016	U			0.017	U
Diethylphthalate	8270D SIM	µg/L	1	U	1	U	0.36	J	0.3	J
Dimethylphthalate	8270D SIM	µg/L	1	U	1	U	1.1	U	1	U
Di-n-butylphthalate	8270D SIM	µg/L	1	U	1	U	1.1	U	0.19	J
Dinitrobutyl Phenol	8151A	µg/L	0.5	U					0.48	U
Di-n-octylphthalate	8270D SIM	µg/L	1	U	1	U	1.1	U	1	U
Diphenylamine	8270D	µg/L	5	U						
EFH (C12-C14)	8015M	mg/L	0.097	U	0.099	U	0.097	U	0.095	U
EFH (C15-C20)	8015M	mg/L	0.097	U	0.099	U	0.097	U	0.095	U
EFH (C21-C30)	8015M	mg/L	0.097	U	0.099	U	0.097	U	0.095	U
EFH (C30-C40)	8015M	mg/L	0.49	UJ	0.49	UJ	0.49	U	0.47	UJ
EFH (C8-C11)	8015M	mg/L	0.097	UJ	0.099	UJ	0.097	UJ	0.095	U
Endosulfan I	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Endosulfan II	8081B	µg/L	0.018	U	0.016	U			0.017	U
Endosulfan Sulfate	8081B	µg/L	0.018	U	0.016	U			0.017	U
Endrin	8081B	µg/L	0.018	U	0.016	U			0.017	U
Endrin Aldehyde	8081B	µg/L	0.092	U	0.08	U			0.083	U
Endrin Ketone	8081B	µg/L	0.018	U	0.016	U			0.017	U
Ethanol	8015C	µg/L			1000	U				
Ethylbenzene	8260B	µg/L			5	U				
Fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Fluorene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Fluoride	300.0	mg/L							0.1	U
Formaldehyde	8315A	µg/L			50	U				
Gamma-Bhc (Lindane)	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Heptachlor	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Heptachlor Epoxide	8081B	µg/L	0.0092	U	0.008	U			0.0083	U
Hexachloro-1,3-butadiene	8260B	µg/L			5	U				
Hexachlorobenzene	8270D	µg/L	0.5	U						
Hexachlorobutadiene	8270D	µg/L	1	U						
Hexachlorocyclopentadiene	8270D	µg/L	15	U						
Hexachloroethane	8270D	µg/L	5	U						

		Sample Name:	EB1-111213		EB-111413		EB2-082813		EB2-091813	
		Location:	5D_DG_EB		5D_DG_EB		5D_DG_EB		5D_DG_EB	
		Sample Date:	11/12/2013		11/14/2013		08/28/2013		09/18/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L	1	U						
Isopropylbenzene	8260B	µg/L			5	U				
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L			5	U				
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
MCPA	8151A	µg/L	200	UJ					190	U
MCPP	8151A	µg/L	200	UJ					190	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methanol	8015C	µg/L			1000	U				
Methoxychlor	8081B	µg/L	0.092	U	0.08	U			0.083	U
Methyl Iodide	8260B	µg/L			5	U				
Methyl Tert-Butyl Ether	8260B	µg/L			5	U				
Methylene Chloride	8260B	µg/L			5	U				
Mirex	8081B	µg/L	0.046	U	0.04	U			0.042	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Morpholine	8270D SIM	µg/L			20	U				
Naphthalene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
n-Butylbenzene	8260B	µg/L			5	U				
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrobenzene	8270D	µg/L	1	U						
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
N-Nitroso-di-n-propylamine	8270D	µg/L	1	U						
N-Nitrosodiphenylamine	8270D	µg/L	1	U						
n-Propylbenzene	8260B	µg/L			5	U				
OCDD	1613B	pg/L	19.9	U	19.6	U	19.7	U	19.1	U
OCDF	1613B	pg/L	19.9	U	19.6	U	19.7	U	19.1	U
o-Xylene	8260B	µg/L			5	U				
Pentachlorophenol	8270D	µg/L	5	U						
Perchlorate	6850	µg/L							0.25	J
pH	9040C	pH	6		6.7		5.6		5.9	
Phenanthrene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Phenol	8270D	µg/L	1	U						
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L	0.051	U	0.052	U	0.053	U	0.05	U
Pyridine	8270D	µg/L	5	U						
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.05	UJ					0.048	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L			5	U				
TCDD TEQ	1613B	pg/L	1.28		0.227		0.49		0.186	
Technical Toxaphene	8081B	µg/L	0.92	U	0.8	U			2.5	U
tert-Butyl ethyl ether	8260B	µg/L			5	U				
tert-Butylbenzene	8260B	µg/L			5	U				
Tertiary amyl methyl ether	8260B	µg/L			5	U				
Tertiary butyl alcohol	8260B	µg/L			50	U				
Tetrachloroethene	8260B	µg/L			5	U				
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L			5	U				
trans-1,2-Dichloroethene	8260B	µg/L			5	U				
trans-1,3-Dichloropropene	8260B	µg/L			5	U				
Trichloroethene	8260B	µg/L			5	U				
Trichlorofluoromethane	8260B	µg/L			5	U				
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L			10	U				
Vinyl Chloride	8260B	µg/L			5	U				
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

Table C-3 - Subarea 8 Equipment Rinsate Samples

		Sample Name:	EB-080713		EB-081413		EB1-071013		EB1-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	08/07/2013		08/14/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L	5	U			5	U	5	U
1,1,1-Trichloroethane	8260B	µg/L	5	U			5	U	5	U
1,1,2,2-Tetrachloroethane	8260B	µg/L	5	U			5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L	5	U			5	U	5	U
1,1,2-Trichloroethane	8260B	µg/L	5	U			5	U	5	U
1,1'-Biphenyl	8270D	µg/L	1	U					1	U
1,1-Dichloroethane	8260B	µg/L	5	U			5	U	5	U
1,1-Dichloroethene	8260B	µg/L	5	U			5	U	5	U
1,1-Dichloropropene	8260B	µg/L	5	U			5	U	5	U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
1,2,3-Trichlorobenzene	8260B	µg/L	5	U			5	U	5	U
1,2,3-Trichloropropane	8260B	µg/L	5	U			5	U	5	U
1,2,4-Trichlorobenzene	8260B	µg/L	5	U			5	U	5	U
1,2,4-Trichlorobenzene	8270D	µg/L	1	U					1	U
1,2,4-Trimethylbenzene	8260B	µg/L	5	U			5	U	5	U
1,2-Dibromo-3-chloropropane	8260B	µg/L	5	U			5	U	5	U
1,2-Dibromoethane	8260B	µg/L	5	U			5	U	5	U
1,2-Dichlorobenzene	8260B	µg/L	5	U			5	U	5	U
1,2-Dichlorobenzene	8270D	µg/L	1	U					1	U
1,2-Dichloroethane	8260B	µg/L	5	U			5	U	5	U
1,2-Dichloropropane	8260B	µg/L	5	U			5	U	5	U
1,2-Diphenylhydrazine	8270D	µg/L	1	U					1	U
1,3,5-Trimethylbenzene	8260B	µg/L	5	U			5	U	5	U
1,3-Dichlorobenzene	8260B	µg/L	5	U			5	U	5	U
1,3-Dichlorobenzene	8270D	µg/L	1	U					1	U
1,3-Dichloropropane	8260B	µg/L	5	U			5	U	5	U
1,4-Dichlorobenzene	8260B	µg/L	5	U			5	U	5	U
1,4-Dichlorobenzene	8270D	µg/L	1	U					1	U
1-Chlorohexane	8260B	µg/L	5	U			5	U	5	U
1-Methylnaphthalene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
2,2-Dichloropropane	8260B	µg/L	5	U			5	U	5	U
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U	1.2	U	1.2	U	1.2	UJ
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
2,3,4,7,8-PECDF	1613B	pg/L	9.67	U	9.79	U	9.64	U	9.98	U
2,3,7,8-TCDD	1613B	pg/L	1.93	U	1.96	U	1.93	U	2	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.93	U	1.96	U	1.93	U	2	U
2,4,5-T	8151A	µg/L	0.049	U	0.049	U	0.089		0.048	U
2,4,5-Trichlorophenol	8270D	µg/L	1	U					1	U
2,4,6-Trichlorophenol	8270D	µg/L	1	U					1	U
2,4-D	8151A	µg/L	0.49	U	0.49	U	0.49	U	0.48	U
2,4-DB	8151A	µg/L	0.98	U	0.98	U	0.99	U	0.97	U
2,4-Dichlorophenol	8270D	µg/L	1	U					1	U
2,4-Dimethylphenol	8270D	µg/L	1	U					1	U
2,4-Dinitrophenol	8270D	µg/L	31	U					33	U
2,6-Dichlorophenol	8270D	µg/L	1	U					1	U
2-Butanone (MEK)	8260B	µg/L	10	U			10	U	10	U
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L	5	U			5	U	5	U
2-Chloroethyl Vinyl Ether	8260B	µg/L	10	U			10	U	10	U
2-Chloronaphthalene	8270D	µg/L	1	U					1	U
2-Chlorophenol	8270D	µg/L	1	U					1	U
2-Chlorotoluene	8260B	µg/L	5	U			5	U	5	U
2-Hexanone	8260B	µg/L	10	U			10	U	10	U
2-Methylnaphthalene	8270D SIM	µg/L	0.012	J	0.012	J	0.052	U	0.014	J
2-Methylphenol	8270D	µg/L	1	U					1	U
2-Nitroaniline	8270D	µg/L	1	U					1	U
2-Nitrophenol	8270D	µg/L	1	U					1	U
2-Phenylbutane	8260B	µg/L	5	U			5	U	5	U
3,3'-Dichlorobenzidine	8270D	µg/L	5	U					6	U
3,5-Dimethylphenol	8270D	µg/L	10	U					11	U
3-Nitroaniline	8270D	µg/L	1	U					1	U
4,4'-DDD	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
4,4'-DDE	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
4,4'-DDT	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L	16	U					17	U
4-Bromophenyl-phenylether	8270D	µg/L	1	U					1	U
4-Chloro-3-methylphenol	8270D	µg/L	1	U					1	U
4-Chloroaniline	8270D	µg/L	1	U					1	U
4-Chlorophenyl-phenylether	8270D	µg/L	1	U					1	U
4-Chlorotoluene	8260B	µg/L	5	U			5	U	5	U
4-Methyl-2-pentanone (MIBK)	8260B	µg/L	10	U			10	U	10	U
4-Methylphenol	8270D	µg/L	1	U					1	U
4-Nitroaniline	8270D	µg/L	1	U					1	U
4-Nitrophenol	8270D	µg/L	31	U					33	U
Acenaphthene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Acenaphthylene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Acetone	8260B	µg/L	8	J			8	J	7	J
Acrolein	8260B	µg/L	100	U			100	U	100	U
Acrylonitrile	8260B	µg/L	20	U			20	U	20	U
Aldrin	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Alpha-Bhc	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L	1	U					1	U
Anthracene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1221	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1232	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U

		Sample Name:	EB-080713		EB-081413		EB1-071013		EB1-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	08/07/2013		08/14/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1242	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1248	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1254	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1260	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1262	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 1268	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 5432	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 5442	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Aroclor 5460	8082A	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Benzene	8260B	µg/L	5	U			5	U	5	U
Benzidine	8270D	µg/L	62	U					66	U
Benzo(a)anthracene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzo(a)pyrene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzo(e)pyrene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Benzoic Acid	8270D	µg/L	16	U					17	UJ
Benzyl Alcohol	8270D	µg/L	16	U					17	U
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
bis(2-chloroethoxy)methane	8270D	µg/L	1	U					1	U
bis(2-chloroethyl) ether	8270D	µg/L	1	U					1	U
bis(2-chloroisopropyl) ether	8270D	µg/L	1	U					1	U
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U	1.1	U	1	U	1.1	U
Boron	6010C	mg/L	0.1	U	0.0106	J	0.1	U	0.1	U
Bromobenzene	8260B	µg/L	5	U			5	U	5	U
Bromochloromethane	8260B	µg/L	5	U			5	U	5	U
Bromodichloromethane	8260B	µg/L	5	U			5	U	5	U
Bromoform	8260B	µg/L	5	U			5	U	5	U
Bromomethane	8260B	µg/L	5	U			5	U	5	U
Butylbenzylphthalate	8270D SIM	µg/L	1	U	1.1	U	1	U	1.1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Carbazole	8270D	µg/L	1	U					1	U
Carbon Disulfide	8260B	µg/L	5	U			5	U	5	U
Carbon Tetrachloride	8260B	µg/L	5	U			5	U	5	U
Chlordane	8081B	µg/L	0.43	U	0.41	U	0.42	U	0.42	U
Chlorobenzene	8260B	µg/L	5	U			5	U	5	U
Chloroethane	8260B	µg/L	5	U			5	U	5	U
Chloroform	8260B	µg/L	5	U			5	U	5	U
Chloromethane	8260B	µg/L	5	U			5	U	5	U
Chlorotrifluoroethylene	8260B	µg/L	5	U			5	U	5	UJ
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L							10	U
Chrysene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
cis-1,2-Dichloroethene	8260B	µg/L	5	U			5	U	5	U
cis-1,3-Dichloropropene	8260B	µg/L	5	U			5	U	5	U
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Cyanide	9012B	mg/L								
Cymene	8260B	µg/L	5	U			5	U	5	U
Delta-Bhc	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Di isopropyl Ether	8260B	µg/L	5	U			5	U	5	U
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Dibenzofuran	8270D	µg/L	1	U					1	U
Dibromochloromethane	8260B	µg/L	5	U			5	U	5	U
Dibromomethane	8260B	µg/L	5	U			5	U	5	U
Dicamba	8151A	µg/L	0.29	U	0.29	U	0.3	U	0.29	U
Dichlorodifluoromethane	8260B	µg/L	5	U			5	U	5	U
Dichlorprop	8151A	µg/L	0.49	U	0.49	U	0.49	U	0.48	U
Dieldrin	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
Diethylphthalate	8270D SIM	µg/L	1	U	0.31	J	1	U	0.24	J
Dimethylphthalate	8270D SIM	µg/L	1	U	1.1	U	1	U	1.1	U
Di-n-butylphthalate	8270D SIM	µg/L	1	U	0.2	J	1	U	0.24	J
Dinitrobutyl Phenol	8151A	µg/L	0.49	U	0.49	U	0.49	U	0.48	UJ
Di-n-octylphthalate	8270D SIM	µg/L	1	U	1.1	U	1	U	1.1	U
Diphenylamine	8270D	µg/L	5	U					6	U
EFH (C12-C14)	8015M	mg/L	0.1	U	0.099	U	0.096	U	0.099	U
EFH (C15-C20)	8015M	mg/L	0.1	U	0.099	U	0.096	U	0.099	U
EFH (C21-C30)	8015M	mg/L	0.1	U	0.099	U	0.096	U	0.099	U
EFH (C30-C40)	8015M	mg/L	0.5	U	0.49	U	0.48	U	0.49	U
EFH (C8-C11)	8015M	mg/L	0.1	U	0.099	U	0.096	U	0.099	U
Endosulfan I	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Endosulfan II	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
Endosulfan Sulfate	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
Endrin	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	UJ
Endrin Aldehyde	8081B	µg/L	0.085	U	0.081	U	0.084	U	0.083	U
Endrin Ketone	8081B	µg/L	0.017	U	0.016	U	0.017	U	0.017	U
Ethylbenzene	8260B	µg/L	5	U			5	U	5	U
Fluoranthene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Fluorene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Fluoride	300.0	mg/L								
Gamma-Bhc (Lindane)	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Heptachlor	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Heptachlor Epoxide	8081B	µg/L	0.0085	U	0.0081	U	0.0084	U	0.0083	U
Hexachloro-1,3-butadiene	8260B	µg/L	5	U			5	U	5	U
Hexachlorobenzene	8270D	µg/L	0.5	U					0.6	U
Hexachlorobutadiene	8270D	µg/L	1	U					1	U
Hexachlorocyclopentadiene	8270D	µg/L	16	U					17	UJ
Hexachloroethane	8270D	µg/L	5	U					6	U
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L	1	U					1	U

		Sample Name:	EB-080713		EB-081413		EB1-071013		EB1-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	08/07/2013		08/14/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Isopropylbenzene	8260B	µg/L	5	U			5	U	5	U
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L	5	U			5	U	5	U
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
MCPA	8151A	µg/L	200	U	200	U	200	U	190	U
MCPP	8151A	µg/L	200	U	200	U	200	U	190	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methoxychlor	8081B	µg/L	0.085	U	0.081	U	0.084	U	0.083	U
Methyl Iodide	8260B	µg/L	5	U			5	U	5	U
Methyl Tert-Butyl Ether	8260B	µg/L	5	U			5	U	5	U
Methylene Chloride	8260B	µg/L	5	U			5	U	5	U
Mirex	8081B	µg/L	0.21	U	0.2	U	0.21	U	0.21	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.0035	J	0.02	U
Naphthalene	8270D SIM	µg/L	0.035	J	0.058		0.034	J	0.046	J
n-Butylbenzene	8260B	µg/L	5	U			5	U	5	U
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrate	300.0	mg/L								
Nitrite-NO2	300.0	mg/L								
Nitrobenzene	8270D	µg/L	1	U					1	U
N-Nitrosodimethylamine	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
N-Nitroso-di-n-propylamine	8270D	µg/L	1	U					1	U
N-Nitrosodiphenylamine	8270D	µg/L	1	U					1	U
n-Propylbenzene	8260B	µg/L	5	U			5	U	5	U
OCDD	1613B	pg/L	19.3	U	19.6	U	19.3	U	20	U
OCDF	1613B	pg/L	19.3	U	19.6	U	19.3	U	20	U
o-Xylene	8260B	µg/L	5	U			5	U	5	U
Pentachlorophenol	8270D	µg/L	5	U					6	U
Perchlorate	6850	µg/L					1	U	1	U
pH	9040C	pH	5.5		5.8		6		6.3	
Phenanthrene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Phenol	8270D	µg/L	1	U					1	U
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L	0.052	U	0.053	U	0.052	U	0.055	U
Pyridine	8270D	µg/L	5	U					6	U
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.049	U	0.049	U	0.049	U	0.048	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L	5	U			5	U	5	U
TCDD TEQ	1613B	pg/L	0.0495		0.103		0.0336		0.0556	
Technical Toxaphene	8081B	µg/L	2.6	U	2.4	U	2.5	U	2.5	U
tert-Butyl ethyl ether	8260B	µg/L	5	U			5	U	5	U
tert-Butylbenzene	8260B	µg/L	5	U			5	U	5	U
Tertiary amyl methyl ether	8260B	µg/L	5	U			5	U	5	U
Tertiary butyl alcohol	8260B	µg/L	50	U			50	U	50	U
Tetrachloroethene	8260B	µg/L	5	U			5	U	5	U
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.0029	J	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L	5	U			5	U	5	U
trans-1,2-Dichloroethene	8260B	µg/L	5	U			5	U	5	U
trans-1,3-Dichloropropene	8260B	µg/L	5	U			5	U	5	U
Trichloroethene	8260B	µg/L	5	U			5	U	5	U
Trichlorofluoromethane	8260B	µg/L	5	U			5	U	5	U
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L	10	U			10	U	10	U
Vinyl Chloride	8260B	µg/L	5	U			5	U	5	U
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

		Sample Name:	EB1-072513		EB1-080113		EB2-071013		EB2-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L					5	U		
1,1,1-Trichloroethane	8260B	µg/L					5	U		
1,1,2,2-Tetrachloroethane	8260B	µg/L					5	U		
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L					5	U		
1,1,2-Trichloroethane	8260B	µg/L					5	U		
1,1'-Biphenyl	8270D	µg/L	1	U						
1,1-Dichloroethane	8260B	µg/L					5	U		
1,1-Dichloroethene	8260B	µg/L					5	U		
1,1-Dichloropropene	8260B	µg/L					5	U		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.93	U	9.79	U	0.268	J	0.542	J
1,2,3-Trichlorobenzene	8260B	µg/L					5	U		
1,2,3-Trichloropropane	8260B	µg/L					5	U		
1,2,4-Trichlorobenzene	8260B	µg/L					5	U		
1,2,4-Trichlorobenzene	8270D	µg/L	1	U						
1,2,4-Trimethylbenzene	8260B	µg/L					5	U		
1,2-Dibromo-3-chloropropane	8260B	µg/L					5	U		
1,2-Dibromoethane	8260B	µg/L					5	U		
1,2-Dichlorobenzene	8260B	µg/L					5	U		
1,2-Dichlorobenzene	8270D	µg/L	1	U						
1,2-Dichloroethane	8260B	µg/L					5	U		
1,2-Dichloropropane	8260B	µg/L					5	U		
1,2-Diphenylhydrazine	8270D	µg/L	1	U						
1,3,5-Trimethylbenzene	8260B	µg/L					5	U		
1,3-Dichlorobenzene	8260B	µg/L					5	U		
1,3-Dichlorobenzene	8270D	µg/L	1	U						
1,3-Dichloropropane	8260B	µg/L					5	U		
1,4-Dichlorobenzene	8260B	µg/L					5	U		
1,4-Dichlorobenzene	8270D	µg/L	1	U						
1-Chlorohexane	8260B	µg/L					5	U		
1-Methylnaphthalene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
2,2-Dichloropropane	8260B	µg/L					5	U		
2,2-Dichlor-Propionic Acid	8151A	µg/L					1.3	UJ	1.2	UJ
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
2,3,4,7,8-PECDF	1613B	pg/L	9.93	U	9.79	U	10.2	U	9.97	U
2,3,7,8-TCDD	1613B	pg/L	1.99	U	1.96	U	2.04	U	1.99	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.99	U	1.96	U	2.04	U	1.99	U
2,4,5-T	8151A	µg/L					0.051	UJ	0.048	U
2,4,5-Trichlorophenol	8270D	µg/L	1	U						
2,4,6-Trichlorophenol	8270D	µg/L	1	U						
2,4-D	8151A	µg/L					0.51	UJ	0.48	U
2,4-DB	8151A	µg/L					1	UJ	0.97	U
2,4-Dichlorophenol	8270D	µg/L	1	U						
2,4-Dimethylphenol	8270D	µg/L	1	U						
2,4-Dinitrophenol	8270D	µg/L	31	U						
2,6-Dichlorophenol	8270D	µg/L	1	U						
2-Butanone (MEK)	8260B	µg/L					10	U		
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L					5	U		
2-Chloroethyl Vinyl Ether	8260B	µg/L					10	U		
2-Chloronaphthalene	8270D	µg/L	1	U						
2-Chlorophenol	8270D	µg/L	1	U						
2-Chlorotoluene	8260B	µg/L					5	U		
2-Hexanone	8260B	µg/L					10	U		
2-Methylnaphthalene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.014	J
2-Methylphenol	8270D	µg/L	1	U						
2-Nitroaniline	8270D	µg/L	1	U						
2-Nitrophenol	8270D	µg/L	1	U						
2-Phenylbutane	8260B	µg/L					5	U		
3,3'-Dichlorobenzidine	8270D	µg/L	5	U						
3,5-Dimethylphenol	8270D	µg/L	10	U						
3-Nitroaniline	8270D	µg/L	1	U						
4,4'-DDD	8081B	µg/L					0.017	U	0.017	U
4,4'-DDE	8081B	µg/L					0.017	U	0.017	U
4,4'-DDT	8081B	µg/L					0.017	U	0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L	16	U						
4-Bromophenyl-phenylether	8270D	µg/L	1	U						
4-Chloro-3-methylphenol	8270D	µg/L	1	U						
4-Chloroaniline	8270D	µg/L	1	U						
4-Chlorophenyl-phenylether	8270D	µg/L	1	U						
4-Chlorotoluene	8260B	µg/L					5	U		
4-Methyl-2-pentanone (MIBK)	8260B	µg/L					10	U		
4-Methylphenol	8270D	µg/L	1	U						
4-Nitroaniline	8270D	µg/L	1	U						
4-Nitrophenol	8270D	µg/L	31	U						
Acenaphthene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Acenaphthylene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Acetone	8260B	µg/L					7	J		
Acrolein	8260B	µg/L					100	U		
Acrylonitrile	8260B	µg/L					20	U		
Aldrin	8081B	µg/L					0.0087	U	0.0083	U
Alpha-Bhc	8081B	µg/L					0.0087	U	0.0083	U
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L	1	U						
Anthracene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1221	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1232	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U

		Sample Name:	EB1-072513		EB1-080113		EB2-071013		EB2-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1242	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1248	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1254	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1260	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1262	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 1268	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 5432	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 5442	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Aroclor 5460	8082A	µg/L	0.41	U	0.42	U	0.44	U	0.41	U
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Benzene	8260B	µg/L					5	U		
Benzidine	8270D	µg/L	63	U						
Benzo(a)anthracene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzo(a)pyrene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzo(e)pyrene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Benzoic Acid	8270D	µg/L	16	U						
Benzyl Alcohol	8270D	µg/L	16	U						
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L					0.0087	U	0.0083	U
bis(2-chloroethoxy)methane	8270D	µg/L	1	U						
bis(2-chloroethyl) ether	8270D	µg/L	1	U						
bis(2-chloroisopropyl) ether	8270D	µg/L	1	U						
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	U
Boron	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U
Bromobenzene	8260B	µg/L					5	U		
Bromochloromethane	8260B	µg/L					5	U		
Bromodichloromethane	8260B	µg/L					5	U		
Bromoform	8260B	µg/L					5	U		
Bromomethane	8260B	µg/L					5	U		
Butylbenzylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Carbazole	8270D	µg/L	1	U						
Carbon Disulfide	8260B	µg/L					5	U		
Carbon Tetrachloride	8260B	µg/L					5	U		
Chlordane	8081B	µg/L					0.44	U	0.41	U
Chlorobenzene	8260B	µg/L					5	U		
Chloroethane	8260B	µg/L					5	U		
Chloroform	8260B	µg/L					5	U		
Chloromethane	8260B	µg/L					5	U		
Chlorotrifluoroethylene	8260B	µg/L					5	U		
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L							10	U
Chrysene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
cis-1,2-Dichloroethene	8260B	µg/L					5	U		
cis-1,3-Dichloropropene	8260B	µg/L					5	U		
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Cyanide	9012B	mg/L	0.01	U						
Cymene	8260B	µg/L					5	U		
Delta-Bhc	8081B	µg/L					0.0087	U	0.0083	U
Di isopropyl Ether	8260B	µg/L					5	U		
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Dibenzofuran	8270D	µg/L	1	U						
Dibromochloromethane	8260B	µg/L					5	U		
Dibromomethane	8260B	µg/L					5	U		
Dicamba	8151A	µg/L					0.31	UJ	0.29	U
Dichlorodifluoromethane	8260B	µg/L					5	U		
Dichlorprop	8151A	µg/L					0.51	UJ	0.48	U
Dieldrin	8081B	µg/L					0.017	U	0.017	U
Diethylphthalate	8270D SIM	µg/L	0.24	J	0.43	J	1	U	0.22	J
Dimethylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	U
Di-n-butylphthalate	8270D SIM	µg/L	0.14	J	1	U	1	U	0.14	J
Dinitrobutyl Phenol	8151A	µg/L					0.51	UJ	0.48	UJ
Di-n-octylphthalate	8270D SIM	µg/L	1	U	1	U	1	U	1	U
Diphenylamine	8270D	µg/L	5	U						
EFH (C12-C14)	8015M	mg/L	0.095	U	0.1	U	0.098	U	0.096	U
EFH (C15-C20)	8015M	mg/L	0.095	U	0.1	U	0.098	U	0.096	U
EFH (C21-C30)	8015M	mg/L	0.095	U	0.1	U	0.098	U	0.096	U
EFH (C30-C40)	8015M	mg/L	0.47	U	0.5	U	0.49	U	0.48	U
EFH (C8-C11)	8015M	mg/L	0.095	UJ	0.1	U	0.098	U	0.096	U
Endosulfan I	8081B	µg/L					0.0087	U	0.0083	U
Endosulfan II	8081B	µg/L					0.017	U	0.017	U
Endosulfan Sulfate	8081B	µg/L					0.017	U	0.017	U
Endrin	8081B	µg/L					0.017	U	0.017	UJ
Endrin Aldehyde	8081B	µg/L					0.087	U	0.083	U
Endrin Ketone	8081B	µg/L					0.017	U	0.017	U
Ethylbenzene	8260B	µg/L					5	U		
Fluoranthene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Fluorene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Fluoride	300.0	mg/L								
Gamma-Bhc (Lindane)	8081B	µg/L					0.0087	U	0.0083	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Heptachlor	8081B	µg/L					0.0087	U	0.0083	U
Heptachlor Epoxide	8081B	µg/L					0.0087	U	0.0083	U
Hexachloro-1,3-butadiene	8260B	µg/L					5	U		
Hexachlorobenzene	8270D	µg/L	0.5	U						
Hexachlorobutadiene	8270D	µg/L	1	U						
Hexachlorocyclopentadiene	8270D	µg/L	16	U						
Hexachloroethane	8270D	µg/L	5	U						
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L	1	U						

		Sample Name:	EB1-072513		EB1-080113		EB2-071013		EB2-071713	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		07/10/2013		07/17/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Isopropylbenzene	8260B	µg/L					5	U		
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L					5	U		
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
MCPA	8151A	µg/L					210	UJ	190	U
MCPP	8151A	µg/L					210	UJ	190	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methoxychlor	8081B	µg/L					0.087	U	0.083	U
Methyl Iodide	8260B	µg/L					5	U		
Methyl Tert-Butyl Ether	8260B	µg/L					5	U		
Methylene Chloride	8260B	µg/L					5	U		
Mirex	8081B	µg/L					0.22	U	0.21	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Naphthalene	8270D SIM	µg/L	0.037	J	0.051	U	0.032	J	0.045	J
n-Butylbenzene	8260B	µg/L					5	U		
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrate	300.0	mg/L								
Nitrite-NO2	300.0	mg/L								
Nitrobenzene	8270D	µg/L	1	U						
N-Nitrosodimethylamine	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
N-Nitroso-di-n-propylamine	8270D	µg/L	1	U						
N-Nitrosodiphenylamine	8270D	µg/L	1	U						
n-Propylbenzene	8260B	µg/L					5	U		
OCDD	1613B	pg/L	19.9	U	19.6	U	20.4	U	19.9	U
OCDF	1613B	pg/L	19.9	U	19.6	U	20.4	U	19.9	U
o-Xylene	8260B	µg/L					5	U		
Pentachlorophenol	8270D	µg/L	5	U						
Perchlorate	6850	µg/L					1	U		
pH	9040C	pH	5.9		5.9		6.2		6	
Phenanthrene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Phenol	8270D	µg/L	1	U						
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L	0.052	U	0.051	U	0.051	U	0.051	U
Pyridine	8270D	µg/L	5	U						
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L					0.051	UJ	0.048	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L					5	U		
TCDD TEQ	1613B	pg/L	0.0814		0.0622		0.0534		0.0896	
Technical Toxaphene	8081B	µg/L					2.6	U	2.5	U
tert-Butyl ethyl ether	8260B	µg/L					5	U		
tert-Butylbenzene	8260B	µg/L					5	U		
Tertiary amyl methyl ether	8260B	µg/L					5	U		
Tertiary butyl alcohol	8260B	µg/L					50	U		
Tetrachloroethene	8260B	µg/L					5	U		
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L					5	U		
trans-1,2-Dichloroethene	8260B	µg/L					5	U		
trans-1,3-Dichloropropene	8260B	µg/L					5	U		
Trichloroethene	8260B	µg/L					5	U		
Trichlorofluoromethane	8260B	µg/L					5	U		
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L					10	U		
Vinyl Chloride	8260B	µg/L					5	U		
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

		Sample Name:	EB2-072513		EB2-080113		EB2-092513		EB3-082813	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		09/25/2013		08/28/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1'-Biphenyl	8270D	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L			1.92	J	9.6	U	9.62	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L			1.74	J	9.6	U	9.62	U
1,2,3,4,7,8-HXCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,6,7,8-HXCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,7,8,9-HXCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L			9.62	U	9.6	U	9.62	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L			1.84	J	9.6	U	9.62	U
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trichlorobenzene	8270D	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichlorobenzene	8270D	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,2-Diphenylhydrazine	8270D	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichlorobenzene	8270D	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1,4-Dichlorobenzene	8270D	µg/L								
1-Chlorohexane	8260B	µg/L								
1-Methylnaphthalene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
2,2-Dichloropropane	8260B	µg/L								
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U	1.2	U	1.2	U	1.2	U
2,3,4,6,7,8-HXCDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
2,3,4,7,8-PECDF	1613B	pg/L			9.62	U	9.6	U	9.62	U
2,3,7,8-TCDD	1613B	pg/L			1.92	U	1.92	U	1.92	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L			1.92	U	1.92	U	1.92	U
2,4,5-T	8151A	µg/L	0.048	U	0.049	U	0.048	U	0.049	U
2,4,5-Trichlorophenol	8270D	µg/L								
2,4,6-Trichlorophenol	8270D	µg/L								
2,4-D	8151A	µg/L	0.48	U	0.49	U	0.48	U	0.49	U
2,4-DB	8151A	µg/L	0.96	U	0.98	U	0.95	U	0.98	U
2,4-Dichlorophenol	8270D	µg/L								
2,4-Dimethylphenol	8270D	µg/L								
2,4-Dinitrophenol	8270D	µg/L								
2,6-Dichlorophenol	8270D	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chloronaphthalene	8270D	µg/L								
2-Chlorophenol	8270D	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Methylnaphthalene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
2-Methylphenol	8270D	µg/L								
2-Nitroaniline	8270D	µg/L								
2-Nitrophenol	8270D	µg/L								
2-Phenylbutane	8260B	µg/L								
3,3'-Dichlorobenzidine	8270D	µg/L								
3,5-Dimethylphenol	8270D	µg/L								
3-Nitroaniline	8270D	µg/L								
4,4'-DDD	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	U
4,4'-DDE	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	UJ
4,4'-DDT	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	U
4,6-Dinitro-2-methylphenol	8270D	µg/L								
4-Bromophenyl-phenylether	8270D	µg/L								
4-Chloro-3-methylphenol	8270D	µg/L								
4-Chloroaniline	8270D	µg/L								
4-Chlorophenyl-phenylether	8270D	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
4-Methylphenol	8270D	µg/L								
4-Nitroaniline	8270D	µg/L								
4-Nitrophenol	8270D	µg/L								
Acenaphthene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Acenaphthylene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Aldrin	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	UJ
Alpha-Bhc	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	UJ
Aluminum	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Aniline	8270D	µg/L								
Anthracene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Antimony	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1221	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1232	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U

		Sample Name:	EB2-072513		EB2-080113		EB2-092513		EB3-082813	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		09/25/2013		08/28/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Aroclor 1242	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1248	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1254	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1260	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1262	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 1268	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 5432	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 5442	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Aroclor 5460	8082A	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Arsenic	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Barium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Benzene	8260B	µg/L								
Benzidine	8270D	µg/L								
Benzo(a)anthracene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzo(a)pyrene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzo(b)fluoranthene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzo(e)pyrene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzo(g,h,i)perylene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzo(k)fluoranthene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Benzoic Acid	8270D	µg/L								
Benzyl Alcohol	8270D	µg/L								
Beryllium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	UJ
bis(2-chloroethoxy)methane	8270D	µg/L								
bis(2-chloroethyl) ether	8270D	µg/L								
bis(2-chloroisopropyl) ether	8270D	µg/L								
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L			1	U	1	UJ	1.1	U
Boron	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Butylbenzylphthalate	8270D SIM	µg/L			1	U	1	U	1.1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Carbazole	8270D	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlordane	8081B	µg/L	0.41	U	0.43	U	0.41	U	0.41	U
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
Chromium	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L								
Chrysene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cobalt	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Cyanide	9012B	mg/L								
Cymene	8260B	µg/L								
Delta-Bhc	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	UJ
Di isopropyl Ether	8260B	µg/L								
Dibenzo(a,h)anthracene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Dibenzofuran	8270D	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dicamba	8151A	µg/L	0.29	U	0.29	U	0.29	U	0.29	U
Dichlorodifluoromethane	8260B	µg/L								
Dichlorprop	8151A	µg/L	0.48	U	0.49	U	0.48	U	0.49	U
Dieldrin	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	U
Diethylphthalate	8270D SIM	µg/L			1	U	0.77	J	0.36	J
Dimethylphthalate	8270D SIM	µg/L			1	U	1	U	1.1	U
Di-n-butylphthalate	8270D SIM	µg/L			1	U	0.15	J	1.1	U
Dinitrobutyl Phenol	8151A	µg/L	0.48	U	0.49	U	0.48	U	0.49	U
Di-n-octylphthalate	8270D SIM	µg/L			1	U	1	U	1.1	U
Diphenylamine	8270D	µg/L								
EFH (C12-C14)	8015M	mg/L			0.097	U	0.096	U	0.097	U
EFH (C15-C20)	8015M	mg/L			0.097	U	0.096	U	0.097	U
EFH (C21-C30)	8015M	mg/L			0.097	U	0.096	U	0.097	U
EFH (C30-C40)	8015M	mg/L			0.48	U	0.48	UJ	0.48	U
EFH (C8-C11)	8015M	mg/L			0.097	U	0.096	UJ	0.097	UJ
Endosulfan I	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	U
Endosulfan II	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	U
Endosulfan Sulfate	8081B	µg/L	0.017	U	0.017	U	0.017	U	0.016	UJ
Endrin	8081B	µg/L	0.017	UJ	0.017	U	0.017	UJ	0.016	UJ
Endrin Aldehyde	8081B	µg/L	0.083	UJ	0.085	U	0.083	U	0.082	UJ
Endrin Ketone	8081B	µg/L	0.017	UJ	0.017	U	0.017	UJ	0.016	U
Ethylbenzene	8260B	µg/L								
Fluoranthene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Fluorene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Fluoride	300.0	mg/L								
Gamma-Bhc (Lindane)	8081B	µg/L	0.0083	UJ	0.0085	U	0.0083	U	0.0082	UJ
Gasoline Range Organics (C5-C12)	8015M	µg/L			50	U	50	U	50	U
Heptachlor	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	U
Heptachlor Epoxide	8081B	µg/L	0.0083	U	0.0085	U	0.0083	U	0.0082	UJ
Hexachloro-1,3-butadiene	8260B	µg/L								
Hexachlorobenzene	8270D	µg/L								
Hexachlorobutadiene	8270D	µg/L								
Hexachlorocyclopentadiene	8270D	µg/L								
Hexachloroethane	8270D	µg/L								
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Iron	6010C	mg/L	0.4	U	0.4	U	0.4	U	0.4	U
Isophorone	8270D	µg/L								

		Sample Name:	EB2-072513		EB2-080113		EB2-092513		EB3-082813	
		Location:	8_DG_EB		8_DG_EB		8_DG_EB		8_DG_EB	
		Sample Date:	07/25/2013		08/01/2013		09/25/2013		08/28/2013	
		Sample Type:	EB		EB		EB		EB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Isopropylbenzene	8260B	µg/L								
Lead	6010C	mg/L	0.03	U	0.03	U	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L								
Magnesium	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
MCPA	8151A	µg/L	190	U	200	U	190	U	200	U
MCPP	8151A	µg/L	190	U	200	U	190	U	200	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Methoxychlor	8081B	µg/L	0.083	U	0.085	U	0.083	U	0.082	U
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
Mirex	8081B	µg/L	0.21	U	0.21	U	0.041	U	0.2	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Naphthalene	8270D SIM	µg/L			0.033	J	0.051	U	0.053	U
n-Butylbenzene	8260B	µg/L								
Nickel	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Nitrate	300.0	mg/L								
Nitrite-NO2	300.0	mg/L								
Nitrobenzene	8270D	µg/L								
N-Nitrosodimethylamine	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
N-Nitroso-di-n-propylamine	8270D	µg/L								
N-Nitrosodiphenylamine	8270D	µg/L								
n-Propylbenzene	8260B	µg/L								
OCDD	1613B	pg/L			19.2	U	19.2	U	19.2	U
OCDF	1613B	pg/L			19.2	U	19.2	U	19.2	U
o-Xylene	8260B	µg/L								
Pentachlorophenol	8270D	µg/L								
Perchlorate	6850	µg/L								
pH	9040C	pH			5.9		6		5.5	
Phenanthrene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Phenol	8270D	µg/L								
Phosphorus	6010C	mg/L	0.2	U	0.2	U	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U	1	U	1	U
Pyrene	8270D SIM	µg/L			0.051	U	0.051	U	0.053	U
Pyridine	8270D	µg/L								
Selenium	6020A	mg/L	0.004	U	0.004	U	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.048	U	0.049	U	0.048	U	0.049	U
Sodium	6010C	mg/L	2	U	2	U	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U	0.002	U	0.002	U
Styrene	8260B	µg/L								
TCDD TEQ	1613B	pg/L			2.66		0.0255		0	U
Technical Toxaphene	8081B	µg/L	2.5	U	2.6	U	2.5	U	2.5	U
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Thallium	6020A	mg/L	0.001	U	0.001	U	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Titanium	6010C	mg/L	0.02	U	0.02	U	0.02	U	0.02	U
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vanadium	6010C	mg/L	0.01	U	0.01	U	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								
Zinc	6010C	mg/L	0.04	U	0.04	U	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U	0.1	U	0.1	U

Notes:
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

		Sample Name:	EB4-082813	
		Location:	8_DG_EB	
		Sample Date:	08/28/2013	
		Sample Type:	EB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L		
1,1,1-Trichloroethane	8260B	µg/L		
1,1,2,2-Tetrachloroethane	8260B	µg/L		
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L		
1,1,2-Trichloroethane	8260B	µg/L		
1,1'-Biphenyl	8270D	µg/L		
1,1-Dichloroethane	8260B	µg/L		
1,1-Dichloroethene	8260B	µg/L		
1,1-Dichloropropene	8260B	µg/L		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.62	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.62	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.62	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.62	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.62	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.62	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.62	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.62	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.62	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.62	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.62	U
1,2,3-Trichlorobenzene	8260B	µg/L		
1,2,3-Trichloropropane	8260B	µg/L		
1,2,4-Trichlorobenzene	8260B	µg/L		
1,2,4-Trichlorobenzene	8270D	µg/L		
1,2,4-Trimethylbenzene	8260B	µg/L		
1,2-Dibromo-3-chloropropane	8260B	µg/L		
1,2-Dibromoethane	8260B	µg/L		
1,2-Dichlorobenzene	8260B	µg/L		
1,2-Dichlorobenzene	8270D	µg/L		
1,2-Dichloroethane	8260B	µg/L		
1,2-Dichloropropane	8260B	µg/L		
1,2-Diphenylhydrazine	8270D	µg/L		
1,3,5-Trimethylbenzene	8260B	µg/L		
1,3-Dichlorobenzene	8260B	µg/L		
1,3-Dichlorobenzene	8270D	µg/L		
1,3-Dichloropropane	8260B	µg/L		
1,4-Dichlorobenzene	8260B	µg/L		
1,4-Dichlorobenzene	8270D	µg/L		
1-Chlorohexane	8260B	µg/L		
1-Methylnaphthalene	8270D SIM	µg/L	0.051	U
2,2-Dichloropropane	8260B	µg/L		
2,2-Dichlor-Propionic Acid	8151A	µg/L		
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.62	U
2,3,4,7,8-PECDF	1613B	pg/L	9.62	U
2,3,7,8-TCDD	1613B	pg/L	1.92	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.92	U
2,4,5-T	8151A	µg/L		
2,4,5-Trichlorophenol	8270D	µg/L		
2,4,6-Trichlorophenol	8270D	µg/L		
2,4-D	8151A	µg/L		
2,4-DB	8151A	µg/L		
2,4-Dichlorophenol	8270D	µg/L		
2,4-Dimethylphenol	8270D	µg/L		
2,4-Dinitrophenol	8270D	µg/L		
2,6-Dichlorophenol	8270D	µg/L		
2-Butanone (MEK)	8260B	µg/L		
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L		
2-Chloroethyl Vinyl Ether	8260B	µg/L		
2-Chloronaphthalene	8270D	µg/L		
2-Chlorophenol	8270D	µg/L		
2-Chlorotoluene	8260B	µg/L		
2-Hexanone	8260B	µg/L		
2-Methylnaphthalene	8270D SIM	µg/L	0.011	J
2-Methylphenol	8270D	µg/L		
2-Nitroaniline	8270D	µg/L		
2-Nitrophenol	8270D	µg/L		
2-Phenylbutane	8260B	µg/L		
3,3'-Dichlorobenzidine	8270D	µg/L		
3,5-Dimethylphenol	8270D	µg/L		
3-Nitroaniline	8270D	µg/L		
4,4'-DDD	8081B	µg/L		
4,4'-DDE	8081B	µg/L		
4,4'-DDT	8081B	µg/L		
4,6-Dinitro-2-methylphenol	8270D	µg/L		
4-Bromophenyl-phenylether	8270D	µg/L		
4-Chloro-3-methylphenol	8270D	µg/L		
4-Chloroaniline	8270D	µg/L		
4-Chlorophenyl-phenylether	8270D	µg/L		
4-Chlorotoluene	8260B	µg/L		
4-Methyl-2-pentanone (MIBK)	8260B	µg/L		
4-Methylphenol	8270D	µg/L		
4-Nitroaniline	8270D	µg/L		
4-Nitrophenol	8270D	µg/L		
Acenaphthene	8270D SIM	µg/L	0.051	U
Acenaphthylene	8270D SIM	µg/L	0.051	U
Acetone	8260B	µg/L		
Acrolein	8260B	µg/L		
Acrylonitrile	8260B	µg/L		
Aldrin	8081B	µg/L		
Alpha-Bhc	8081B	µg/L		
Aluminum	6010C	mg/L	0.4	U
Aniline	8270D	µg/L		
Anthracene	8270D SIM	µg/L	0.051	U
Antimony	6010C	mg/L	0.04	U
Aroclor 1016	8082A	µg/L	0.41	U
Aroclor 1221	8082A	µg/L	0.41	U
Aroclor 1232	8082A	µg/L	0.41	U

		Sample Name:	EB4-082813	
		Location:	8_DG_EB	
		Sample Date:	08/28/2013	
		Sample Type:	EB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
Aroclor 1242	8082A	µg/L	0.41	U
Aroclor 1248	8082A	µg/L	0.41	U
Aroclor 1254	8082A	µg/L	0.41	U
Aroclor 1260	8082A	µg/L	0.41	U
Aroclor 1262	8082A	µg/L	0.41	U
Aroclor 1268	8082A	µg/L	0.41	U
Aroclor 5432	8082A	µg/L	0.41	U
Aroclor 5442	8082A	µg/L	0.41	U
Aroclor 5460	8082A	µg/L	0.41	U
Arsenic	6010C	mg/L	0.04	U
Barium	6010C	mg/L	0.01	U
Benzene	8260B	µg/L		
Benzidine	8270D	µg/L		
Benzo(a)anthracene	8270D SIM	µg/L	0.051	U
Benzo(a)pyrene	8270D SIM	µg/L	0.051	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	U
Benzo(e)pyrene	8270D SIM	µg/L	0.051	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	U
Benzoic Acid	8270D	µg/L		
Benzyl Alcohol	8270D	µg/L		
Beryllium	6010C	mg/L	0.01	U
Beta-Bhc	8081B	µg/L		
bis(2-chloroethoxy)methane	8270D	µg/L		
bis(2-chloroethyl) ether	8270D	µg/L		
bis(2-chloroisopropyl) ether	8270D	µg/L		
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U
Boron	6010C	mg/L	0.1	U
Bromobenzene	8260B	µg/L		
Bromochloromethane	8260B	µg/L		
Bromodichloromethane	8260B	µg/L		
Bromoform	8260B	µg/L		
Bromomethane	8260B	µg/L		
Butylbenzylphthalate	8270D SIM	µg/L	1	U
Cadmium	6010C	mg/L	0.01	U
Calcium	6010C	mg/L	0.4	U
Carbazole	8270D	µg/L		
Carbon Disulfide	8260B	µg/L		
Carbon Tetrachloride	8260B	µg/L		
Chlordane	8081B	µg/L		
Chlorobenzene	8260B	µg/L		
Chloroethane	8260B	µg/L		
Chloroform	8260B	µg/L		
Chloromethane	8260B	µg/L		
Chlorotrifluoroethylene	8260B	µg/L		
Chromium	6010C	mg/L	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L		
Chrysene	8270D SIM	µg/L	0.051	U
cis-1,2-Dichloroethene	8260B	µg/L		
cis-1,3-Dichloropropene	8260B	µg/L		
Cobalt	6010C	mg/L	0.01	U
Copper	6010C	mg/L	0.02	U
Cyanide	9012B	mg/L		
Cymene	8260B	µg/L		
Delta-Bhc	8081B	µg/L		
Di isopropyl Ether	8260B	µg/L		
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	U
Dibenzofuran	8270D	µg/L		
Dibromochloromethane	8260B	µg/L		
Dibromomethane	8260B	µg/L		
Dicamba	8151A	µg/L		
Dichlorodifluoromethane	8260B	µg/L		
Dichlorprop	8151A	µg/L		
Dieldrin	8081B	µg/L		
Diethylphthalate	8270D SIM	µg/L	0.4	J
Dimethylphthalate	8270D SIM	µg/L	1	U
Di-n-butylphthalate	8270D SIM	µg/L	1	U
Dinitrobutyl Phenol	8151A	µg/L		
Di-n-octylphthalate	8270D SIM	µg/L	1	U
Diphenylamine	8270D	µg/L		
EFH (C12-C14)	8015M	mg/L	0.094	U
EFH (C15-C20)	8015M	mg/L	0.094	U
EFH (C21-C30)	8015M	mg/L	0.094	U
EFH (C30-C40)	8015M	mg/L	0.47	U
EFH (C8-C11)	8015M	mg/L	0.094	UJ
Endosulfan I	8081B	µg/L		
Endosulfan II	8081B	µg/L		
Endosulfan Sulfate	8081B	µg/L		
Endrin	8081B	µg/L		
Endrin Aldehyde	8081B	µg/L		
Endrin Ketone	8081B	µg/L		
Ethylbenzene	8260B	µg/L		
Fluoranthene	8270D SIM	µg/L	0.051	U
Fluorene	8270D SIM	µg/L	0.013	J
Fluoride	300.0	mg/L	0.1	U
Gamma-Bhc (Lindane)	8081B	µg/L		
Gasoline Range Organics (C5-C12)	8015M	µg/L		
Heptachlor	8081B	µg/L		
Heptachlor Epoxide	8081B	µg/L		
Hexachloro-1,3-butadiene	8260B	µg/L		
Hexachlorobenzene	8270D	µg/L		
Hexachlorobutadiene	8270D	µg/L		
Hexachlorocyclopentadiene	8270D	µg/L		
Hexachloroethane	8270D	µg/L		
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	U
Iron	6010C	mg/L	0.4	U
Isophorone	8270D	µg/L		

		Sample Name:	EB4-082813	
		Location:	8_DG_EB	
		Sample Date:	08/28/2013	
		Sample Type:	EB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
Isopropylbenzene	8260B	µg/L		
Lead	6010C	mg/L	0.03	U
Lithium	6010C	mg/L	0.04	U
m,p-Xylene	8260B	µg/L		
Magnesium	6010C	mg/L	0.2	U
Manganese	6010C	mg/L	0.01	U
MCPA	8151A	µg/L		
MCPP	8151A	µg/L		
Mercury	7470A	mg/L	0.0002	U
Methoxychlor	8081B	µg/L		
Methyl Iodide	8260B	µg/L		
Methyl Tert-Butyl Ether	8260B	µg/L		
Methylene Chloride	8260B	µg/L		
Mirex	8081B	µg/L		
Molybdenum	6010C	mg/L	0.02	U
Naphthalene	8270D SIM	µg/L	0.051	U
n-Butylbenzene	8260B	µg/L		
Nickel	6010C	mg/L	0.02	U
Nitrate	300.0	mg/L	0.1	U
Nitrite-NO2	300.0	mg/L	0.1	U
Nitrobenzene	8270D	µg/L		
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	U
N-Nitroso-di-n-propylamine	8270D	µg/L		
N-Nitrosodiphenylamine	8270D	µg/L		
n-Propylbenzene	8260B	µg/L		
OCDD	1613B	pg/L	19.2	U
OCDF	1613B	pg/L	19.2	U
o-Xylene	8260B	µg/L		
Pentachlorophenol	8270D	µg/L		
Perchlorate	6850	µg/L		
pH	9040C	pH	5.7	
Phenanthrene	8270D SIM	µg/L	0.051	U
Phenol	8270D	µg/L		
Phosphorus	6010C	mg/L	0.2	U
Potassium	6010C	mg/L	1	U
Pyrene	8270D SIM	µg/L	0.015	J
Pyridine	8270D	µg/L		
Selenium	6020A	mg/L	0.004	U
Silver	6020A	mg/L	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L		
Sodium	6010C	mg/L	2	U
Strontium	6020A	mg/L	0.002	U
Styrene	8260B	µg/L		
TCDD TEQ	1613B	pg/L	0.0006	
Technical Toxaphene	8081B	µg/L		
tert-Butyl ethyl ether	8260B	µg/L		
tert-Butylbenzene	8260B	µg/L		
Tertiary amyl methyl ether	8260B	µg/L		
Tertiary butyl alcohol	8260B	µg/L		
Tetrachloroethene	8260B	µg/L		
Thallium	6020A	mg/L	0.001	U
Tin	6010C	mg/L	0.04	U
Titanium	6010C	mg/L	0.02	U
Toluene	8260B	µg/L		
trans-1,2-Dichloroethene	8260B	µg/L		
trans-1,3-Dichloropropene	8260B	µg/L		
Trichloroethene	8260B	µg/L		
Trichlorofluoromethane	8260B	µg/L		
Vanadium	6010C	mg/L	0.01	U
Vinyl Acetate	8260B	µg/L		
Vinyl Chloride	8260B	µg/L		
Zinc	6010C	mg/L	0.04	U
Zirconium	6010C	mg/L	0.1	U

Notes:
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

Table C-4 - Subarea 5D Field Blank Samples

		Sample Name:	FB-041113		FB-041613	
		Location:	FIELD BLANK		FIELD BLANK	
		Sample Date:	04/11/2013		04/16/2013	
		Sample Type:	FB		FB	
		Lab:	LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L	5	U	5	U
1,1,1-Trichloroethane	8260B	µg/L	5	U	5	U
1,1,2,2-Tetrachloroethane	8260B	µg/L	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L	5	U	5	U
1,1,2-Trichloroethane	8260B	µg/L	5	U	5	U
1,1'-Biphenyl	8270D	µg/L	1	U	1	U
1,1-Dichloroethane	8260B	µg/L	5	U	5	U
1,1-Dichloroethene	8260B	µg/L	5	U	5	U
1,1-Dichloropropene	8260B	µg/L	5	U	5	U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U	9.71	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.76	U	9.71	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.76	U	9.71	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	0.125	J	9.71	U
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.76	U	0.257	J
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U	9.71	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.76	U	9.71	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U	9.71	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.76	U	9.71	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.76	U	9.71	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U	9.71	U
1,2,3-Trichlorobenzene	8260B	µg/L	5	U	5	U
1,2,3-Trichloropropane	8260B	µg/L	5	U	5	U
1,2,4-Trichlorobenzene	8260B	µg/L	5	U	5	U
1,2,4-Trichlorobenzene	8270D	µg/L	1	U	1	U
1,2,4-Trimethylbenzene	8260B	µg/L	5	U	5	U
1,2-Dibromo-3-chloropropane	8260B	µg/L	5	U	5	U
1,2-Dibromoethane	8260B	µg/L	5	U	5	U
1,2-Dichlorobenzene	8260B	µg/L	5	U	5	U
1,2-Dichlorobenzene	8270D	µg/L	1	U	1	U
1,2-Dichloroethane	8260B	µg/L	5	U	5	U
1,2-Dichloropropane	8260B	µg/L	5	U	5	U
1,2-Diphenylhydrazine	8270D	µg/L	1	U	1	U
1,3,5-Trimethylbenzene	8260B	µg/L	5	U	5	U
1,3,5-Trinitrobenzene	8330A	µg/L	0.6	UJ	0.6	U
1,3-Dichlorobenzene	8260B	µg/L	5	U	5	U
1,3-Dichlorobenzene	8270D	µg/L	1	U	1	U
1,3-Dichloropropane	8260B	µg/L	5	U	5	U
1,4-Dichlorobenzene	8260B	µg/L	5	U	5	U
1,4-Dichlorobenzene	8270D	µg/L	1	U	1	U
1,4-Dioxane	8260B SIM	µg/L	2	U	2	U
1-Chlorohexane	8260B	µg/L	5	U	5	U
1-Methylnaphthalene	8270D	µg/L	0.5 0.5	U U	0.5 0.5	U U
1-Methylnaphthalene	8270D SIM	µg/L	0.019	J	0.052	U
2,2-Dichloropropane	8260B	µg/L	5	U	5	U
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U	1.2	UJ
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.76	U	9.71	U
2,3,4,7,8-PECDF	1613B	pg/L	9.76	U	9.71	U
2,3,7,8-TCDD	1613B	pg/L	1.95	U	1.94	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.95	U	1.94	U
2,4,5-T	8151A	µg/L	0.049	U	0.049	UJ
2,4,5-Trichlorophenol	8270D	µg/L	1	U	1	U
2,4,6-Trichlorophenol	8270D	µg/L	1	U	1	U
2,4,6-Trinitrotoluene	8330A	µg/L	0.6	UJ	0.6	U
2,4-D	8151A	µg/L	0.49	U	0.49	U
2,4-DB	8151A	µg/L	0.98	U	0.98	U
2,4-Diamino-6-nitrotoluene	8330A	µg/L	0.6	U	0.6	U
2,4-Dichlorophenol	8270D	µg/L	1	U	1	U
2,4-Dimethylphenol	8270D	µg/L	1	U	1	U
2,4-Dinitrophenol	8270D	µg/L	31	U	31	U
2,4-Dinitrotoluene	8330A	µg/L	0.6	UJ	0.6	U
2,6-Diamino-4-nitrotoluene	8330A	µg/L	0.6	U	0.6	U
2,6-Dichlorophenol	8270D	µg/L	1	U	1	U
2,6-Dinitrotoluene	8330A	µg/L	0.6	U	0.6	U
2-Amino-4,6-Dinitrotoluene	8330A	µg/L	0.6	UJ	0.6	U
2-Butanone (MEK)	8260B	µg/L	10	U	10	U
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L	5	U	5	U
2-Chloroethyl Vinyl Ether	8260B	µg/L	10	U	10	U
2-Chloronaphthalene	8270D	µg/L	1	U	1	U
2-Chlorophenol	8270D	µg/L	1	U	1	U
2-Chlorotoluene	8260B	µg/L	5	U	5	U
2-Hexanone	8260B	µg/L	10	U	10	U
2-Methylnaphthalene	8270D	µg/L	0.5 0.5	U U	0.5 0.5	U U
2-Methylnaphthalene	8270D SIM	µg/L	0.024	J	0.012	J
2-Methylphenol	8270D	µg/L	1	U	1	U
2-Nitroaniline	8270D	µg/L	1	U	1	U
2-Nitrophenol	8270D	µg/L	1	U	1	U
2-Nitrotoluene	8330A	µg/L	0.6	UJ	0.6	U
2-Phenylbutane	8260B	µg/L	5	U	5	U
2-Propanol	8015C	µg/L	1000	UJ	1000	UJ
3,3'-Dichlorobenzidine	8270D	µg/L	5	U	5	U
3,5-Dimethylphenol	8270D	µg/L	10	U	10	U
3-Nitroaniline	8270D	µg/L	1	U	1	U
3-Nitrotoluene	8330A	µg/L	1.2	UJ	1.2	U
4,4'-DDD	8081B	µg/L	0.016	U	0.017	U
4,4'-DDE	8081B	µg/L	0.016	U	0.017	U
4,4'-DDT	8081B	µg/L	0.016	U	0.017	U
4,6-Dinitro-2-methylphenol	8270D	µg/L	15	U	16	U
4-Amino-2,6-Dinitrotoluene	8330A	µg/L	0.6	U	0.6	U
4-Bromophenyl-phenylether	8270D	µg/L	1	U	1	U
4-Chloro-3-methylphenol	8270D	µg/L	1	U	1	U
4-Chloroaniline	8270D	µg/L	1	U	1	U
4-Chlorophenyl-phenylether	8270D	µg/L	1	U	1	U
4-Chlorotoluene	8260B	µg/L	5	U	5	U
4-Methyl-2-pentanone (MIBK)	8260B	µg/L	10	U	10	U
4-Methylphenol	8270D	µg/L	1	U	1	U

		Sample Name:	FB-041113		FB-041613	
		Location:	FIELD BLANK		FIELD BLANK	
		Sample Date:	04/11/2013		04/16/2013	
		Sample Type:	FB		FB	
		Lab:	LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
4-Nitroaniline	8270D	µg/L	1	U	1	U
4-Nitrophenol	8270D	µg/L	31	U	31	U
4-Nitrotoluene	8330A	µg/L	1.2	UJ	1.2	U
Acenaphthene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Acenaphthene	8270D SIM	µg/L	0.051	U	0.052	U
Acenaphthylene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Acenaphthylene	8270D SIM	µg/L	0.051	U	0.052	U
Acetone	8260B	µg/L	20	U	20	U
Acrolein	8260B	µg/L	100	U	100	U
Acrylonitrile	8260B	µg/L	20	U	20	U
Aldrin	8081B	µg/L	0.0081	U	0.0086	U
Alpha-Bhc	8081B	µg/L	0.0081	U	0.0086	U
Aluminum	6010C	mg/L	0.4	U	0.4	U
Aniline	8270D	µg/L	1	U	1	U
Anthracene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Anthracene	8270D SIM	µg/L	0.051	U	0.052	U
Antimony	6010C	mg/L	0.04	U	0.04	U
Aroclor 1016	8082A	µg/L	0.4	U	0.43	U
Aroclor 1221	8082A	µg/L	0.4	U	0.43	U
Aroclor 1232	8082A	µg/L	0.4	U	0.43	U
Aroclor 1242	8082A	µg/L	0.4	U	0.43	U
Aroclor 1248	8082A	µg/L	0.4	U	0.43	U
Aroclor 1254	8082A	µg/L	0.4	U	0.43	U
Aroclor 1260	8082A	µg/L	0.4	U	0.43	U
Aroclor 1262	8082A	µg/L	0.4	U	0.43	U
Aroclor 1268	8082A	µg/L	0.4	U	0.43	U
Aroclor 5432	8082A	µg/L	0.4	U	0.43	U
Aroclor 5442	8082A	µg/L	0.4	U	0.43	U
Aroclor 5460	8082A	µg/L	0.4	U	0.43	U
Arsenic	6010C	mg/L	0.04	U	0.04	U
Barium	6010C	mg/L	0.01	U	0.01	U
Benzene	8260B	µg/L	5	U	5	U
Benzidine	8270D	µg/L	61	U	62	U
Benzo(a)anthracene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Benzo(a)anthracene	8270D SIM	µg/L	0.051	U	0.052	U
Benzo(a)pyrene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Benzo(a)pyrene	8270D SIM	µg/L	0.051	U	0.052	U
Benzo(b)fluoranthene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U
Benzo(e)pyrene	8270D SIM	µg/L	0.051	U	0.052	U
Benzo(g,h,i)perylene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	U	0.052	U
Benzo(k)fluoranthene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U
Benzoic Acid	8270D	µg/L	15	UJ	16	UJ
Benzyl Alcohol	8270D	µg/L	15	U	16	U
Beryllium	6010C	mg/L	0.01	U	0.01	U
Beta-Bhc	8081B	µg/L	0.0081	U	0.0086	U
bis(2-chloroethoxy)methane	8270D	µg/L	1	U	1	U
bis(2-chloroethyl) ether	8270D	µg/L	1	U	1	U
bis(2-chloroisopropyl) ether	8270D	µg/L	1	U	1	U
Bis(2-ethylhexyl)phthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U	1	U
Boron	6010C	mg/L	0.1	U	0.1	U
Bromobenzene	8260B	µg/L	5	U	5	U
Bromochloromethane	8260B	µg/L	5	U	5	U
Bromodichloromethane	8260B	µg/L	5	U	5	U
Bromoform	8260B	µg/L	5	U	5	U
Bromomethane	8260B	µg/L	5	U	5	U
Butylbenzylphthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Butylbenzylphthalate	8270D SIM	µg/L	1	U	1	U
Cadmium	6010C	mg/L	0.01	U	0.01	U
Calcium	6010C	mg/L	0.4	U	0.4	U
Carbazole	8270D	µg/L	1	U	1	U
Carbon Disulfide	8260B	µg/L	5	U	5	U
Carbon Tetrachloride	8260B	µg/L	5	U	5	U
Chlordane	8081B	µg/L	0.4	U	0.43	U
Chlorobenzene	8260B	µg/L	5	U	5	U
Chloroethane	8260B	µg/L	5	U	5	U
Chloroform	8260B	µg/L	5	U	3	J
Chloromethane	8260B	µg/L	5	U	5	U
Chlorotrifluoroethylene	8260B	µg/L	5	U	5	U
Chromium	6010C	mg/L	0.03	U	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L	10	U	10	U
Chrysene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Chrysene	8270D SIM	µg/L	0.051	U	0.052	U
cis-1,2-Dichloroethene	8260B	µg/L	5	U	5	U
cis-1,3-Dichloropropene	8260B	µg/L	5	U	5	U
Cobalt	6010C	mg/L	0.01	U	0.01	U
Copper	6010C	mg/L	0.02	U	0.02	U
Cyanide	9012B	mg/L	0.01	U	0.01	U
Cymene	8260B	µg/L	5	U	5	U
Delta-Bhc	8081B	µg/L	0.0081	U	0.0086	U
Di isopropyl Ether	8260B	µg/L	5	U	5	U
Dibenzo(a,h)anthracene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U

		Sample Name:	FB-041113		FB-041613	
		Location:	FIELD BLANK		FIELD BLANK	
		Sample Date:	04/11/2013		04/16/2013	
		Sample Type:	FB		FB	
		Lab:	LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	U	0.052	U
Dibenzofuran	8270D	µg/L	1	U	1	U
Dibromochloromethane	8260B	µg/L	5	U	5	U
Dibromomethane	8260B	µg/L	5	U	5	U
Dicamba	8151A	µg/L	0.29	U	0.29	UJ
Dichlorodifluoromethane	8260B	µg/L	5	U	5	U
Dichlorprop	8151A	µg/L	0.49	U	0.49	UJ
Dieldrin	8081B	µg/L	0.016	U	0.017	U
Diethylene Glycol	8015C	mg/L	10	UJ	10	U
Diethylphthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Diethylphthalate	8270D SIM	µg/L	0.18	J	1	U
Dimethylphthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Dimethylphthalate	8270D SIM	µg/L	1	U	1	U
Di-n-butylphthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Di-n-butylphthalate	8270D SIM	µg/L	0.17	J	0.11	J
Dinitrobutyl Phenol	8151A	µg/L	0.49	U	0.49	UJ
Di-n-octylphthalate	8270D	µg/L	5	U	5	U
			5	U	5	U
Di-n-octylphthalate	8270D SIM	µg/L	1	UJ	1	UJ
Diphenylamine	8270D	µg/L	5	U	5	U
EFH (C12-C14)	8015M	mg/L	0.57	U	0.59	U
EFH (C15-C20)	8015M	mg/L	0.57	U	0.59	U
EFH (C21-C30)	8015M	mg/L	0.57	U	0.59	U
EFH (C30-C40)	8015M	mg/L	0.57	U	0.59	UJ
EFH (C8-C11)	8015M	mg/L	0.57	UJ	0.59	U
Endosulfan I	8081B	µg/L	0.0081	U	0.0086	U
Endosulfan II	8081B	µg/L	0.016	U	0.017	U
Endosulfan Sulfate	8081B	µg/L	0.016	U	0.017	U
Endrin	8081B	µg/L	0.016	U	0.017	U
Endrin Aldehyde	8081B	µg/L	0.081	U	0.086	U
Endrin Ketone	8081B	µg/L	0.016	U	0.017	U
Ethanol	8015C	µg/L	1000	UJ	1000	UJ
Ethylbenzene	8260B	µg/L	5	U	5	U
Ethylene Glycol	8015C	mg/L	10	UJ	10	U
Fluoranthene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Fluoranthene	8270D SIM	µg/L	0.051	U	0.052	U
Fluorene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Fluorene	8270D SIM	µg/L	0.051	U	0.052	U
Fluoride	300.0	mg/L	0.1	U	0.1	U
Formaldehyde	8315A	µg/L	50	U	50	U
Gamma-Bhc (Lindane)	8081B	µg/L	0.0081	U	0.0086	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U
Heptachlor	8081B	µg/L	0.0081	U	0.0086	U
Heptachlor Epoxide	8081B	µg/L	0.0081	U	0.0086	U
Hexachloro-1,3-butadiene	8260B	µg/L	5	U	5	U
Hexachlorobenzene	8270D	µg/L	0.5	U	0.5	U
Hexachlorobutadiene	8270D	µg/L	1	U	1	U
Hexachlorocyclopentadiene	8270D	µg/L	15	U	16	U
Hexachloroethane	8270D	µg/L	5	U	5	U
HMX	8330A	µg/L	2	UJ	2	U
Indeno(1,2,3-cd)pyrene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	U	0.052	U
Iron	6010C	mg/L	0.4	U	0.4	U
Isophorone	8270D	µg/L	1	U	1	U
Isopropylbenzene	8260B	µg/L	5	U	5	U
Lead	6010C	mg/L	0.03	U	0.03	U
Lithium	6010C	mg/L	0.04	U	0.04	U
m,p-Xylene	8260B	µg/L	5	U	5	U
Magnesium	6010C	mg/L	0.2	U	0.2	U
Manganese	6010C	mg/L	0.01	U	0.01	U
MCPA	8151A	µg/L	200	U	200	U
MCPP	8151A	µg/L	200	U	200	UJ
M-Dinitrobenzene	8330A	µg/L	0.6	UJ	0.6	U
Mercury	7470A	mg/L	0.0002	U	0.0002	U
Methanol	8015C	µg/L	1000	UJ	1000	UJ
Methoxychlor	8081B	µg/L	0.081	U	0.086	U
Methyl Iodide	8260B	µg/L	5	U	5	U
Methyl Tert-Butyl Ether	8260B	µg/L	5	U	5	U
Methylene Chloride	8260B	µg/L	2	J	18	
Mirex	8081B	µg/L	0.2	U	0.22	U
Molybdenum	6010C	mg/L	0.02	U	0.02	U
m-Terphenyl	8015B	mg/L	0.0048	U	0.0049	U
Naphthalene	8270D	µg/L	0.2	J	0.5	U
			0.2	J	0.5	U
Naphthalene	8270D SIM	µg/L	0.17		0.052	U
n-Butylbenzene	8260B	µg/L	5	U	5	U
Nickel	6010C	mg/L	0.02	U	0.02	U
Nitrate	300.0	mg/L	0.1	U	0.1	U
Nitrite-NO2	300.0	mg/L	0.1	U	0.1	U
Nitrobenzene	8270D	µg/L	1	U	1	U
Nitrobenzene	8330A	µg/L	0.6	U	0.6	U
Nitroglycerin	8330A	µg/kg	100000000	UJ	100000000	U
N-Nitrosodimethylamine	8270D	µg/L	5	U	5	U
			5	U	5	U
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	U	0.052	U
N-Nitroso-di-n-propylamine	8270D	µg/L	1	U	1	U
N-Nitrosodiphenylamine	8270D	µg/L	1	U	1	U
n-Propylbenzene	8260B	µg/L	5	U	5	U
OCDD	1613B	pg/L	19.5	U	19.4	U
OCDF	1613B	pg/L	19.5	U	19.4	U
o-Terphenyl	8015B	mg/L	0.0048	U	0.0049	U

		Sample Name:	FB-041113		FB-041613	
		Location:	FIELD BLANK		FIELD BLANK	
		Sample Date:	04/11/2013		04/16/2013	
		Sample Type:	FB		FB	
		Lab:	LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer
o-Xylene	8260B	µg/L	5	U	5	U
Pentachlorophenol	8270D	µg/L	5	U	5	U
Perchlorate	6850	µg/L	1	U	1	U
PETN	8330A	µg/kg	100000000	UJ	100000000	U
pH	9040C	pH	7.5		5.7	
Phenanthrene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Phenanthrene	8270D SIM	µg/L	0.051	U	0.052	U
Phenol	8270D	µg/L	1	U	1	U
Phosphorus	6010C	mg/L	0.2	U	0.2	U
Potassium	6010C	mg/L	1	U	1	U
Propylene Glycol	8015C	mg/L	10	UJ	10	U
p-Terphenyl	8015B	mg/L	0.0048	U	0.0049	U
Pyrene	8270D	µg/L	0.5	U	0.5	U
			0.5	U	0.5	U
Pyrene	8270D SIM	µg/L	0.051	U	0.052	U
Pyridine	8270D	µg/L	5	U	5	U
RDX	8330A	µg/L	0.6	UJ	0.6	U
Selenium	6020A	mg/L	0.004	U	0.004	U
Silver	6020A	mg/L	0.001	U	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.049	U	0.049	U
Sodium	6010C	mg/L	2	U	2	U
Strontium	6020A	mg/L	0.002	U	0.002	U
Styrene	8260B	µg/L	5	U	5	U
TCDD TEQ	1613B	pg/L	0.082		0.0354	
Technical Toxaphene	8081B	µg/L	2.4	U	2.6	U
tert-Butyl ethyl ether	8260B	µg/L	5	U	5	U
tert-Butylbenzene	8260B	µg/L	5	U	5	U
Tertiary amyl methyl ether	8260B	µg/L	5	U	5	U
Tertiary butyl alcohol	8260B	µg/L	50	U	50	U
Tetrachloroethene	8260B	µg/L	5	U	5	U
Tetryl	8330A	µg/L	0.6	U	0.6	U
Thallium	6020A	mg/L	0.001	U	0.001	U
Tin	6010C	mg/L	0.04	U	0.0029	J
Titanium	6010C	mg/L	0.02	U	0.02	U
Toluene	8260B	µg/L	5	U	5	U
trans-1,2-Dichloroethene	8260B	µg/L	5	U	5	U
trans-1,3-Dichloropropene	8260B	µg/L	5	U	5	U
Trichloroethene	8260B	µg/L	5	U	5	U
Trichlorofluoromethane	8260B	µg/L	5	U	5	U
Triethylene Glycol	8015C	mg/L	10	UJ	10	U
Vanadium	6010C	mg/L	0.01	U	0.01	U
Vinyl Acetate	8260B	µg/L	10	U	10	U
Vinyl Chloride	8260B	µg/L	5	U	5	U
Zinc	6010C	mg/L	0.04	U	0.04	U
Zirconium	6010C	mg/L	0.1	U	0.1	U

Notes:
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

Table C-5 - Subarea 8 Field Blank Samples

		Sample Name:	FB-041113	
		Location:	FIELD BLANK	
		Sample Date:	04/11/2013	
		Sample Type:	FB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L	5	U
1,1,1-Trichloroethane	8260B	µg/L	5	U
1,1,2,2-Tetrachloroethane	8260B	µg/L	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L	5	U
1,1,2-Trichloroethane	8260B	µg/L	5	U
1,1'-Biphenyl	8270D	µg/L	1	U
1,1-Dichloroethane	8260B	µg/L	5	U
1,1-Dichloroethene	8260B	µg/L	5	U
1,1-Dichloropropene	8260B	µg/L	5	U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U
1,2,3,4,6,7,8-HPCDF	1613B	pg/L	9.76	U
1,2,3,4,7,8,9-HPCDF	1613B	pg/L	9.76	U
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	0.125	J
1,2,3,4,7,8-HXCDF	1613B	pg/L	9.76	U
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U
1,2,3,6,7,8-HXCDF	1613B	pg/L	9.76	U
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U
1,2,3,7,8,9-HXCDF	1613B	pg/L	9.76	U
1,2,3,7,8-Pentachlorodibenzofuran	1613B	pg/L	9.76	U
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1613B	pg/L	9.76	U
1,2,3-Trichlorobenzene	8260B	µg/L	5	U
1,2,3-Trichloropropane	8260B	µg/L	5	U
1,2,4-Trichlorobenzene	8260B	µg/L	5	U
1,2,4-Trichlorobenzene	8270D	µg/L	1	U
1,2,4-Trimethylbenzene	8260B	µg/L	5	U
1,2-Dibromo-3-chloropropane	8260B	µg/L	5	U
1,2-Dibromoethane	8260B	µg/L	5	U
1,2-Dichlorobenzene	8260B	µg/L	5	U
1,2-Dichlorobenzene	8270D	µg/L	1	U
1,2-Dichloroethane	8260B	µg/L	5	U
1,2-Dichloropropane	8260B	µg/L	5	U
1,2-Diphenylhydrazine	8270D	µg/L	1	U
1,3,5-Trimethylbenzene	8260B	µg/L	5	U
1,3,5-Trinitrobenzene	8330A	µg/L	0.6	UJ
1,3-Dichlorobenzene	8260B	µg/L	5	U
1,3-Dichlorobenzene	8270D	µg/L	1	U
1,3-Dichloropropane	8260B	µg/L	5	U
1,4-Dichlorobenzene	8260B	µg/L	5	U
1,4-Dichlorobenzene	8270D	µg/L	1	U
1,4-Dioxane	8260B SIM	µg/L	2	U
1-Chlorohexane	8260B	µg/L	5	U
1-Methylnaphthalene	8270D	µg/L	0.5	U
1-Methylnaphthalene	8270D SIM	µg/L	0.019	J
2,2-Dichloropropane	8260B	µg/L	5	U
2,2-Dichlor-Propionic Acid	8151A	µg/L	1.2	U
2,3,4,6,7,8-HXCDF	1613B	pg/L	9.76	U
2,3,4,7,8-PECDF	1613B	pg/L	9.76	U
2,3,7,8-TCDD	1613B	pg/L	1.95	U
2,3,7,8-Tetrachlorodibenzofuran	1613B	pg/L	1.95	U
2,4,5-T	8151A	µg/L	0.049	U
2,4,5-Trichlorophenol	8270D	µg/L	1	U
2,4,6-Trichlorophenol	8270D	µg/L	1	U
2,4,6-Trinitrotoluene	8330A	µg/L	0.6	UJ
2,4-D	8151A	µg/L	0.49	U
2,4-DB	8151A	µg/L	0.98	U
2,4-Diamino-6-nitrotoluene	8330A	µg/L	0.6	U
2,4-Dichlorophenol	8270D	µg/L	1	U
2,4-Dimethylphenol	8270D	µg/L	1	U
2,4-Dinitrophenol	8270D	µg/L	31	U
2,4-Dinitrotoluene	8330A	µg/L	0.6	UJ
2,6-Diamino-4-nitrotoluene	8330A	µg/L	0.6	U
2,6-Dichlorophenol	8270D	µg/L	1	U
2,6-Dinitrotoluene	8330A	µg/L	0.6	U
2-Amino-4,6-Dinitrotoluene	8330A	µg/L	0.6	UJ
2-Butanone (MEK)	8260B	µg/L	10	U
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L	5	U
2-Chloroethyl Vinyl Ether	8260B	µg/L	10	U
2-Chloronaphthalene	8270D	µg/L	1	U
2-Chlorophenol	8270D	µg/L	1	U
2-Chlorotoluene	8260B	µg/L	5	U
2-Hexanone	8260B	µg/L	10	U
2-Methylnaphthalene	8270D	µg/L	0.5	U
2-Methylnaphthalene	8270D SIM	µg/L	0.024	J
2-Methylphenol	8270D	µg/L	1	U
2-Nitroaniline	8270D	µg/L	1	U
2-Nitrophenol	8270D	µg/L	1	U
2-Nitrotoluene	8330A	µg/L	0.6	UJ
2-Phenylbutane	8260B	µg/L	5	U
2-Propanol	8015C	µg/L	1000	UJ
3,3'-Dichlorobenzidine	8270D	µg/L	5	U
3,5-Dimethylphenol	8270D	µg/L	10	U
3-Nitroaniline	8270D	µg/L	1	U
3-Nitrotoluene	8330A	µg/L	1.2	UJ
4,4'-DDD	8081B	µg/L	0.016	U
4,4'-DDE	8081B	µg/L	0.016	U
4,4'-DDT	8081B	µg/L	0.016	U
4,6-Dinitro-2-methylphenol	8270D	µg/L	15	U
4-Amino-2,6-Dinitrotoluene	8330A	µg/L	0.6	U
4-Bromophenyl-phenylether	8270D	µg/L	1	U
4-Chloro-3-methylphenol	8270D	µg/L	1	U
4-Chloroaniline	8270D	µg/L	1	U
4-Chlorophenyl-phenylether	8270D	µg/L	1	U
4-Chlorotoluene	8260B	µg/L	5	U
4-Methyl-2-pentanone (MIBK)	8260B	µg/L	10	U
4-Methylphenol	8270D	µg/L	1	U
4-Nitroaniline	8270D	µg/L	1	U
4-Nitrophenol	8270D	µg/L	31	U

Table C-5 - Subarea 8 Field Blank Samples

		Sample Name:	FB-041113	
		Location:	FIELD BLANK	
		Sample Date:	04/11/2013	
		Sample Type:	FB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
4-Nitrotoluene	8330A	µg/L	1.2	UJ
Acenaphthene	8270D	µg/L	0.5	U
Acenaphthene	8270D SIM	µg/L	0.051	U
Acenaphthylene	8270D	µg/L	0.5	U
Acenaphthylene	8270D SIM	µg/L	0.051	U
Acetone	8260B	µg/L	20	U
Acrolein	8260B	µg/L	100	U
Acrylonitrile	8260B	µg/L	20	U
Aldrin	8081B	µg/L	0.0081	U
Alpha-Bhc	8081B	µg/L	0.0081	U
Aluminum	6010C	mg/L	0.4	U
Aniline	8270D	µg/L	1	U
Anthracene	8270D	µg/L	0.5	U
Anthracene	8270D SIM	µg/L	0.051	U
Antimony	6010C	mg/L	0.04	U
Aroclor 1016	8082A	µg/L	0.4	U
Aroclor 1221	8082A	µg/L	0.4	U
Aroclor 1232	8082A	µg/L	0.4	U
Aroclor 1242	8082A	µg/L	0.4	U
Aroclor 1248	8082A	µg/L	0.4	U
Aroclor 1254	8082A	µg/L	0.4	U
Aroclor 1260	8082A	µg/L	0.4	U
Aroclor 1262	8082A	µg/L	0.4	U
Aroclor 1268	8082A	µg/L	0.4	U
Aroclor 5432	8082A	µg/L	0.4	U
Aroclor 5442	8082A	µg/L	0.4	U
Aroclor 5460	8082A	µg/L	0.4	U
Arsenic	6010C	mg/L	0.04	U
Barium	6010C	mg/L	0.01	U
Benzene	8260B	µg/L	5	U
Benzidine	8270D	µg/L	61	U
Benzo(a)anthracene	8270D	µg/L	0.5	U
Benzo(a)anthracene	8270D SIM	µg/L	0.051	U
Benzo(a)pyrene	8270D	µg/L	0.5	U
Benzo(a)pyrene	8270D SIM	µg/L	0.051	U
Benzo(b)fluoranthene	8270D	µg/L	0.5	U
Benzo(b)fluoranthene	8270D SIM	µg/L	0.051	U
Benzo(e)pyrene	8270D SIM	µg/L	0.051	U
Benzo(g,h,i)perylene	8270D	µg/L	0.5	U
Benzo(g,h,i)perylene	8270D SIM	µg/L	0.051	U
Benzo(k)fluoranthene	8270D	µg/L	0.5	U
Benzo(k)fluoranthene	8270D SIM	µg/L	0.051	U
Benzoic Acid	8270D	µg/L	15	UJ
Benzyl Alcohol	8270D	µg/L	15	U
Beryllium	6010C	mg/L	0.01	U
Beta-Bhc	8081B	µg/L	0.0081	U
bis(2-chloroethoxy)methane	8270D	µg/L	1	U
bis(2-chloroethyl) ether	8270D	µg/L	1	U
bis(2-chloroisopropyl) ether	8270D	µg/L	1	U
Bis(2-ethylhexyl)phthalate	8270D	µg/L	5	U
Bis(2-ethylhexyl)phthalate	8270D SIM	µg/L	1	U
Boron	6010C	mg/L	0.1	U
Bromobenzene	8260B	µg/L	5	U
Bromochloromethane	8260B	µg/L	5	U
Bromodichloromethane	8260B	µg/L	5	U
Bromoform	8260B	µg/L	5	U
Bromomethane	8260B	µg/L	5	U
Butylbenzylphthalate	8270D	µg/L	5	U
Butylbenzylphthalate	8270D SIM	µg/L	1	U
Cadmium	6010C	mg/L	0.01	U
Calcium	6010C	mg/L	0.4	U
Carbazole	8270D	µg/L	1	U
Carbon Disulfide	8260B	µg/L	5	U
Carbon Tetrachloride	8260B	µg/L	5	U
Chlordane	8081B	µg/L	0.4	U
Chlorobenzene	8260B	µg/L	5	U
Chloroethane	8260B	µg/L	5	U
Chloroform	8260B	µg/L	5	U
Chloromethane	8260B	µg/L	5	U
Chlorotrifluoroethylene	8260B	µg/L	5	U
Chromium	6010C	mg/L	0.03	U
Chromium (Hexavalent Compounds)	7199	µg/L	10	U
Chrysene	8270D	µg/L	0.5	U
Chrysene	8270D SIM	µg/L	0.051	U
cis-1,2-Dichloroethene	8260B	µg/L	5	U
cis-1,3-Dichloropropene	8260B	µg/L	5	U
Cobalt	6010C	mg/L	0.01	U
Copper	6010C	mg/L	0.02	U
Cyanide	9012B	mg/L	0.01	U
Cymene	8260B	µg/L	5	U
Delta-Bhc	8081B	µg/L	0.0081	U
Di isopropyl Ether	8260B	µg/L	5	U
Dibenzo(a,h)anthracene	8270D	µg/L	0.5	U
Dibenzo(a,h)anthracene	8270D SIM	µg/L	0.051	U
Dibenzofuran	8270D	µg/L	1	U
Dibromochloromethane	8260B	µg/L	5	U
Dibromomethane	8260B	µg/L	5	U
Dicamba	8151A	µg/L	0.29	U
Dichlorodifluoromethane	8260B	µg/L	5	U
Dichlorprop	8151A	µg/L	0.49	U
Dieldrin	8081B	µg/L	0.016	U
Diethylene Glycol	8015C	mg/L	10	UJ
Diethylphthalate	8270D	µg/L	5	U
Diethylphthalate	8270D SIM	µg/L	0.18	J
Dimethylphthalate	8270D	µg/L	5	U
Dimethylphthalate	8270D SIM	µg/L	1	U
Di-n-butylphthalate	8270D	µg/L	5	U

Table C-5 - Subarea 8 Field Blank Samples

		Sample Name:	FB-041113	
		Location:	FIELD BLANK	
		Sample Date:	04/11/2013	
		Sample Type:	FB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
Di-n-butylphthalate	8270D SIM	µg/L	0.17	J
Dinitrobutyl Phenol	8151A	µg/L	0.49	U
Di-n-octylphthalate	8270D	µg/L	5	U
Di-n-octylphthalate	8270D SIM	µg/L	1	UJ
Diphenylamine	8270D	µg/L	5	U
EFH (C12-C14)	8015M	mg/L	0.57	U
EFH (C15-C20)	8015M	mg/L	0.57	U
EFH (C21-C30)	8015M	mg/L	0.57	U
EFH (C30-C40)	8015M	mg/L	0.57	U
EFH (C8-C11)	8015M	mg/L	0.57	UJ
Endosulfan I	8081B	µg/L	0.0081	U
Endosulfan II	8081B	µg/L	0.016	U
Endosulfan Sulfate	8081B	µg/L	0.016	U
Endrin	8081B	µg/L	0.016	U
Endrin Aldehyde	8081B	µg/L	0.081	U
Endrin Ketone	8081B	µg/L	0.016	U
Ethanol	8015C	µg/L	1000	UJ
Ethylbenzene	8260B	µg/L	5	U
Ethylene Glycol	8015C	mg/L	10	UJ
Fluoranthene	8270D	µg/L	0.5	U
Fluoranthene	8270D SIM	µg/L	0.051	U
Fluorene	8270D	µg/L	0.5	U
Fluorene	8270D SIM	µg/L	0.051	U
Fluoride	300.0	mg/L	0.1	U
Formaldehyde	8315A	µg/L	50	U
Gamma-Bhc (Lindane)	8081B	µg/L	0.0081	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U
Heptachlor	8081B	µg/L	0.0081	U
Heptachlor Epoxide	8081B	µg/L	0.0081	U
Hexachloro-1,3-butadiene	8260B	µg/L	5	U
Hexachlorobenzene	8270D	µg/L	0.5	U
Hexachlorobutadiene	8270D	µg/L	1	U
Hexachlorocyclopentadiene	8270D	µg/L	15	U
Hexachloroethane	8270D	µg/L	5	U
HMX	8330A	µg/L	2	UJ
Indeno(1,2,3-cd)pyrene	8270D	µg/L	0.5	U
Indeno(1,2,3-cd)pyrene	8270D SIM	µg/L	0.051	U
Iron	6010C	mg/L	0.4	U
Isophorone	8270D	µg/L	1	U
Isopropylbenzene	8260B	µg/L	5	U
Lead	6010C	mg/L	0.03	U
Lithium	6010C	mg/L	0.04	U
m,p-Xylene	8260B	µg/L	5	U
Magnesium	6010C	mg/L	0.2	U
Manganese	6010C	mg/L	0.01	U
MCPA	8151A	µg/L	200	U
MCPP	8151A	µg/L	200	U
M-Dinitrobenzene	8330A	µg/L	0.6	UJ
Mercury	7470A	mg/L	0.0002	U
Methanol	8015C	µg/L	1000	UJ
Methoxychlor	8081B	µg/L	0.081	U
Methyl Iodide	8260B	µg/L	5	U
Methyl Tert-Butyl Ether	8260B	µg/L	5	U
Methylene Chloride	8260B	µg/L	2	J
Mirex	8081B	µg/L	0.2	U
Molybdenum	6010C	mg/L	0.02	U
m-Terphenyl	8015B	mg/L	0.0048	U
Naphthalene	8270D	µg/L	0.2	J
Naphthalene	8270D SIM	µg/L	0.17	
n-Butylbenzene	8260B	µg/L	5	U
Nickel	6010C	mg/L	0.02	U
Nitrate	300.0	mg/L	0.1	U
Nitrite-NO2	300.0	mg/L	0.1	U
Nitrobenzene	8270D	µg/L	1	U
Nitrobenzene	8330A	µg/L	0.6	U
Nitroglycerin	8330A	µg/kg	100000000	UJ
N-Nitrosodimethylamine	8270D	µg/L	5	U
N-Nitrosodimethylamine	8270D SIM	µg/L	0.051	U
N-Nitroso-di-n-propylamine	8270D	µg/L	1	U
N-Nitrosodiphenylamine	8270D	µg/L	1	U
n-Propylbenzene	8260B	µg/L	5	U
OCDD	1613B	pg/L	19.5	U
OCDF	1613B	pg/L	19.5	U
o-Terphenyl	8015B	mg/L	0.0048	U
o-Xylene	8260B	µg/L	5	U
Pentachlorophenol	8270D	µg/L	5	U
Perchlorate	6850	µg/L	1	U
PETN	8330A	µg/kg	100000000	UJ
pH	9040C	pH	7.5	
Phenanthrene	8270D	µg/L	0.5	U
Phenanthrene	8270D SIM	µg/L	0.051	U
Phenol	8270D	µg/L	1	U
Phosphorus	6010C	mg/L	0.2	U
Potassium	6010C	mg/L	1	U
Propylene Glycol	8015C	mg/L	10	UJ
p-Terphenyl	8015B	mg/L	0.0048	U
Pyrene	8270D	µg/L	0.5	U
Pyrene	8270D SIM	µg/L	0.051	U
Pyridine	8270D	µg/L	5	U
RDX	8330A	µg/L	0.6	UJ
Selenium	6020A	mg/L	0.004	U
Silver	6020A	mg/L	0.001	U
Silvex (2,4,5-TP)	8151A	µg/L	0.049	U
Sodium	6010C	mg/L	2	U
Strontium	6020A	mg/L	0.002	U
Styrene	8260B	µg/L	5	U
TCDD TEQ	1613B	pg/L	0.082	

Table C-5 - Subarea 8 Field Blank Samples

		Sample Name:	FB-041113	
		Location:	FIELD BLANK	
		Sample Date:	04/11/2013	
		Sample Type:	FB	
		Lab:	LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer
Technical Toxaphene	8081B	µg/L	2.4	U
tert-Butyl ethyl ether	8260B	µg/L	5	U
tert-Butylbenzene	8260B	µg/L	5	U
Tertiary amyl methyl ether	8260B	µg/L	5	U
Tertiary butyl alcohol	8260B	µg/L	50	U
Tetrachloroethene	8260B	µg/L	5	U
Tetryl	8330A	µg/L	0.6	U
Thallium	6020A	mg/L	0.001	U
Tin	6010C	mg/L	0.04	U
Titanium	6010C	mg/L	0.02	U
Toluene	8260B	µg/L	5	U
trans-1,2-Dichloroethene	8260B	µg/L	5	U
trans-1,3-Dichloropropene	8260B	µg/L	5	U
Trichloroethene	8260B	µg/L	5	U
Trichlorofluoromethane	8260B	µg/L	5	U
Triethylene Glycol	8015C	mg/L	10	UJ
Vanadium	6010C	mg/L	0.01	U
Vinyl Acetate	8260B	µg/L	10	U
Vinyl Chloride	8260B	µg/L	5	U
Zinc	6010C	mg/L	0.04	U
Zirconium	6010C	mg/L	0.1	U

Notes:
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

Table C-6 - Subarea 5D Trip Blank Samples

		Sample Name:	TB-082613		TB-082913		TB-083013		TB-090313		TB-090413		TB-090513		TB-090613		TB-090913	
		Location:	5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB	
		Sample Date:	08/26/2013		08/29/2013		08/30/2013		09/03/2013		09/04/2013		09/05/2013		09/06/2013		09/09/2013	
		Sample Type:	TB		TB		TB		TB		TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL		LL		LL		LL		LL	
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	Concentration	Final Qualifer
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

Table C-6 - Subarea 5D Trip Blank Samples

		Sample Name:	TB-091013		TB-091113		TB-091213		TB-091613		TB-091713		TB-091813		TB-091913		TB-092313	
		Location:	5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB	
		Sample Date:	09/10/2013		09/11/2013		09/12/2013		09/16/2013		09/17/2013		09/18/2013		09/19/2013		09/23/2013	
		Sample Type:	TB		TB		TB		TB		TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL		LL		LL		LL		LL	
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	Concentration	Final Qualifer
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

Table C-6 - Subarea 5D Trip Blank Samples

		Sample Name:	TB-092413		TB-092513		TB-093013		TB-100113		TB-100313		TB-100713		TB-100813		TB1-092613	
		Location:	5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB	
		Sample Date:	09/24/2013		09/25/2013		09/30/2013		10/01/2013		10/03/2013		10/07/2013		10/08/2013		09/26/2013	
		Sample Type:	TB		TB		TB		TB		TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL		LL		LL		LL		LL	
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	Concentration	Final Qualifer
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

Table C-6 - Subarea 5D Trip Blank Samples

		Sample Name:	TB1-100213		TB1-111213		TB-111513		TB2-082813	
		Location:	5D_DG_TB		5D_DG_TB		5D_DG_TB		5D_DG_TB	
		Sample Date:	10/02/2013		11/12/2013		11/15/2013		08/28/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-070813		TB-070913		TB-071013		TB-071113	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/08/2013		07/09/2013		07/10/2013		07/11/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L					5	U	5	U
1,1,1-Trichloroethane	8260B	µg/L					5	U	5	U
1,1,2,2-Tetrachloroethane	8260B	µg/L					5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L					5	U	5	U
1,1,2-Trichloroethane	8260B	µg/L					5	U	5	U
1,1-Dichloroethane	8260B	µg/L					5	U	5	U
1,1-Dichloroethene	8260B	µg/L					5	U	5	U
1,1-Dichloropropene	8260B	µg/L					5	U	5	U
1,2,3-Trichlorobenzene	8260B	µg/L					5	U	5	U
1,2,3-Trichloropropane	8260B	µg/L					5	U	5	U
1,2,4-Trichlorobenzene	8260B	µg/L					5	U	5	U
1,2,4-Trimethylbenzene	8260B	µg/L					5	U	5	U
1,2-Dibromo-3-chloropropane	8260B	µg/L					5	U	5	U
1,2-Dibromoethane	8260B	µg/L					5	U	5	U
1,2-Dichlorobenzene	8260B	µg/L					5	U	5	U
1,2-Dichloroethane	8260B	µg/L					5	U	5	U
1,2-Dichloropropane	8260B	µg/L					5	U	5	U
1,3,5-Trimethylbenzene	8260B	µg/L					5	U	5	U
1,3-Dichlorobenzene	8260B	µg/L					5	U	5	U
1,3-Dichloropropane	8260B	µg/L					5	U	5	U
1,4-Dichlorobenzene	8260B	µg/L					5	U	5	U
1-Chlorohexane	8260B	µg/L					5	U	5	U
2,2-Dichloropropane	8260B	µg/L					5	U	5	U
2-Butanone (MEK)	8260B	µg/L					10	U	10	U
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L					5	U	5	U
2-Chloroethyl Vinyl Ether	8260B	µg/L					10	U	10	U
2-Chlorotoluene	8260B	µg/L					5	U	5	U
2-Hexanone	8260B	µg/L					10	U	10	U
2-Phenylbutane	8260B	µg/L					5	U	5	U
4-Chlorotoluene	8260B	µg/L					5	U	5	U
4-Methyl-2-pentanone (MIBK)	8260B	µg/L					10	U	10	U
Acetone	8260B	µg/L					20	U	20	U
Acrolein	8260B	µg/L					100	U	100	U
Acrylonitrile	8260B	µg/L					20	U	20	U
Benzene	8260B	µg/L					5	U	5	U
Bromobenzene	8260B	µg/L					5	U	5	U
Bromochloromethane	8260B	µg/L					5	U	5	U
Bromodichloromethane	8260B	µg/L					5	U	5	U
Bromoform	8260B	µg/L					5	U	5	U
Bromomethane	8260B	µg/L					5	U	5	U
Carbon Disulfide	8260B	µg/L					5	U	5	U
Carbon Tetrachloride	8260B	µg/L					5	U	5	U
Chlorobenzene	8260B	µg/L					5	U	5	U
Chloroethane	8260B	µg/L					5	U	5	U
Chloroform	8260B	µg/L					5	U	5	U
Chloromethane	8260B	µg/L					5	U	5	U
Chlorotrifluoroethylene	8260B	µg/L					5	U	5	U
cis-1,2-Dichloroethene	8260B	µg/L					5	U	5	U
cis-1,3-Dichloropropene	8260B	µg/L					5	U	5	U
Cymene	8260B	µg/L					5	U	5	U
Di isopropyl Ether	8260B	µg/L					5	U	5	U
Dibromochloromethane	8260B	µg/L					5	U	5	U
Dibromomethane	8260B	µg/L					5	U	5	U
Dichlorodifluoromethane	8260B	µg/L					5	U	5	U
Ethylbenzene	8260B	µg/L					5	U	5	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L					5	U	5	U
Isopropylbenzene	8260B	µg/L					5	U	5	U
m,p-Xylene	8260B	µg/L					5	U	5	U
Methyl Iodide	8260B	µg/L					5	U	5	U
Methyl Tert-Butyl Ether	8260B	µg/L					5	U	5	U
Methylene Chloride	8260B	µg/L					5	U	5	U
n-Butylbenzene	8260B	µg/L					5	U	5	U
n-Propylbenzene	8260B	µg/L					5	U	5	U
o-Xylene	8260B	µg/L					5	U	5	U
Styrene	8260B	µg/L					5	U	5	U
tert-Butyl ethyl ether	8260B	µg/L					5	U	5	U
tert-Butylbenzene	8260B	µg/L					5	U	5	U
Tertiary amyl methyl ether	8260B	µg/L					5	U	5	U
Tertiary butyl alcohol	8260B	µg/L					50	U	50	U
Tetrachloroethene	8260B	µg/L					5	U	5	U
Toluene	8260B	µg/L					5	U	5	U
trans-1,2-Dichloroethene	8260B	µg/L					5	U	5	U
trans-1,3-Dichloropropene	8260B	µg/L					5	U	5	U
Trichloroethene	8260B	µg/L					5	U	5	U
Trichlorofluoromethane	8260B	µg/L					5	U	5	U
Vinyl Acetate	8260B	µg/L					10	U	10	U
Vinyl Chloride	8260B	µg/L					5	U	5	U

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-071213		TB-071513		TB-071613		TB-071713	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/12/2013		07/15/2013		07/16/2013		07/17/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L					5	U	5	U
1,1,1-Trichloroethane	8260B	µg/L					5	U	5	U
1,1,2,2-Tetrachloroethane	8260B	µg/L					5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L					5	U	5	U
1,1,2-Trichloroethane	8260B	µg/L					5	U	5	U
1,1-Dichloroethane	8260B	µg/L					5	U	5	U
1,1-Dichloroethene	8260B	µg/L					5	U	5	U
1,1-Dichloropropene	8260B	µg/L					5	U	5	U
1,2,3-Trichlorobenzene	8260B	µg/L					5	U	5	U
1,2,3-Trichloropropane	8260B	µg/L					5	U	5	U
1,2,4-Trichlorobenzene	8260B	µg/L					5	U	5	U
1,2,4-Trimethylbenzene	8260B	µg/L					5	U	5	U
1,2-Dibromo-3-chloropropane	8260B	µg/L					5	U	5	U
1,2-Dibromoethane	8260B	µg/L					5	U	5	U
1,2-Dichlorobenzene	8260B	µg/L					5	U	5	U
1,2-Dichloroethane	8260B	µg/L					5	U	5	U
1,2-Dichloropropane	8260B	µg/L					5	U	5	U
1,3,5-Trimethylbenzene	8260B	µg/L					5	U	5	U
1,3-Dichlorobenzene	8260B	µg/L					5	U	5	U
1,3-Dichloropropane	8260B	µg/L					5	U	5	U
1,4-Dichlorobenzene	8260B	µg/L					5	U	5	U
1-Chlorohexane	8260B	µg/L					5	U	5	U
2,2-Dichloropropane	8260B	µg/L					5	U	5	U
2-Butanone (MEK)	8260B	µg/L					10	U	10	U
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L					5	U	5	U
2-Chloroethyl Vinyl Ether	8260B	µg/L					10	U	10	U
2-Chlorotoluene	8260B	µg/L					5	U	5	U
2-Hexanone	8260B	µg/L					10	U	10	U
2-Phenylbutane	8260B	µg/L					5	U	5	U
4-Chlorotoluene	8260B	µg/L					5	U	5	U
4-Methyl-2-pentanone (MIBK)	8260B	µg/L					10	U	10	U
Acetone	8260B	µg/L					20	U	20	U
Acrolein	8260B	µg/L					100	U	100	U
Acrylonitrile	8260B	µg/L					20	U	20	U
Benzene	8260B	µg/L					5	U	5	U
Bromobenzene	8260B	µg/L					5	U	5	U
Bromochloromethane	8260B	µg/L					5	U	5	U
Bromodichloromethane	8260B	µg/L					5	U	5	U
Bromoform	8260B	µg/L					5	U	5	U
Bromomethane	8260B	µg/L					5	U	5	U
Carbon Disulfide	8260B	µg/L					5	U	5	U
Carbon Tetrachloride	8260B	µg/L					5	U	5	U
Chlorobenzene	8260B	µg/L					5	U	5	U
Chloroethane	8260B	µg/L					5	U	5	U
Chloroform	8260B	µg/L					5	U	5	U
Chloromethane	8260B	µg/L					5	U	5	U
Chlorotrifluoroethylene	8260B	µg/L					5	UJ	5	UJ
cis-1,2-Dichloroethene	8260B	µg/L					5	U	5	U
cis-1,3-Dichloropropene	8260B	µg/L					5	U	5	U
Cymene	8260B	µg/L					5	U	5	U
Di isopropyl Ether	8260B	µg/L					5	U	5	U
Dibromochloromethane	8260B	µg/L					5	U	5	U
Dibromomethane	8260B	µg/L					5	U	5	U
Dichlorodifluoromethane	8260B	µg/L					5	U	5	U
Ethylbenzene	8260B	µg/L					5	U	5	U
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L					5	U	5	U
Isopropylbenzene	8260B	µg/L					5	U	5	U
m,p-Xylene	8260B	µg/L					5	U	5	U
Methyl Iodide	8260B	µg/L					5	U	5	U
Methyl Tert-Butyl Ether	8260B	µg/L					5	U	5	U
Methylene Chloride	8260B	µg/L					5	U	5	U
n-Butylbenzene	8260B	µg/L					5	U	5	U
n-Propylbenzene	8260B	µg/L					5	U	5	U
o-Xylene	8260B	µg/L					5	U	5	U
Styrene	8260B	µg/L					5	U	5	U
tert-Butyl ethyl ether	8260B	µg/L					5	U	5	U
tert-Butylbenzene	8260B	µg/L					5	U	5	U
Tertiary amyl methyl ether	8260B	µg/L					5	U	5	U
Tertiary butyl alcohol	8260B	µg/L					50	U	50	U
Tetrachloroethene	8260B	µg/L					5	U	5	U
Toluene	8260B	µg/L					5	U	5	U
trans-1,2-Dichloroethene	8260B	µg/L					5	U	5	U
trans-1,3-Dichloropropene	8260B	µg/L					5	U	5	U
Trichloroethene	8260B	µg/L					5	U	5	U
Trichlorofluoromethane	8260B	µg/L					5	U	5	U
Vinyl Acetate	8260B	µg/L					10	U	10	U
Vinyl Chloride	8260B	µg/L					5	U	5	U

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-071813		TB-071913		TB-072213		TB-072313	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/18/2013		07/19/2013		07/22/2013		07/23/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L	5	U						
1,1,1-Trichloroethane	8260B	µg/L	5	U						
1,1,2,2-Tetrachloroethane	8260B	µg/L	5	U						
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L	5	U						
1,1,2-Trichloroethane	8260B	µg/L	5	U						
1,1-Dichloroethane	8260B	µg/L	5	U						
1,1-Dichloroethene	8260B	µg/L	5	U						
1,1-Dichloropropene	8260B	µg/L	5	U						
1,2,3-Trichlorobenzene	8260B	µg/L	5	U						
1,2,3-Trichloropropane	8260B	µg/L	5	U						
1,2,4-Trichlorobenzene	8260B	µg/L	5	U						
1,2,4-Trimethylbenzene	8260B	µg/L	5	U						
1,2-Dibromo-3-chloropropane	8260B	µg/L	5	U						
1,2-Dibromoethane	8260B	µg/L	5	U						
1,2-Dichlorobenzene	8260B	µg/L	5	U						
1,2-Dichloroethane	8260B	µg/L	5	U						
1,2-Dichloropropane	8260B	µg/L	5	U						
1,3,5-Trimethylbenzene	8260B	µg/L	5	U						
1,3-Dichlorobenzene	8260B	µg/L	5	U						
1,3-Dichloropropane	8260B	µg/L	5	U						
1,4-Dichlorobenzene	8260B	µg/L	5	U						
1-Chlorohexane	8260B	µg/L	5	U						
2,2-Dichloropropane	8260B	µg/L	5	U						
2-Butanone (MEK)	8260B	µg/L	10	U						
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L	5	U						
2-Chloroethyl Vinyl Ether	8260B	µg/L	10	U						
2-Chlorotoluene	8260B	µg/L	5	U						
2-Hexanone	8260B	µg/L	10	U						
2-Phenylbutane	8260B	µg/L	5	U						
4-Chlorotoluene	8260B	µg/L	5	U						
4-Methyl-2-pentanone (MIBK)	8260B	µg/L	10	U						
Acetone	8260B	µg/L	20	U						
Acrolein	8260B	µg/L	100	U						
Acrylonitrile	8260B	µg/L	20	U						
Benzene	8260B	µg/L	5	U						
Bromobenzene	8260B	µg/L	5	U						
Bromochloromethane	8260B	µg/L	5	U						
Bromodichloromethane	8260B	µg/L	5	U						
Bromoform	8260B	µg/L	5	U						
Bromomethane	8260B	µg/L	5	U						
Carbon Disulfide	8260B	µg/L	5	U						
Carbon Tetrachloride	8260B	µg/L	5	U						
Chlorobenzene	8260B	µg/L	5	U						
Chloroethane	8260B	µg/L	5	U						
Chloroform	8260B	µg/L	5	U						
Chloromethane	8260B	µg/L	5	U						
Chlorotrifluoroethylene	8260B	µg/L	5	UJ						
cis-1,2-Dichloroethene	8260B	µg/L	5	U						
cis-1,3-Dichloropropene	8260B	µg/L	5	U						
Cymene	8260B	µg/L	5	U						
Di isopropyl Ether	8260B	µg/L	5	U						
Dibromochloromethane	8260B	µg/L	5	U						
Dibromomethane	8260B	µg/L	5	U						
Dichlorodifluoromethane	8260B	µg/L	5	U						
Ethylbenzene	8260B	µg/L	5	U						
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L	5	U						
Isopropylbenzene	8260B	µg/L	5	U						
m,p-Xylene	8260B	µg/L	5	U						
Methyl Iodide	8260B	µg/L	5	U						
Methyl Tert-Butyl Ether	8260B	µg/L	5	U						
Methylene Chloride	8260B	µg/L	5	U						
n-Butylbenzene	8260B	µg/L	5	U						
n-Propylbenzene	8260B	µg/L	5	U						
o-Xylene	8260B	µg/L	5	U						
Styrene	8260B	µg/L	5	U						
tert-Butyl ethyl ether	8260B	µg/L	5	U						
tert-Butylbenzene	8260B	µg/L	5	U						
Tertiary amyl methyl ether	8260B	µg/L	5	U						
Tertiary butyl alcohol	8260B	µg/L	50	U						
Tetrachloroethene	8260B	µg/L	5	U						
Toluene	8260B	µg/L	5	U						
trans-1,2-Dichloroethene	8260B	µg/L	5	U						
trans-1,3-Dichloropropene	8260B	µg/L	5	U						
Trichloroethene	8260B	µg/L	5	U						
Trichlorofluoromethane	8260B	µg/L	5	U						
Vinyl Acetate	8260B	µg/L	10	U						
Vinyl Chloride	8260B	µg/L	5	U						

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-072413		TB-072513		TB-072613		TB-073013	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/24/2013		07/25/2013		07/26/2013		07/30/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1-Chlorohexane	8260B	µg/L								
2,2-Dichloropropane	8260B	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Phenylbutane	8260B	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Benzene	8260B	µg/L								
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cymene	8260B	µg/L								
Di isopropyl Ether	8260B	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dichlorodifluoromethane	8260B	µg/L								
Ethylbenzene	8260B	µg/L								
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L								
Isopropylbenzene	8260B	µg/L								
m,p-Xylene	8260B	µg/L								
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
n-Butylbenzene	8260B	µg/L								
n-Propylbenzene	8260B	µg/L								
o-Xylene	8260B	µg/L								
Styrene	8260B	µg/L								
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-073113		TB-080113		TB-080213		TB-080513	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/31/2013		08/01/2013		08/02/2013		08/05/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1-Chlorohexane	8260B	µg/L								
2,2-Dichloropropane	8260B	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Phenylbutane	8260B	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Benzene	8260B	µg/L								
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cymene	8260B	µg/L								
Di isopropyl Ether	8260B	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dichlorodifluoromethane	8260B	µg/L								
Ethylbenzene	8260B	µg/L								
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L								
Isopropylbenzene	8260B	µg/L								
m,p-Xylene	8260B	µg/L								
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
n-Butylbenzene	8260B	µg/L								
n-Propylbenzene	8260B	µg/L								
o-Xylene	8260B	µg/L								
Styrene	8260B	µg/L								
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-080613		TB-080713		TB-080813		TB-080913	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	08/06/2013		08/07/2013		08/08/2013		08/09/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L	5	U						
1,1,1-Trichloroethane	8260B	µg/L	5	U						
1,1,2,2-Tetrachloroethane	8260B	µg/L	5	U						
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L	5	U						
1,1,2-Trichloroethane	8260B	µg/L	5	U						
1,1-Dichloroethane	8260B	µg/L	5	U						
1,1-Dichloroethene	8260B	µg/L	5	U						
1,1-Dichloropropene	8260B	µg/L	5	U						
1,2,3-Trichlorobenzene	8260B	µg/L	5	U						
1,2,3-Trichloropropane	8260B	µg/L	5	U						
1,2,4-Trichlorobenzene	8260B	µg/L	5	U						
1,2,4-Trimethylbenzene	8260B	µg/L	5	U						
1,2-Dibromo-3-chloropropane	8260B	µg/L	5	U						
1,2-Dibromoethane	8260B	µg/L	5	U						
1,2-Dichlorobenzene	8260B	µg/L	5	U						
1,2-Dichloroethane	8260B	µg/L	5	U						
1,2-Dichloropropane	8260B	µg/L	5	U						
1,3,5-Trimethylbenzene	8260B	µg/L	5	U						
1,3-Dichlorobenzene	8260B	µg/L	5	U						
1,3-Dichloropropane	8260B	µg/L	5	U						
1,4-Dichlorobenzene	8260B	µg/L	5	U						
1-Chlorohexane	8260B	µg/L	5	U						
2,2-Dichloropropane	8260B	µg/L	5	U						
2-Butanone (MEK)	8260B	µg/L	10	U						
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L	5	U						
2-Chloroethyl Vinyl Ether	8260B	µg/L	10	U						
2-Chlorotoluene	8260B	µg/L	5	U						
2-Hexanone	8260B	µg/L	10	U						
2-Phenylbutane	8260B	µg/L	5	U						
4-Chlorotoluene	8260B	µg/L	5	U						
4-Methyl-2-pentanone (MIBK)	8260B	µg/L	10	U						
Acetone	8260B	µg/L	20	U						
Acrolein	8260B	µg/L	100	U						
Acrylonitrile	8260B	µg/L	20	U						
Benzene	8260B	µg/L	5	U						
Bromobenzene	8260B	µg/L	5	U						
Bromochloromethane	8260B	µg/L	5	U						
Bromodichloromethane	8260B	µg/L	5	U						
Bromoform	8260B	µg/L	5	U						
Bromomethane	8260B	µg/L	5	U						
Carbon Disulfide	8260B	µg/L	5	U						
Carbon Tetrachloride	8260B	µg/L	5	U						
Chlorobenzene	8260B	µg/L	5	U						
Chloroethane	8260B	µg/L	5	U						
Chloroform	8260B	µg/L	5	U						
Chloromethane	8260B	µg/L	5	U						
Chlorotrifluoroethylene	8260B	µg/L	5	U						
cis-1,2-Dichloroethene	8260B	µg/L	5	U						
cis-1,3-Dichloropropene	8260B	µg/L	5	U						
Cymene	8260B	µg/L	5	U						
Di isopropyl Ether	8260B	µg/L	5	U						
Dibromochloromethane	8260B	µg/L	5	U						
Dibromomethane	8260B	µg/L	5	U						
Dichlorodifluoromethane	8260B	µg/L	5	U						
Ethylbenzene	8260B	µg/L	5	U						
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L	5	U						
Isopropylbenzene	8260B	µg/L	5	U						
m,p-Xylene	8260B	µg/L	5	U						
Methyl Iodide	8260B	µg/L	5	U						
Methyl Tert-Butyl Ether	8260B	µg/L	5	U						
Methylene Chloride	8260B	µg/L	5	U						
n-Butylbenzene	8260B	µg/L	5	U						
n-Propylbenzene	8260B	µg/L	5	U						
o-Xylene	8260B	µg/L	5	U						
Styrene	8260B	µg/L	5	U						
tert-Butyl ethyl ether	8260B	µg/L	5	U						
tert-Butylbenzene	8260B	µg/L	5	U						
Tertiary amyl methyl ether	8260B	µg/L	5	U						
Tertiary butyl alcohol	8260B	µg/L	50	U						
Tetrachloroethene	8260B	µg/L	5	U						
Toluene	8260B	µg/L	5	U						
trans-1,2-Dichloroethene	8260B	µg/L	5	U						
trans-1,3-Dichloropropene	8260B	µg/L	5	U						
Trichloroethene	8260B	µg/L	5	U						
Trichlorofluoromethane	8260B	µg/L	5	U						
Vinyl Acetate	8260B	µg/L	10	U						
Vinyl Chloride	8260B	µg/L	5	U						

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB-081213		TB-081313		TB-081413		TB-082713	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	08/12/2013		08/13/2013		08/14/2013		08/27/2013	
		Sample Type:	TB		TB		TB		TB	
		Lab:	LL		LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L								
1,1,1-Trichloroethane	8260B	µg/L								
1,1,2,2-Tetrachloroethane	8260B	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L								
1,1,2-Trichloroethane	8260B	µg/L								
1,1-Dichloroethane	8260B	µg/L								
1,1-Dichloroethene	8260B	µg/L								
1,1-Dichloropropene	8260B	µg/L								
1,2,3-Trichlorobenzene	8260B	µg/L								
1,2,3-Trichloropropane	8260B	µg/L								
1,2,4-Trichlorobenzene	8260B	µg/L								
1,2,4-Trimethylbenzene	8260B	µg/L								
1,2-Dibromo-3-chloropropane	8260B	µg/L								
1,2-Dibromoethane	8260B	µg/L								
1,2-Dichlorobenzene	8260B	µg/L								
1,2-Dichloroethane	8260B	µg/L								
1,2-Dichloropropane	8260B	µg/L								
1,3,5-Trimethylbenzene	8260B	µg/L								
1,3-Dichlorobenzene	8260B	µg/L								
1,3-Dichloropropane	8260B	µg/L								
1,4-Dichlorobenzene	8260B	µg/L								
1-Chlorohexane	8260B	µg/L								
2,2-Dichloropropane	8260B	µg/L								
2-Butanone (MEK)	8260B	µg/L								
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L								
2-Chloroethyl Vinyl Ether	8260B	µg/L								
2-Chlorotoluene	8260B	µg/L								
2-Hexanone	8260B	µg/L								
2-Phenylbutane	8260B	µg/L								
4-Chlorotoluene	8260B	µg/L								
4-Methyl-2-pentanone (MIBK)	8260B	µg/L								
Acetone	8260B	µg/L								
Acrolein	8260B	µg/L								
Acrylonitrile	8260B	µg/L								
Benzene	8260B	µg/L								
Bromobenzene	8260B	µg/L								
Bromochloromethane	8260B	µg/L								
Bromodichloromethane	8260B	µg/L								
Bromoform	8260B	µg/L								
Bromomethane	8260B	µg/L								
Carbon Disulfide	8260B	µg/L								
Carbon Tetrachloride	8260B	µg/L								
Chlorobenzene	8260B	µg/L								
Chloroethane	8260B	µg/L								
Chloroform	8260B	µg/L								
Chloromethane	8260B	µg/L								
Chlorotrifluoroethylene	8260B	µg/L								
cis-1,2-Dichloroethene	8260B	µg/L								
cis-1,3-Dichloropropene	8260B	µg/L								
Cymene	8260B	µg/L								
Di isopropyl Ether	8260B	µg/L								
Dibromochloromethane	8260B	µg/L								
Dibromomethane	8260B	µg/L								
Dichlorodifluoromethane	8260B	µg/L								
Ethylbenzene	8260B	µg/L								
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L								
Isopropylbenzene	8260B	µg/L								
m,p-Xylene	8260B	µg/L								
Methyl Iodide	8260B	µg/L								
Methyl Tert-Butyl Ether	8260B	µg/L								
Methylene Chloride	8260B	µg/L								
n-Butylbenzene	8260B	µg/L								
n-Propylbenzene	8260B	µg/L								
o-Xylene	8260B	µg/L								
Styrene	8260B	µg/L								
tert-Butyl ethyl ether	8260B	µg/L								
tert-Butylbenzene	8260B	µg/L								
Tertiary amyl methyl ether	8260B	µg/L								
Tertiary butyl alcohol	8260B	µg/L								
Tetrachloroethene	8260B	µg/L								
Toluene	8260B	µg/L								
trans-1,2-Dichloroethene	8260B	µg/L								
trans-1,3-Dichloropropene	8260B	µg/L								
Trichloroethene	8260B	µg/L								
Trichlorofluoromethane	8260B	µg/L								
Vinyl Acetate	8260B	µg/L								
Vinyl Chloride	8260B	µg/L								

Notes:
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

Table C-7 - Subarea 8 Trip Blank Samples

		Sample Name:	TB1-072913		TB1-082813		TB2-092613	
		Location:	8_DG_TB		8_DG_TB		8_DG_TB	
		Sample Date:	07/29/2013		08/28/2013		09/26/2013	
		Sample Type:	TB		TB		TB	
		Lab:	LL		LL		LL	
Analyte	Analytic Method	Units	Concentration	Final Qualifer	Concentration	Final Qualifer	Concentration	Final Qualifer
1,1,1,2-Tetrachloroethane	8260B	µg/L						
1,1,1-Trichloroethane	8260B	µg/L						
1,1,2,2-Tetrachloroethane	8260B	µg/L						
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B	µg/L						
1,1,2-Trichloroethane	8260B	µg/L						
1,1-Dichloroethane	8260B	µg/L						
1,1-Dichloroethene	8260B	µg/L						
1,1-Dichloropropene	8260B	µg/L						
1,2,3-Trichlorobenzene	8260B	µg/L						
1,2,3-Trichloropropane	8260B	µg/L						
1,2,4-Trichlorobenzene	8260B	µg/L						
1,2,4-Trimethylbenzene	8260B	µg/L						
1,2-Dibromo-3-chloropropane	8260B	µg/L						
1,2-Dibromoethane	8260B	µg/L						
1,2-Dichlorobenzene	8260B	µg/L						
1,2-Dichloroethane	8260B	µg/L						
1,2-Dichloropropane	8260B	µg/L						
1,3,5-Trimethylbenzene	8260B	µg/L						
1,3-Dichlorobenzene	8260B	µg/L						
1,3-Dichloropropane	8260B	µg/L						
1,4-Dichlorobenzene	8260B	µg/L						
1-Chlorohexane	8260B	µg/L						
2,2-Dichloropropane	8260B	µg/L						
2-Butanone (MEK)	8260B	µg/L						
2-Chloro-1,1,1-trifluoroethane	8260B	µg/L						
2-Chloroethyl Vinyl Ether	8260B	µg/L						
2-Chlorotoluene	8260B	µg/L						
2-Hexanone	8260B	µg/L						
2-Phenylbutane	8260B	µg/L						
4-Chlorotoluene	8260B	µg/L						
4-Methyl-2-pentanone (MIBK)	8260B	µg/L						
Acetone	8260B	µg/L						
Acrolein	8260B	µg/L						
Acrylonitrile	8260B	µg/L						
Benzene	8260B	µg/L						
Bromobenzene	8260B	µg/L						
Bromochloromethane	8260B	µg/L						
Bromodichloromethane	8260B	µg/L						
Bromoform	8260B	µg/L						
Bromomethane	8260B	µg/L						
Carbon Disulfide	8260B	µg/L						
Carbon Tetrachloride	8260B	µg/L						
Chlorobenzene	8260B	µg/L						
Chloroethane	8260B	µg/L						
Chloroform	8260B	µg/L						
Chloromethane	8260B	µg/L						
Chlorotrifluoroethylene	8260B	µg/L						
cis-1,2-Dichloroethene	8260B	µg/L						
cis-1,3-Dichloropropene	8260B	µg/L						
Cymene	8260B	µg/L						
Di isopropyl Ether	8260B	µg/L						
Dibromochloromethane	8260B	µg/L						
Dibromomethane	8260B	µg/L						
Dichlorodifluoromethane	8260B	µg/L						
Ethylbenzene	8260B	µg/L						
Gasoline Range Organics (C5-C12)	8015M	µg/L	50	U	50	U	50	U
Hexachloro-1,3-butadiene	8260B	µg/L						
Isopropylbenzene	8260B	µg/L						
m,p-Xylene	8260B	µg/L						
Methyl Iodide	8260B	µg/L						
Methyl Tert-Butyl Ether	8260B	µg/L						
Methylene Chloride	8260B	µg/L						
n-Butylbenzene	8260B	µg/L						
n-Propylbenzene	8260B	µg/L						
o-Xylene	8260B	µg/L						
Styrene	8260B	µg/L						
tert-Butyl ethyl ether	8260B	µg/L						
tert-Butylbenzene	8260B	µg/L						
Tertiary amyl methyl ether	8260B	µg/L						
Tertiary butyl alcohol	8260B	µg/L						
Tetrachloroethene	8260B	µg/L						
Toluene	8260B	µg/L						
trans-1,2-Dichloroethene	8260B	µg/L						
trans-1,3-Dichloropropene	8260B	µg/L						
Trichloroethene	8260B	µg/L						
Trichlorofluoromethane	8260B	µg/L						
Vinyl Acetate	8260B	µg/L						
Vinyl Chloride	8260B	µg/L						

Notes:
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

				Location	5D_DG-504		5D_DG-504		RPD
				Sample Name:	SL-804-SA5D-SB-4.0-5.0		SL-504-SA5D-SB-4.0-5.0		
				Sample Date	09/17/2013		09/17/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.018	UJ	0.0133	J	200.00
Metals	Aluminum	7429-90-5	6010C	mg/kg	28600	J	32000	J	11.22
Metals	Antimony	7440-36-0	6010C	mg/kg	4.46	UJ	4.45	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	7.15		7.48		4.51
Metals	Barium	7440-39-3	6010C	mg/kg	127	J	111	J	13.45
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.862	J	1.04	J	18.72
Metals	Boron	7440-42-8	6010C	mg/kg	10.5	J	8.9	J	16.49
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.11	U	1.11	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	65200	J	36200	J	57.20
Metals	Chromium	7440-47-3	6010C	mg/kg	33.4	J	35.6	J	6.38
Metals	Cobalt	7440-48-4	6010C	mg/kg	8.27	J	8.09	J	2.20
Metals	Copper	7440-50-8	6010C	mg/kg	16.5		16		3.08
Metals	Iron	7439-89-6	6010C	mg/kg	29400	J	32700	J	10.63
Metals	Lead	7439-92-1	6010C	mg/kg	9.49		9.51		0.21
Metals	Lithium	7439-93-2	6010C	mg/kg	25.9		26.7		3.04
Metals	Magnesium	7439-95-4	6010C	mg/kg	6460	J	6260	J	3.14
Metals	Manganese	7439-96-5	6010C	mg/kg	368	J	291	J	23.37
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.23	UJ	2.22	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	16.8	J	20.8	J	21.28
Metals	Phosphorus	7723-14-0	6010C	mg/kg	271		176		42.51
Metals	Potassium	7440-09-7	6010C	mg/kg	3190	J	2780	J	13.74
Metals	Selenium	7782-49-2	6020A	mg/kg	0.127	J	0.445	UJ	200.00
Metals	Silver	7440-22-4	6020A	mg/kg	0.0665	J	0.0832	J	22.31
Metals	Sodium	7440-23-5	6010C	mg/kg	610		700		13.74
Metals	Strontium	7440-24-6	6020A	mg/kg	83.7		55.8		40.00
Metals	Thallium	7440-28-0	6020A	mg/kg	0.467	J	0.333	J	33.50
Metals	Tin	7440-31-5	6010C	mg/kg	11.1	U	11.1	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1360		1260		7.63
Metals	Vanadium	7440-62-2	6010C	mg/kg	63.6		65		2.18
Metals	Zinc	7440-66-6	6010C	mg/kg	60.8		59.2		2.67
Metals	Zirconium	7440-67-7	6010C	mg/kg	3.33	J	3.53	J	5.83
Moisture Content	Moisture	MOIST	160.3M	%	12		12.7		5.67
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	UJ	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	38	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	38	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	38	U	--

				Location	5D_DG-504		5D_DG-504		RPD
				Sample Name:	SL-804-SA5D-SB-4.0-5.0		SL-504-SA5D-SB-4.0-5.0		
				Sample Date	09/17/2013		09/17/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.38		8.17		2.54
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.7	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.7	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.7	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.6	U	5.7	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1	U	--

Notes:
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 only were estimated "J"

				Location	5D_DG-515		5D_DG-515		RPD
				Sample Name:	SL-815-SA5D-SB-0.0-0.5		SL-515-SA5D-SB-0.0-0.5		
				Sample Date	09/09/2013		09/09/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	0.529	J	0.403	J	27.04
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	0.196	J	0.159	J	20.85
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.4	U	5.24	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.061	J	5.24	UJ	200.00
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	0.194	J	0.0599	J	105.63
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.151	J	5.24	UJ	200.00
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.101	J	5.24	UJ	200.00
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.133	J	0.0862	J	42.70
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.192	J	0.174	J	9.84
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.4	UJ	0.156	J	200.00
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.4	UJ	0.0657	J	200.00
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.4	UJ	5.24	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.112	J	5.24	UJ	200.00
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.08	U	1.05	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.08	U	1.05	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	3.63	J	3.47	J	4.51
Dioxins	OCDF	39001-02-0	1613B	ng/kg	10.8	U	10.5	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.0229		0.00518		126.21
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	1	J	0.91	J	9.42
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0178	U	0.0176	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	24600		24700		0.41
Metals	Antimony	7440-36-0	6010C	mg/kg	1.25	J	1.25	J	0.00
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.34		5.42		1.49
Metals	Barium	7440-39-3	6010C	mg/kg	100		102		1.98
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.829	J	0.841	J	1.44
Metals	Boron	7440-42-8	6010C	mg/kg	19.1		20.1		5.10
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.648	J	0.623	J	3.93
Metals	Calcium	7440-70-2	6010C	mg/kg	37200		45600		20.29
Metals	Chromium	7440-47-3	6010C	mg/kg	33.8	J	34.7	J	2.63
Metals	Cobalt	7440-48-4	6010C	mg/kg	9.08	J	9.13	J	0.55
Metals	Copper	7440-50-8	6010C	mg/kg	17.6		17.6		0.00
Metals	Iron	7439-89-6	6010C	mg/kg	31800		33100		4.01
Metals	Lead	7439-92-1	6010C	mg/kg	9.96		9.92		0.40
Metals	Lithium	7439-93-2	6010C	mg/kg	23.6		23.8		0.84
Metals	Magnesium	7439-95-4	6010C	mg/kg	7620		7600		0.26
Metals	Manganese	7439-96-5	6010C	mg/kg	424		421		0.71
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.12	UJ	2.14	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	18.4		18.4		0.00
Metals	Phosphorus	7723-14-0	6010C	mg/kg	737		720		2.33
Metals	Potassium	7440-09-7	6010C	mg/kg	7150		6910		3.41
Metals	Selenium	7782-49-2	6020A	mg/kg	0.346	J	0.327	J	5.65
Metals	Silver	7440-22-4	6020A	mg/kg	0.0321	J	0.0315	J	1.89
Metals	Sodium	7440-23-5	6010C	mg/kg	109		111		1.82
Metals	Strontium	7440-24-6	6020A	mg/kg	82.8	J	89.4	J	7.67
Metals	Thallium	7440-28-0	6020A	mg/kg	0.356		0.329		7.88
Metals	Tin	7440-31-5	6010C	mg/kg	10.6	U	10.7	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1250		1250		0.00
Metals	Vanadium	7440-62-2	6010C	mg/kg	64.7	J	65.9	J	1.84
Metals	Zinc	7440-66-6	6010C	mg/kg	81.2		81.6		0.49
Metals	Zirconium	7440-67-7	6010C	mg/kg	1.93	J	2.64	J	31.07
Moisture Content	Moisture	MOIST	160.3M	%	7.7		9.2		17.75
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.4	J	1.5	J	6.90
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.5	J	1.2	J	22.22
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	0.89	J	1.8	UJ	200.00
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.8	UJ	1.8	UJ	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	0.81	J	1.8	UJ	200.00
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	36	U	36	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	36	U	36	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	36	U	36	U	--

				Location	5D_DG-515		5D_DG-515		RPD
				Sample Name:	SL-815-SA5D-SB-0.0-0.5		SL-515-SA5D-SB-0.0-0.5		
				Sample Date	09/09/2013		09/09/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	0.58	J	0.65	J	11.38
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	2.1	U	2.1	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	18	U	19	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	2	U	2	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.9	U	0.91	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	7.3	U	7.4	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	36	U	36	U	--
pH	pH	pH	9045M	pH	8.05		7.6		5.75
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.4	U	5.5	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.4	U	5.5	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.4	U	5.5	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	10	J	5.5	J	58.06
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	22	J	11	J	66.67
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-516		5D_DG-516		RPD
				Sample Name:	SL-816-SA5D-SB-4.0-5.0		SL-516-SA5D-SB-4.0-5.0		
				Sample Date	11/15/2013		11/15/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.44	U	5.44	U	--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.195	J	0.0446	J	125.54
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.222	J	0.146	J	41.30
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.44	U	5.44	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.172	J	0.0967	J	56.05
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.44	UJ	5.44	UJ	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.09	UJ	1.09	UJ	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.09	UJ	1.09	UJ	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	10.9	UJ	10.9	UJ	--
Dioxins	OCDF	39001-02-0	1613B	ng/kg	10.9	U	10.9	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.236		0.0352		148.08
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	99	U	99	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.9	U	1.9	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	40	U	40	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	19	U	19	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	13	U	13	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	19	U	19	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2700	U	2800	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2700	U	2800	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.9	U	1.9	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg	0.16	J	0.44	UJ	200.00
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0283		0.0337		17.42
Metals	Aluminum	7429-90-5	6010C	mg/kg	24400	J	26200	J	7.11
Metals	Antimony	7440-36-0	6010C	mg/kg	4.32	UJ	4.38	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	7.34		7.49		2.02
Metals	Barium	7440-39-3	6010C	mg/kg	106	J	136	J	24.79
Metals	Beryllium	7440-41-7	6010C	mg/kg	1.01	J	0.984	J	2.61
Metals	Boron	7440-42-8	6010C	mg/kg	1.71	J	2.58	J	40.56
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.08	U	1.09	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	3670	J	4330	J	16.50
Metals	Chromium	7440-47-3	6010C	mg/kg	25.6		25.2		1.57
Metals	Cobalt	7440-48-4	6010C	mg/kg	6.98		7.02		0.57
Metals	Copper	7440-50-8	6010C	mg/kg	11.4		12.1		5.96
Metals	Iron	7439-89-6	6010C	mg/kg	26500		25400		4.24
Metals	Lead	7439-92-1	6010C	mg/kg	8.66		7.84		9.94
Metals	Lithium	7439-93-2	6010C	mg/kg	19		20.5		7.59
Metals	Magnesium	7439-95-4	6010C	mg/kg	5110		4960		2.98
Metals	Manganese	7439-96-5	6010C	mg/kg	243	J	425	J	54.49
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.16	UJ	2.19	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	12.9		14.3		10.29
Metals	Phosphorus	7723-14-0	6010C	mg/kg	124		132		6.25
Metals	Potassium	7440-09-7	6010C	mg/kg	2270		2220		2.23
Metals	Selenium	7782-49-2	6020A	mg/kg	0.147	J	0.167	J	12.74
Metals	Silver	7440-22-4	6020A	mg/kg	0.216	U	0.219	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	539		481		11.37
Metals	Strontium	7440-24-6	6020A	mg/kg	25.9	J	27.8	J	7.08
Metals	Thallium	7440-28-0	6020A	mg/kg	0.216	U	0.219	U	--
Metals	Tin	7440-31-5	6010C	mg/kg	10.8	U	10.9	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1050		1140		8.22
Metals	Vanadium	7440-62-2	6010C	mg/kg	48.6		49.7		2.24
Metals	Zinc	7440-66-6	6010C	mg/kg	51.9		48.1		7.60
Metals	Zirconium	7440-67-7	6010C	mg/kg	5.1	J	4.99	J	2.18
Moisture Content	Moisture	MOIST	160.3M	%	10.2		9.5		7.11
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	36	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	36	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	36	U	--

				Location	5D_DG-516		5D_DG-516		RPD
				Sample Name:	SL-816-SA5D-SB-4.0-5.0		SL-516-SA5D-SB-4.0-5.0		
				Sample Date	11/15/2013		11/15/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.32		7.79		6.58
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.5	U	5.5	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.5	U	5.5	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.5	U	5.5	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.5	U	5.5	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.2	UJ	1.2	UJ	--

Notes:
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 only were estimated "J"

				Location	5D_DG-524		5D_DG-524		RPD
				Sample Name:	SL-824-SA5D-SB-5.5-6.5		SL-524-SA5D-SB-5.5-6.5		
				Sample Date	09/04/2013		09/04/2013		
				Start Depth:	5.5		5.5		
				End Depth:	6.5		6.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	96	U	96	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.8	U	1.8	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	38	U	39	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	18	U	18	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	13	U	13	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	18	U	18	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	26	U	26	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2700	U	2700	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2700	U	2700	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.8	U	1.8	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0172	UJ	0.113	J	200.00
Metals	Aluminum	7429-90-5	6010C	mg/kg	12800		13100		2.32
Metals	Antimony	7440-36-0	6010C	mg/kg	4.22	UJ	4.28	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.01		4.02	J	21.93
Metals	Barium	7440-39-3	6010C	mg/kg	84		76.5		9.35
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.453	J	0.449	J	0.89
Metals	Boron	7440-42-8	6010C	mg/kg	22.1		22.7		2.68
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.427	J	0.456	J	6.57
Metals	Calcium	7440-70-2	6010C	mg/kg	3230		3180		1.56
Metals	Chromium	7440-47-3	6010C	mg/kg	17		17.1		0.59
Metals	Cobalt	7440-48-4	6010C	mg/kg	3.99		3.69		7.81
Metals	Copper	7440-50-8	6010C	mg/kg	10.5		10.1		3.88
Metals	Iron	7439-89-6	6010C	mg/kg	20800		20000		3.92
Metals	Lead	7439-92-1	6010C	mg/kg	3.96		4.53		13.43
Metals	Lithium	7439-93-2	6010C	mg/kg	24.5		21.8		11.66
Metals	Magnesium	7439-95-4	6010C	mg/kg	4660		4290		8.27
Metals	Manganese	7439-96-5	6010C	mg/kg	225	J	182	J	21.13
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.11	U	2.14	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	9.18		8.39		8.99
Metals	Phosphorus	7723-14-0	6010C	mg/kg	351		305		14.02
Metals	Potassium	7440-09-7	6010C	mg/kg	1850		1690		9.04
Metals	Selenium	7782-49-2	6020A	mg/kg	0.422	U	0.428	U	--
Metals	Silver	7440-22-4	6020A	mg/kg	0.0687	J	0.0657	J	4.46
Metals	Sodium	7440-23-5	6010C	mg/kg	141		160		12.62
Metals	Strontium	7440-24-6	6020A	mg/kg	32.2		25.3		24.00
Metals	Thallium	7440-28-0	6020A	mg/kg	0.328		0.233		33.87
Metals	Tin	7440-31-5	6010C	mg/kg	10.6	U	10.7	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1310		1250		4.69
Metals	Vanadium	7440-62-2	6010C	mg/kg	36.4		35.6		2.22
Metals	Zinc	7440-66-6	6010C	mg/kg	51.8		47.3		9.08
Metals	Zirconium	7440-67-7	6010C	mg/kg	4.05	J	4.01	J	0.99
Moisture Content	Moisture	MOIST	160.3M	%	7.1		6.6		7.30
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.8	UJ	0.84	J	200.00
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	35	U	35	U	--

				Location	5D_DG-524		5D_DG-524		RPD
				Sample Name:	SL-824-SA5D-SB-5.5-6.5		SL-524-SA5D-SB-5.5-6.5		
				Sample Date	09/04/2013		09/04/2013		
				Start Depth:	5.5		5.5		
				End Depth:	6.5		6.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.8	UJ	1.6	J	200.00
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	2	U	2	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	18	U	18	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.89	U	0.89	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	7.2	U	7.2	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	36	U	35	U	--
pH	pH	pH	9045M	pH	7.78		7.74		0.52
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.3	U	5.3	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.3	U	5.3	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.3	U	5.3	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.3	U	5.3	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1.1	U	--

Notes:
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 only were estimated "J"

				Location	5D_DG-535		5D_DG-535		RPD
				Sample Name:	SL-835-SA5D-SB-0.0-0.5		SL-535-SA5D-SB-0.0-0.5		
				Sample Date	08/30/2013		08/30/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	6.88	J	4.97	UJ	200.00
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	0.465	J	0.0152	J	187.34
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	4.94	U	4.97	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.169	J	0.0481	J	111.38
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	4.94	U	4.97	U	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.597	J	0.0385	J	175.77
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	4.94	UJ	4.97	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.996	J	4.97	UJ	200.00
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.502	J	4.97	UJ	200.00
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	4.94	UJ	4.97	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.332	J	4.97	UJ	200.00
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.103	J	4.97	UJ	200.00
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	4.94	UJ	4.97	UJ	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.114	J	0.994	UJ	200.00
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.989	U	0.994	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	111	J	1.32	J	195.30
Dioxins	OCDF	39001-02-0	1613B	ng/kg	1.33	J	9.94	UJ	200.00
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.398		0.0103		189.91
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0169	U	0.0172	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	19000		16900		11.70
Metals	Antimony	7440-36-0	6010C	mg/kg	1.78	J	2.02	J	12.63
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.91		8.27		33.29
Metals	Barium	7440-39-3	6010C	mg/kg	116		124		6.67
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.711	J	0.804	J	12.28
Metals	Boron	7440-42-8	6010C	mg/kg	7	J	7.59	J	8.09
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.513	J	0.485	J	5.61
Metals	Calcium	7440-70-2	6010C	mg/kg	2860		3560		21.81
Metals	Chromium	7440-47-3	6010C	mg/kg	25.3		25.5		0.79
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.13		8.97		22.86
Metals	Copper	7440-50-8	6010C	mg/kg	13.4		14.3		6.50
Metals	Iron	7439-89-6	6010C	mg/kg	25000		31600		23.32
Metals	Lead	7439-92-1	6010C	mg/kg	7.49		9.6		24.69
Metals	Lithium	7439-93-2	6010C	mg/kg	24.3		39.6		47.89
Metals	Magnesium	7439-95-4	6010C	mg/kg	4690		5960		23.85
Metals	Manganese	7439-96-5	6010C	mg/kg	381		418		9.26
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.01	U	2.04	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	15.4		16.2		5.06
Metals	Phosphorus	7723-14-0	6010C	mg/kg	415		534		25.08
Metals	Potassium	7440-09-7	6010C	mg/kg	3970	J	2860	J	32.50
Metals	Selenium	7782-49-2	6020A	mg/kg	0.219	J	0.193	J	12.62
Metals	Silver	7440-22-4	6020A	mg/kg	0.201	U	0.204	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	90.8	J	160	J	55.18
Metals	Strontium	7440-24-6	6020A	mg/kg	22.2		21.7		2.28
Metals	Thallium	7440-28-0	6020A	mg/kg	0.282		0.318		12.00
Metals	Tin	7440-31-5	6010C	mg/kg	10	U	10.2	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1370		1620		16.72
Metals	Vanadium	7440-62-2	6010C	mg/kg	46		49.7		7.73
Metals	Zinc	7440-66-6	6010C	mg/kg	61.6		77.4		22.73
Metals	Zirconium	7440-67-7	6010C	mg/kg	5.02	UJ	2.11	J	200.00
Moisture Content	Moisture	MOIST	160.3M	%	2.3		3.7		46.67
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.1	J	1.7	UJ	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	J	1.7	UJ	200.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	17	U	17	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	0.63	J	1.7	UJ	200.00
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	0.85	J	1.7	UJ	200.00
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.3	J	1.7	UJ	200.00
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	0.74	J	1.7	UJ	200.00
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	0.81	J	1.7	UJ	200.00
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	34	U	34	U	--

				Location	5D_DG-535		5D_DG-535		RPD
				Sample Name:	SL-835-SA5D-SB-0.0-0.5		SL-535-SA5D-SB-0.0-0.5		
				Sample Date	08/30/2013		08/30/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	1.9	U	2	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	17	U	17	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.84	U	0.85	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	6.8	U	6.9	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	33	U	34	U	--
pH	pH	pH	9045M	pH	6.44		6.34		1.56
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.1	U	5.2	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.1	U	5.2	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.1	U	5.2	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	4.7	J	5.2	UJ	200.00
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	9	J	10	UJ	200.00
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-550		5D_DG-550		RPD
				Sample Name:	SL-850-SA5D-SB-4.0-5.0		SL-550-SA5D-SB-4.0-5.0		
				Sample Date	09/06/2013		09/06/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0182	U	0.0185	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	24600		22600		8.47
Metals	Antimony	7440-36-0	6010C	mg/kg	4.34	UJ	4.33	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	6.06		5.72		5.77
Metals	Barium	7440-39-3	6010C	mg/kg	115		113		1.75
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.925	J	0.865	J	6.70
Metals	Boron	7440-42-8	6010C	mg/kg	5.46	J	4.63	J	16.45
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.0934	J	0.119	J	24.11
Metals	Calcium	7440-70-2	6010C	mg/kg	3570		3350		6.36
Metals	Chromium	7440-47-3	6010C	mg/kg	35.2	J	31.4	J	11.41
Metals	Cobalt	7440-48-4	6010C	mg/kg	8.55	J	8.28	J	3.21
Metals	Copper	7440-50-8	6010C	mg/kg	14.1		13.8		2.15
Metals	Iron	7439-89-6	6010C	mg/kg	28200		29400		4.17
Metals	Lead	7439-92-1	6010C	mg/kg	8.02		7.37		8.45
Metals	Lithium	7439-93-2	6010C	mg/kg	30.2		28.8		4.75
Metals	Magnesium	7439-95-4	6010C	mg/kg	6830		6460		5.57
Metals	Manganese	7439-96-5	6010C	mg/kg	387		359		7.51
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.17	U	2.17	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	18.8		18.1		3.79
Metals	Phosphorus	7723-14-0	6010C	mg/kg	390	J	344	J	12.53
Metals	Potassium	7440-09-7	6010C	mg/kg	3660	J	3430	J	6.49
Metals	Selenium	7782-49-2	6020A	mg/kg	0.135	J	0.142	J	5.05
Metals	Silver	7440-22-4	6020A	mg/kg	0.036	J	0.0367	J	1.93
Metals	Sodium	7440-23-5	6010C	mg/kg	108	J	99	J	8.70
Metals	Strontium	7440-24-6	6020A	mg/kg	28.3		28.2		0.35
Metals	Thallium	7440-28-0	6020A	mg/kg	0.29		0.295		1.71
Metals	Tin	7440-31-5	6010C	mg/kg	10.9	U	10.8	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1240		1010		20.44
Metals	Vanadium	7440-62-2	6010C	mg/kg	63.8		56.8		11.61
Metals	Zinc	7440-66-6	6010C	mg/kg	62.1		62.3		0.32
Metals	Zirconium	7440-67-7	6010C	mg/kg	8.09		7.16		12.20
Moisture Content	Moisture	MOIST	160.3M	%	10.6		10.4		1.90
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--

				Location	5D_DG-550		5D_DG-550		RPD
				Sample Name:	SL-850-SA5D-SB-4.0-5.0		SL-550-SA5D-SB-4.0-5.0		
				Sample Date	09/06/2013		09/06/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.63		7.74		1.43
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.5	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.5	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.5	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.5	U	5.6	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	0.9	U	1	U	--

Notes:
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 only were estimated "J"

				Location	5D_DG-553		5D_DG-553		RPD
				Sample Name:	SL-853-SA5D-SB-0.0-0.5		SL-553-SA5D-SB-0.0-0.5		
				Sample Date	09/12/2013		09/12/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	6.28		9.2		37.73
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	1.28	J	1.59	J	21.60
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	4.89	U	5.03	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	4.89	U	5.03	U	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	0.352	J	0.251	J	33.50
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.577	J	0.581	J	0.69
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.271	J	5.03	U	200.00
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.649	J	0.585	J	10.37
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.559	J	0.471	J	17.09
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	4.89	U	5.03	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	4.89	U	5.03	U	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.38	J	0.207	J	58.94
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.223	J	0.195	J	13.40
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.977	U	1.01	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.127	J	1.01	UJ	200.00
Dioxins	OCDD	3268-87-9	1613B	ng/kg	86	J	150	J	54.24
Dioxins	OCDF	39001-02-0	1613B	ng/kg	3.29	J	4.59	J	32.99
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.263		0.288		9.07
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	0.86	J	0.8	J	7.23
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	91	U	91	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.7	U	1.7	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	36	U	37	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	17	UJ	17	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	12	U	12	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	17	U	17	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg			24	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2500	U	2500	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2500	U	2500	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.7	UJ	1.7	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg	0.24	J	0.2	J	18.18
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0215		0.0205		4.76
Metals	Aluminum	7429-90-5	6010C	mg/kg	16800		15900		5.50
Metals	Antimony	7440-36-0	6010C	mg/kg	3.94	UJ	4.02	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	3.83	J	3.46	J	10.15
Metals	Barium	7440-39-3	6010C	mg/kg	87.3		82.1		6.14
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.662	J	0.634	J	4.32
Metals	Boron	7440-42-8	6010C	mg/kg	3.06	J	3.72	J	19.47
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.363	J	0.32	J	12.59
Metals	Calcium	7440-70-2	6010C	mg/kg	4570		4450		2.66
Metals	Chromium	7440-47-3	6010C	mg/kg	30.3		29.1		4.04
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.28	J	6.45	J	12.09
Metals	Copper	7440-50-8	6010C	mg/kg	12.5		10.7		15.52
Metals	Iron	7439-89-6	6010C	mg/kg	27000		24500		9.71
Metals	Lead	7439-92-1	6010C	mg/kg	11.8		10.1		15.53
Metals	Lithium	7439-93-2	6010C	mg/kg	24.3		21.6		11.76
Metals	Magnesium	7439-95-4	6010C	mg/kg	5840		5370		8.39
Metals	Manganese	7439-96-5	6010C	mg/kg	386		358		7.53
Metals	Molybdenum	7439-98-7	6010C	mg/kg	1.97	U	2.01	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	12.7		11.6		9.05
Metals	Phosphorus	7723-14-0	6010C	mg/kg	579		586		1.20
Metals	Potassium	7440-09-7	6010C	mg/kg	4940		4690		5.19
Metals	Selenium	7782-49-2	6020A	mg/kg	0.284	J	0.232	J	20.16
Metals	Silver	7440-22-4	6020A	mg/kg	0.0309	J	0.0272	J	12.74
Metals	Sodium	7440-23-5	6010C	mg/kg	83.4	J	78.9	J	5.55
Metals	Strontium	7440-24-6	6020A	mg/kg	34.9	J	26.7	J	26.62
Metals	Thallium	7440-28-0	6020A	mg/kg	0.391	J	0.277	J	34.13
Metals	Tin	7440-31-5	6010C	mg/kg	9.85	U	10	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1090		1040		4.69
Metals	Vanadium	7440-62-2	6010C	mg/kg	53.6		51.4		4.19
Metals	Zinc	7440-66-6	6010C	mg/kg	67		60.3		10.53
Metals	Zirconium	7440-67-7	6010C	mg/kg	6.53		6.1		6.81
Moisture Content	Moisture	MOIST	160.3M	%	1.4		1.4		0.00
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.1	J	1.6	J	37.04
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.1	J	1.6	J	37.04
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	2.3		2.4		4.26
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	17	U	17	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1	J	1.2	J	18.18
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	0.77	J	1.2	J	43.65
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	17	J	18	UJ	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	2.2		2.7		20.41
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	2.3		3.2		32.73
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	0.72	J	0.9	J	22.22
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.4	J	2		35.29
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	2.2		3.2		37.04
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	33	U	33	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	33	U	33	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	33	U	33	U	--

				Location	5D_DG-553		5D_DG-553		RPD
				Sample Name:	SL-853-SA5D-SB-0.0-0.5		SL-553-SA5D-SB-0.0-0.5		
				Sample Date	09/12/2013		09/12/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg	5.1	U	5.1	U	--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.66		7.11		7.45
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.1	U	5.1	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.1	U	5.1	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	2.1	J	2.5	J	17.39
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	11		13	J	16.67
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	32		41		24.66
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-560		5D_DG-560		RPD
				Sample Name:	SL-860-SA5D-SB-4.0-5.0		SL-560-SA5D-SB-4.0-5.0		
				Sample Date	11/12/2013		11/12/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	94	U	93	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.8	U	1.8	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	38	U	37	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	18	U	18	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	13	U	12	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	18	U	18	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	25	U	25	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2600	U	2600	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2600	U	2600	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.8	U	1.8	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg	0.34	J	0.33	J	2.99
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0165	U	0.0168	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	13300	J	14400	J	7.94
Metals	Antimony	7440-36-0	6010C	mg/kg	4.01	UJ	4.01	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.98	J	5.64	J	5.85
Metals	Barium	7440-39-3	6010C	mg/kg	61.3		61.7		0.65
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.618	J	0.668	J	7.78
Metals	Boron	7440-42-8	6010C	mg/kg	1.94	J	1.9	J	2.08
Metals	Cadmium	7440-43-9	6010C	mg/kg	1	U	1	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	2770	J	2270	J	19.84
Metals	Chromium	7440-47-3	6010C	mg/kg	18.2	J	16.4	J	10.40
Metals	Cobalt	7440-48-4	6010C	mg/kg	3.53		3.18		10.43
Metals	Copper	7440-50-8	6010C	mg/kg	6.97	J	5.94	J	15.96
Metals	Iron	7439-89-6	6010C	mg/kg	21400	J	21200	J	0.94
Metals	Lead	7439-92-1	6010C	mg/kg	6.82	J	6.33	J	7.45
Metals	Lithium	7439-93-2	6010C	mg/kg	12.5		12.7		1.59
Metals	Magnesium	7439-95-4	6010C	mg/kg	3760	J	3520	J	6.59
Metals	Manganese	7439-96-5	6010C	mg/kg	160	J	148	J	7.79
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2	UJ	2	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	9.08		8.12		11.16
Metals	Phosphorus	7723-14-0	6010C	mg/kg	198	J	134	J	38.55
Metals	Potassium	7440-09-7	6010C	mg/kg	2510	J	2100	J	17.79
Metals	Selenium	7782-49-2	6020A	mg/kg	0.401	U	0.401	U	--
Metals	Silver	7440-22-4	6020A	mg/kg	0.2	U	0.2	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	136		132		2.99
Metals	Strontium	7440-24-6	6020A	mg/kg	14.4	J	13.2	J	8.70
Metals	Thallium	7440-28-0	6020A	mg/kg	0.291	J	0.224	J	26.02
Metals	Tin	7440-31-5	6010C	mg/kg	10	U	10	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1070		989		7.87
Metals	Vanadium	7440-62-2	6010C	mg/kg	32.7	J	33.1	J	1.22
Metals	Zinc	7440-66-6	6010C	mg/kg	49.9	J	45.6	J	9.01
Metals	Zirconium	7440-67-7	6010C	mg/kg	3.96	J	4.11	J	3.72
Moisture Content	Moisture	MOIST	160.3M	%	4		3.1		25.35
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	34	U	34	U	--

				Location	5D_DG-560		5D_DG-560		RPD
				Sample Name:	SL-860-SA5D-SB-4.0-5.0		SL-560-SA5D-SB-4.0-5.0		
				Sample Date	11/12/2013		11/12/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.5		7.4		13.84
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg	35	U	34	U	--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg	35	U	34	U	--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg	35	U	34	U	--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg	35	U	34	U	--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg	35	U	34	U	--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg	35	U	34	U	--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg	35	U	34	U	--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg	35	U	34	U	--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg	35	U	34	U	--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg	35	U	34	U	--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg	690	U	680	U	--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg	35	U	34	U	--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg	34	U	34	U	--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg	35	U	34	U	--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg	35	U	34	U	--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg	35	U	34	U	--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg	35	U	34	U	--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg	350	U	340	U	--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg	170	U	170	U	--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg	170	U	170	U	--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg	520	U	520	U	--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg	35	U	34	U	--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg	35	U	34	U	--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg	35	U	34	U	--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg	35	U	34	U	--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg	35	U	34	U	--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg	170	U	170	U	--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg	520	U	520	U	--
SVOC	Aniline	62-53-3	8270D	µg/kg	350	U	340	U	--
SVOC	Benzidine	92-87-5	8270D	µg/kg	1700	U	1700	U	--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg	520	U	520	U	--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg	350	U	340	U	--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg	35	U	34	U	--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg	35	U	34	U	--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg	35	U	34	U	--
SVOC	Carbazole	86-74-8	8270D	µg/kg	35	U	34	U	--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg	35	U	34	U	--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg	170	U	170	U	--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg	18	U	18	U	--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg	35	U	34	U	--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg	520	U	520	U	--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg	170	U	170	U	--
SVOC	Isophorone	78-59-1	8270D	µg/kg	35	U	34	U	--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg	35	U	34	U	--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg	35	U	34	U	--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg	35	U	34	U	--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg	180	U	180	U	--
SVOC	Phenol	108-95-2	8270D	µg/kg	35	U	34	U	--
SVOC	Pyridine	110-86-1	8270D	µg/kg	170	U	170	U	--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.2	U	5.1	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.2	U	5.1	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.2	U	5.1	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.2	U	5.1	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	10	U	10	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	UJ	0.4	J	200.00

Notes:
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 only were estimated "J"

				Location	5D_DG-563		5D_DG-563		RPD
				Sample Name:	SL-863-SA5D-SB-4.0-5.0		SL-563-SA5D-SB-4.0-5.0		
				Sample Date	09/25/2013		09/25/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0126	J	0.013	J	3.12
Metals	Aluminum	7429-90-5	6010C	mg/kg	16800	J	19300	J	13.85
Metals	Antimony	7440-36-0	6010C	mg/kg	4.24	UJ	4.19	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	4.49		4.38		2.48
Metals	Barium	7440-39-3	6010C	mg/kg	67.1		75		11.12
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.56	J	0.655	J	15.64
Metals	Boron	7440-42-8	6010C	mg/kg	8.83	J	10.5		17.28
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.402	J	0.439	J	8.80
Metals	Calcium	7440-70-2	6010C	mg/kg	127000	J	112000	J	12.55
Metals	Chromium	7440-47-3	6010C	mg/kg	23		24.7		7.13
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.4		9.99		29.79
Metals	Copper	7440-50-8	6010C	mg/kg	12.6		14.7		15.38
Metals	Iron	7439-89-6	6010C	mg/kg	25000	J	26900	J	7.32
Metals	Lead	7439-92-1	6010C	mg/kg	8.55		10		15.63
Metals	Lithium	7439-93-2	6010C	mg/kg	24		26.2		8.76
Metals	Magnesium	7439-95-4	6010C	mg/kg	6440	J	6980	J	8.05
Metals	Manganese	7439-96-5	6010C	mg/kg	296	J	303	J	2.34
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.12	U	2.1	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	14.5		15.9		9.21
Metals	Phosphorus	7723-14-0	6010C	mg/kg	505	J	521	J	3.12
Metals	Potassium	7440-09-7	6010C	mg/kg	2860	J	3280	J	13.68
Metals	Selenium	7782-49-2	6020A	mg/kg	0.207	J	0.239	J	14.35
Metals	Silver	7440-22-4	6020A	mg/kg	0.0392	J	0.0378	J	3.64
Metals	Sodium	7440-23-5	6010C	mg/kg	144		146		1.38
Metals	Strontium	7440-24-6	6020A	mg/kg	235	J	206	J	13.15
Metals	Thallium	7440-28-0	6020A	mg/kg	0.332	J	0.289	J	13.85
Metals	Tin	7440-31-5	6010C	mg/kg	10.6	U	10.5	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	734		873		17.30
Metals	Vanadium	7440-62-2	6010C	mg/kg	40.1	J	45	J	11.52
Metals	Zinc	7440-66-6	6010C	mg/kg	63	J	70.3	J	10.95
Metals	Zirconium	7440-67-7	6010C	mg/kg	6.31		7.13		12.20
Moisture Content	Moisture	MOIST	160.3M	%	6.5		7.4		12.95
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.8	UJ	5.6	J	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.8	UJ	12	J	200.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.8	UJ	7.8	J	200.00
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	35	U	36	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	35	U	36	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	35	U	36	U	--

				Location	5D_DG-563		5D_DG-563		RPD
				Sample Name:	SL-863-SA5D-SB-4.0-5.0		SL-563-SA5D-SB-4.0-5.0		
				Sample Date	09/25/2013		09/25/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.35		8.29		0.72
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.3	U	5.4	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.3	U	5.4	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.3	U	5.4	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5	J	5.4	UJ	200.00
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	8.5	J	11	UJ	200.00
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1.1	U	--

Notes:
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 only were estimated "J"

				Location	5D_DG-565		5D_DG-565		RPD
				Sample Name:	SL-865-SA5D-SB-0.0-0.5		SL-565-SA5D-SB-0.0-0.5		
				Sample Date	09/24/2013		09/24/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	0.722	J	5.25	U	200.00
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.144	J	5.25	U	200.00
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.03	U	5.25	U	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.105	J	0.0976	J	7.31
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.0816	J	0.0682	J	17.89
Dioxins	OCDD	3268-87-9	1613B	ng/kg	4.69	J	2.22	J	71.49
Dioxins	OCDF	39001-02-0	1613B	ng/kg	10.1	U	10.5	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.147		0.218		38.90
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0292	J	0.014	J	70.37
Metals	Aluminum	7429-90-5	6010C	mg/kg	20400		22700		10.67
Metals	Antimony	7440-36-0	6010C	mg/kg	4.18	UJ	4.21	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	4.16	J	4.92		16.74
Metals	Barium	7440-39-3	6010C	mg/kg	151		149		1.33
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.692	J	0.858	J	21.42
Metals	Boron	7440-42-8	6010C	mg/kg	23.9	J	3.09	J	154.21
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.19		0.84	J	34.48
Metals	Calcium	7440-70-2	6010C	mg/kg	61000		52200		15.55
Metals	Chromium	7440-47-3	6010C	mg/kg	29.6		30.9		4.30
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.91	J	9.18	J	14.86
Metals	Copper	7440-50-8	6010C	mg/kg	25.7		30.5		17.08
Metals	Iron	7439-89-6	6010C	mg/kg	32700	J	55000	J	50.86
Metals	Lead	7439-92-1	6010C	mg/kg	16.3		11.2		37.09
Metals	Lithium	7439-93-2	6010C	mg/kg	22.5		25.5		12.50
Metals	Magnesium	7439-95-4	6010C	mg/kg	7520		8530		12.59
Metals	Manganese	7439-96-5	6010C	mg/kg	263		275		4.46
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.09	U	2.1	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	18.8		22.2		16.59
Metals	Phosphorus	7723-14-0	6010C	mg/kg	533		427		22.08
Metals	Potassium	7440-09-7	6010C	mg/kg	4490	J	4120	J	8.59
Metals	Selenium	7782-49-2	6020A	mg/kg	0.266	J	0.166	J	46.30
Metals	Silver	7440-22-4	6020A	mg/kg	0.209	U	0.21	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	131		134		2.26
Metals	Strontium	7440-24-6	6020A	mg/kg	169	J	114	J	38.87
Metals	Thallium	7440-28-0	6020A	mg/kg	0.319		0.341		6.67
Metals	Tin	7440-31-5	6010C	mg/kg	10.4	U	10.5	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	914		924		1.09
Metals	Vanadium	7440-62-2	6010C	mg/kg	59.1		65		9.51
Metals	Zinc	7440-66-6	6010C	mg/kg	83		85.3		2.73
Metals	Zirconium	7440-67-7	6010C	mg/kg	6.15		6.59		6.91
Moisture Content	Moisture	MOIST	160.3M	%	5.2		5.9		12.61
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	11	J	19	UJ	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	0.71	J	1.7	UJ	200.00
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	35	U	35	U	--

				Location	5D_DG-565		5D_DG-565		RPD
				Sample Name:	SL-865-SA5D-SB-0.0-0.5		SL-565-SA5D-SB-0.0-0.5		
				Sample Date	09/24/2013		09/24/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.72		7.54		2.36
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.2	U	5.3	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.2	U	5.3	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.2	U	5.3	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	8.7	J	4.3	J	67.69
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	29	J	13	J	76.19
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-568		5D_DG-568		RPD
				Sample Name:	SL-868-SA5D-SB-2.5-3.5		SL-568-SA5D-SB-2.5-3.5		
				Sample Date	09/23/2013		09/23/2013		
				Start Depth:	2.5		2.5		
				End Depth:	3.5		3.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	91	U	96	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.7	U	1.8	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	37	U	38	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	17	U	18	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	12	U	13	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	17	U	18	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	24	U	26	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2500	U	2700	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2500	U	2700	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.7	U	1.8	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0158	UJ	0.0123	J	200.00
Metals	Aluminum	7429-90-5	6010C	mg/kg	18100	J	21900	J	19.00
Metals	Antimony	7440-36-0	6010C	mg/kg	3.98	UJ	4.26	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	4.83		4.32		11.15
Metals	Barium	7440-39-3	6010C	mg/kg	91.9		102		10.42
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.534	J	0.602	J	11.97
Metals	Boron	7440-42-8	6010C	mg/kg	8.73	J	10.1	J	14.55
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.39	J	0.342	J	13.11
Metals	Calcium	7440-70-2	6010C	mg/kg	43500		39600		9.39
Metals	Chromium	7440-47-3	6010C	mg/kg	32.7		33.3		1.82
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.63	J	8.49	J	10.67
Metals	Copper	7440-50-8	6010C	mg/kg	15.8		17.1		7.90
Metals	Iron	7439-89-6	6010C	mg/kg	23800	J	27700	J	15.15
Metals	Lead	7439-92-1	6010C	mg/kg	6.79		7.55		10.60
Metals	Lithium	7439-93-2	6010C	mg/kg	28.5	J	35.1	J	20.75
Metals	Magnesium	7439-95-4	6010C	mg/kg	6710	J	7660	J	13.22
Metals	Manganese	7439-96-5	6010C	mg/kg	307	J	283	J	8.14
Metals	Molybdenum	7439-98-7	6010C	mg/kg	1.99	U	2.13	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	16.6		18.6		11.36
Metals	Phosphorus	7723-14-0	6010C	mg/kg	487		468		3.98
Metals	Potassium	7440-09-7	6010C	mg/kg	3020	J	3590	J	17.25
Metals	Selenium	7782-49-2	6020A	mg/kg	0.168	J	0.195	J	14.88
Metals	Silver	7440-22-4	6020A	mg/kg	0.0294	J	0.0348	J	16.82
Metals	Sodium	7440-23-5	6010C	mg/kg	176		200		12.77
Metals	Strontium	7440-24-6	6020A	mg/kg	97		95.6		1.45
Metals	Thallium	7440-28-0	6020A	mg/kg	0.269		0.302		11.56
Metals	Tin	7440-31-5	6010C	mg/kg	9.95	U	10.7	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	891	J	1170	J	27.07
Metals	Vanadium	7440-62-2	6010C	mg/kg	53.7	J	60.1	J	11.25
Metals	Zinc	7440-66-6	6010C	mg/kg	66.1	J	83.4	J	23.14
Metals	Zirconium	7440-67-7	6010C	mg/kg	3.82	J	4.53	J	17.01
Moisture Content	Moisture	MOIST	160.3M	%	1.5		6.2		122.08
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	0.82	J	0.94	J	13.64
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	0.98	J	1.2	J	20.18
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.4	J	2.1		40.00
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	17	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.2	J	0.87	J	31.88
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.7	UJ	1.2	J	200.00
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	7.5	J	19	UJ	200.00
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.1	J	1.5	J	30.77
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	18	U	19	UJ	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.4	J	2.1		40.00
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	0.76	J	1.8	UJ	200.00
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	0.86	J	0.93	J	7.82
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.4	J	1.9		30.30
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	17	UJ	7.3	J	200.00
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	17	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	34	U	35	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	34	U	35	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	34	U	35	U	--

				Location	5D_DG-568		5D_DG-568		RPD
				Sample Name:	SL-868-SA5D-SB-2.5-3.5		SL-568-SA5D-SB-2.5-3.5		
				Sample Date	09/23/2013		09/23/2013		
				Start Depth:	2.5		2.5		
				End Depth:	3.5		3.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	1.9	U	2	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	17	U	18	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.8	U	1.9	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.84	U	0.88	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	6.8	U	7.1	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.7	U	1.8	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	33	U	35	U	--
pH	pH	pH	9045M	pH	8.14		7.99		1.86
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.1	U	5.3	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.1	U	5.3	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.1	U	5.3	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	12	J	22	J	58.82
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	45	J	26	J	53.52
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1	U	--

Notes:
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 only were estimated "J"

				Location	5D_DG-579		5D_DG-579		RPD
				Sample Name:	SL-879-SA5D-SB-0.0-0.5		SL-579-SA5D-SB-0.0-0.5		
				Sample Date	09/19/2013		09/19/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.3	J	1.36	J	118.32
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	1.05	J	0.422	J	85.33
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	4.9	UJ	4.98	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	4.9	U	4.98	U	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	4.9	UJ	4.98	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.697	J	0.316	J	75.22
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	4.9	UJ	4.98	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.882	J	0.39	J	77.36
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.745	J	0.506	J	38.21
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	0.588	J	4.98	UJ	200.00
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	4.9	UJ	4.98	UJ	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	4.9	U	4.98	U	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.664	J	4.98	UJ	200.00
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.98	UJ	0.996	UJ	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.307	J	0.113	J	92.38
Dioxins	OCDD	3268-87-9	1613B	ng/kg	54.4	J	12.9	J	123.33
Dioxins	OCDF	39001-02-0	1613B	ng/kg	2.82	J	9.96	UJ	200.00
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.594		0.234		86.96
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg					--
Metals	Aluminum	7429-90-5	6010C	mg/kg					--
Metals	Antimony	7440-36-0	6010C	mg/kg					--
Metals	Arsenic	7440-38-2	6010C	mg/kg					--
Metals	Barium	7440-39-3	6010C	mg/kg					--
Metals	Beryllium	7440-41-7	6010C	mg/kg					--
Metals	Boron	7440-42-8	6010C	mg/kg					--
Metals	Cadmium	7440-43-9	6010C	mg/kg					--
Metals	Calcium	7440-70-2	6010C	mg/kg					--
Metals	Chromium	7440-47-3	6010C	mg/kg					--
Metals	Cobalt	7440-48-4	6010C	mg/kg					--
Metals	Copper	7440-50-8	6010C	mg/kg					--
Metals	Iron	7439-89-6	6010C	mg/kg					--
Metals	Lead	7439-92-1	6010C	mg/kg					--
Metals	Lithium	7439-93-2	6010C	mg/kg					--
Metals	Magnesium	7439-95-4	6010C	mg/kg					--
Metals	Manganese	7439-96-5	6010C	mg/kg					--
Metals	Molybdenum	7439-98-7	6010C	mg/kg					--
Metals	Nickel	7440-02-0	6010C	mg/kg					--
Metals	Phosphorus	7723-14-0	6010C	mg/kg					--
Metals	Potassium	7440-09-7	6010C	mg/kg					--
Metals	Selenium	7782-49-2	6020A	mg/kg					--
Metals	Silver	7440-22-4	6020A	mg/kg					--
Metals	Sodium	7440-23-5	6010C	mg/kg					--
Metals	Strontium	7440-24-6	6020A	mg/kg					--
Metals	Thallium	7440-28-0	6020A	mg/kg					--
Metals	Tin	7440-31-5	6010C	mg/kg					--
Metals	Titanium	7440-32-6	6010C	mg/kg					--
Metals	Vanadium	7440-62-2	6010C	mg/kg					--
Metals	Zinc	7440-66-6	6010C	mg/kg					--
Metals	Zirconium	7440-67-7	6010C	mg/kg					--
Moisture Content	Moisture	MOIST	160.3M	%	1.7		1.7		0.00
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg					--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg					--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg					--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg					--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg					--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg					--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg					--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg					--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg					--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg					--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg					--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg					--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg					--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg					--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg					--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg					--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg					--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg					--

				Location	5D_DG-579		5D_DG-579		RPD
				Sample Name:	SL-879-SA5D-SB-0.0-0.5		SL-579-SA5D-SB-0.0-0.5		
				Sample Date	09/19/2013		09/19/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg	5.1	U	5.1	U	--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	0.82	J	0.86	J	4.76
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1	J	0.98	J	2.02
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	17	U	17	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.84	U	0.84	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	6.8	U	6.8	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	33	U	34	U	--
pH	pH	pH	9045M	pH					--
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg					--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg					--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg					--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg					--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg					--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-582		5D_DG-582		RPD
				Sample Name:	SL-882-SA5D-SB-4.0-5.0		SL-582-SA5D-SB-4.0-5.0		
				Sample Date	09/30/2013		09/30/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	100	U	100	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.9	U	1.9	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	41	U	41	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	19	U	19	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	14	U	14	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	19	U	19	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2800	U	2800	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2800	U	2800	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.9	U	1.9	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0181	U	0.0186	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	25200		23800		5.71
Metals	Antimony	7440-36-0	6010C	mg/kg	4.39	UJ	4.49	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	6.42		6.58		2.46
Metals	Barium	7440-39-3	6010C	mg/kg	108		95.3		12.49
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.789	J	0.771	J	2.31
Metals	Boron	7440-42-8	6010C	mg/kg	6.43	J	5.7	J	12.04
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.1	U	1.12	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	30200		26200		14.18
Metals	Chromium	7440-47-3	6010C	mg/kg	34.8		34.1		2.03
Metals	Cobalt	7440-48-4	6010C	mg/kg	8.59		8.11		5.75
Metals	Copper	7440-50-8	6010C	mg/kg	11	U	11.2	U	--
Metals	Iron	7439-89-6	6010C	mg/kg	31200		30200		3.26
Metals	Lead	7439-92-1	6010C	mg/kg	5.5		5.23		5.03
Metals	Lithium	7439-93-2	6010C	mg/kg	30.8		29.5		4.31
Metals	Magnesium	7439-95-4	6010C	mg/kg	7760		7620		1.82
Metals	Manganese	7439-96-5	6010C	mg/kg	396		326		19.39
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.2	U	2.24	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	15.2		14		8.22
Metals	Phosphorus	7723-14-0	6010C	mg/kg	462		433		6.48
Metals	Potassium	7440-09-7	6010C	mg/kg	4170	J	3880	J	7.20
Metals	Selenium	7782-49-2	6020A	mg/kg	0.184	J	0.22	J	17.82
Metals	Silver	7440-22-4	6020A	mg/kg	0.22	U	0.224	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	144		146		1.38
Metals	Strontium	7440-24-6	6020A	mg/kg	62.7		61.4		2.10
Metals	Thallium	7440-28-0	6020A	mg/kg	0.318		0.297		6.83
Metals	Tin	7440-31-5	6010C	mg/kg	11	U	11.2	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1460		1360		7.09
Metals	Vanadium	7440-62-2	6010C	mg/kg	69.2		67.8		2.04
Metals	Zinc	7440-66-6	6010C	mg/kg	69.5		69.4		0.14
Metals	Zirconium	7440-67-7	6010C	mg/kg	7.78		8.23		5.62
Moisture Content	Moisture	MOIST	160.3M	%	11.6		11.7		0.86
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--

				Location	5D_DG-582		5D_DG-582		RPD
				Sample Name:	SL-882-SA5D-SB-4.0-5.0		SL-582-SA5D-SB-4.0-5.0		
				Sample Date	09/30/2013		09/30/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.26		8.18		0.97
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.1	U	1.1	UJ	--

Notes:
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 only were estimated "J"

				Location	5D_DG-590		5D_DG-590		RPD
				Sample Name:	SL-890-SA5D-SB-4.0-5.0		SL-590-SA5D-SB-4.0-5.0		
				Sample Date	09/06/2013		09/06/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	13.4	J	14.2	J	5.80
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg					--
Metals	Aluminum	7429-90-5	6010C	mg/kg					--
Metals	Antimony	7440-36-0	6010C	mg/kg					--
Metals	Arsenic	7440-38-2	6010C	mg/kg					--
Metals	Barium	7440-39-3	6010C	mg/kg					--
Metals	Beryllium	7440-41-7	6010C	mg/kg					--
Metals	Boron	7440-42-8	6010C	mg/kg					--
Metals	Cadmium	7440-43-9	6010C	mg/kg					--
Metals	Calcium	7440-70-2	6010C	mg/kg					--
Metals	Chromium	7440-47-3	6010C	mg/kg					--
Metals	Cobalt	7440-48-4	6010C	mg/kg					--
Metals	Copper	7440-50-8	6010C	mg/kg					--
Metals	Iron	7439-89-6	6010C	mg/kg					--
Metals	Lead	7439-92-1	6010C	mg/kg					--
Metals	Lithium	7439-93-2	6010C	mg/kg					--
Metals	Magnesium	7439-95-4	6010C	mg/kg					--
Metals	Manganese	7439-96-5	6010C	mg/kg					--
Metals	Molybdenum	7439-98-7	6010C	mg/kg					--
Metals	Nickel	7440-02-0	6010C	mg/kg					--
Metals	Phosphorus	7723-14-0	6010C	mg/kg					--
Metals	Potassium	7440-09-7	6010C	mg/kg					--
Metals	Selenium	7782-49-2	6020A	mg/kg					--
Metals	Silver	7440-22-4	6020A	mg/kg					--
Metals	Sodium	7440-23-5	6010C	mg/kg					--
Metals	Strontium	7440-24-6	6020A	mg/kg					--
Metals	Thallium	7440-28-0	6020A	mg/kg					--
Metals	Tin	7440-31-5	6010C	mg/kg					--
Metals	Titanium	7440-32-6	6010C	mg/kg					--
Metals	Vanadium	7440-62-2	6010C	mg/kg					--
Metals	Zinc	7440-66-6	6010C	mg/kg					--
Metals	Zirconium	7440-67-7	6010C	mg/kg					--
Moisture Content	Moisture	MOIST	160.3M	%	8.1		8.3		2.44
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg					--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg					--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg					--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg					--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg					--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg					--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg					--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg					--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg					--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg					--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg					--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg					--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg					--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg					--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg					--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg					--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg					--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg					--

				Location	5D_DG-590		5D_DG-590		RPD
				Sample Name:	SL-890-SA5D-SB-4.0-5.0		SL-590-SA5D-SB-4.0-5.0		
				Sample Date	09/06/2013		09/06/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg	7.5		8.2	J	8.92
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.27		7.23		0.55
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg					--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg					--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg					--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg					--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg					--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-600		5D_DG-600		RPD
				Sample Name:	SL-900-SA5D-SB-0.0-0.5		SL-600-SA5D-SB-0.0-0.5		
				Sample Date	10/02/2013		10/02/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	2.5	J	0.93	J	91.55
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg					--
Metals	Aluminum	7429-90-5	6010C	mg/kg					--
Metals	Antimony	7440-36-0	6010C	mg/kg					--
Metals	Arsenic	7440-38-2	6010C	mg/kg					--
Metals	Barium	7440-39-3	6010C	mg/kg					--
Metals	Beryllium	7440-41-7	6010C	mg/kg					--
Metals	Boron	7440-42-8	6010C	mg/kg					--
Metals	Cadmium	7440-43-9	6010C	mg/kg					--
Metals	Calcium	7440-70-2	6010C	mg/kg					--
Metals	Chromium	7440-47-3	6010C	mg/kg					--
Metals	Cobalt	7440-48-4	6010C	mg/kg					--
Metals	Copper	7440-50-8	6010C	mg/kg					--
Metals	Iron	7439-89-6	6010C	mg/kg					--
Metals	Lead	7439-92-1	6010C	mg/kg					--
Metals	Lithium	7439-93-2	6010C	mg/kg					--
Metals	Magnesium	7439-95-4	6010C	mg/kg					--
Metals	Manganese	7439-96-5	6010C	mg/kg					--
Metals	Molybdenum	7439-98-7	6010C	mg/kg					--
Metals	Nickel	7440-02-0	6010C	mg/kg					--
Metals	Phosphorus	7723-14-0	6010C	mg/kg					--
Metals	Potassium	7440-09-7	6010C	mg/kg					--
Metals	Selenium	7782-49-2	6020A	mg/kg					--
Metals	Silver	7440-22-4	6020A	mg/kg					--
Metals	Sodium	7440-23-5	6010C	mg/kg					--
Metals	Strontium	7440-24-6	6020A	mg/kg					--
Metals	Thallium	7440-28-0	6020A	mg/kg					--
Metals	Tin	7440-31-5	6010C	mg/kg					--
Metals	Titanium	7440-32-6	6010C	mg/kg					--
Metals	Vanadium	7440-62-2	6010C	mg/kg					--
Metals	Zinc	7440-66-6	6010C	mg/kg					--
Metals	Zirconium	7440-67-7	6010C	mg/kg					--
Moisture Content	Moisture	MOIST	160.3M	%	8.6		5		52.94
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg					--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg					--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg					--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg					--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg					--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg					--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg					--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg					--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg					--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg					--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg					--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg					--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg					--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg					--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg					--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg					--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg					--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg					--

				Location	5D_DG-600		5D_DG-600		RPD
				Sample Name:	SL-900-SA5D-SB-0.0-0.5		SL-600-SA5D-SB-0.0-0.5		
				Sample Date	10/02/2013		10/02/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.26		6.83		6.10
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg					--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg					--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg					--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg					--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg					--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	5D_DG-605		5D_DG-605		RPD
				Sample Name:	SL-905-SA5D-SB-4.0-5.0		SL-605-SA5D-SB-4.0-5.0		
				Sample Date	09/10/2013		09/10/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	1.5	J	3.2	J	72.34
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg					--
Metals	Aluminum	7429-90-5	6010C	mg/kg					--
Metals	Antimony	7440-36-0	6010C	mg/kg					--
Metals	Arsenic	7440-38-2	6010C	mg/kg					--
Metals	Barium	7440-39-3	6010C	mg/kg					--
Metals	Beryllium	7440-41-7	6010C	mg/kg					--
Metals	Boron	7440-42-8	6010C	mg/kg					--
Metals	Cadmium	7440-43-9	6010C	mg/kg					--
Metals	Calcium	7440-70-2	6010C	mg/kg					--
Metals	Chromium	7440-47-3	6010C	mg/kg					--
Metals	Cobalt	7440-48-4	6010C	mg/kg					--
Metals	Copper	7440-50-8	6010C	mg/kg					--
Metals	Iron	7439-89-6	6010C	mg/kg					--
Metals	Lead	7439-92-1	6010C	mg/kg					--
Metals	Lithium	7439-93-2	6010C	mg/kg					--
Metals	Magnesium	7439-95-4	6010C	mg/kg					--
Metals	Manganese	7439-96-5	6010C	mg/kg					--
Metals	Molybdenum	7439-98-7	6010C	mg/kg					--
Metals	Nickel	7440-02-0	6010C	mg/kg					--
Metals	Phosphorus	7723-14-0	6010C	mg/kg					--
Metals	Potassium	7440-09-7	6010C	mg/kg					--
Metals	Selenium	7782-49-2	6020A	mg/kg					--
Metals	Silver	7440-22-4	6020A	mg/kg					--
Metals	Sodium	7440-23-5	6010C	mg/kg					--
Metals	Strontium	7440-24-6	6020A	mg/kg					--
Metals	Thallium	7440-28-0	6020A	mg/kg					--
Metals	Tin	7440-31-5	6010C	mg/kg					--
Metals	Titanium	7440-32-6	6010C	mg/kg					--
Metals	Vanadium	7440-62-2	6010C	mg/kg					--
Metals	Zinc	7440-66-6	6010C	mg/kg					--
Metals	Zirconium	7440-67-7	6010C	mg/kg					--
Moisture Content	Moisture	MOIST	160.3M	%	14.5		13.9		4.23
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg					--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg					--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg					--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg					--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg					--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg					--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg					--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg					--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg					--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg					--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg					--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg					--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg					--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg					--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg					--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg					--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg					--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg					--

				Location	5D_DG-605		5D_DG-605		RPD
				Sample Name:	SL-905-SA5D-SB-4.0-5.0		SL-605-SA5D-SB-4.0-5.0		
				Sample Date	09/10/2013		09/10/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	5D_DG		5D_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH					--
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg					--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg					--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg					--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg					--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg					--
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-501		8_DG-501		RPD
				Sample Name:	SL-801-SA8-SB-0.0-0.5		SL-501-SA8-SB-0.0-0.5		
				Sample Date	07/15/2013		07/15/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	11.7		19.1		48.05
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	2.24	J	3.22	J	35.90
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	0.224	J	0.317	J	34.38
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.265	J	0.303	J	13.38
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.1	U	0.312	J	200.00
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.803	J	1.14	J	34.69
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.1	UJ	0.379	J	200.00
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.808	J	0.996	J	20.84
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.431	J	0.415	J	3.78
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	1.18	J	1.09	J	7.93
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.149	J	0.263	J	55.34
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.1	U	0.262	J	200.00
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.208	J	0.653	J	103.37
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.02	UJ	0.0816	J	200.00
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.685	J	0.54	J	23.67
Dioxins	OCDD	3268-87-9	1613B	ng/kg	137	J	240	J	54.64
Dioxins	OCDF	39001-02-0	1613B	ng/kg	4.72	J	5.69	J	18.64
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.516		0.665		25.23
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	94	U	93	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.8	U			--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	37	U			--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	18	U			--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	12	U	12	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	18	U	18	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	25	U	25	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2600	U	2600	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2600	U	2600	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.8	U			--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0493	J	0.0276	J	56.44
Metals	Aluminum	7429-90-5	6010C	mg/kg	18400		17500		5.01
Metals	Antimony	7440-36-0	6010C	mg/kg	4.06	UJ	4.11	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	4.41		3.89	J	12.53
Metals	Barium	7440-39-3	6010C	mg/kg	104		103		0.97
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.842	J	0.605	J	32.76
Metals	Boron	7440-42-8	6010C	mg/kg	16.1	J	10.3	UJ	200.00
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.374	J	0.352	J	6.06
Metals	Calcium	7440-70-2	6010C	mg/kg	5920	J	3910	J	40.90
Metals	Chromium	7440-47-3	6010C	mg/kg	21.4		20.7		3.33
Metals	Cobalt	7440-48-4	6010C	mg/kg	5.67	J	5.94	J	4.65
Metals	Copper	7440-50-8	6010C	mg/kg	11.2		12.2		8.55
Metals	Iron	7439-89-6	6010C	mg/kg	21900		20900		4.67
Metals	Lead	7439-92-1	6010C	mg/kg	18.4	J	35.3	J	62.94
Metals	Lithium	7439-93-2	6010C	mg/kg	21.7	J	21.5	J	0.93
Metals	Magnesium	7439-95-4	6010C	mg/kg	4900		4540		7.63
Metals	Manganese	7439-96-5	6010C	mg/kg	410		393		4.23
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.03	UJ	2.06	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	12.6		12.4		1.60
Metals	Phosphorus	7723-14-0	6010C	mg/kg	466		434		7.11
Metals	Potassium	7440-09-7	6010C	mg/kg	3740		3510		6.34
Metals	Selenium	7782-49-2	6020A	mg/kg	0.246	J	0.245	J	0.41
Metals	Silver	7440-22-4	6020A	mg/kg	0.0479	J	0.0421	J	12.89
Metals	Sodium	7440-23-5	6010C	mg/kg	85.6	J	77	J	10.58
Metals	Strontium	7440-24-6	6020A	mg/kg	26		20.9		21.75
Metals	Thallium	7440-28-0	6020A	mg/kg	0.289		0.284		1.75
Metals	Tin	7440-31-5	6010C	mg/kg	10.2	U	10.3	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1150		1050		9.09
Metals	Vanadium	7440-62-2	6010C	mg/kg	40.9		37.3		9.21
Metals	Zinc	7440-66-6	6010C	mg/kg	65.3		62.7		4.06
Metals	Zirconium	7440-67-7	6010C	mg/kg	0.923	J	1.14	J	21.04
Moisture Content	Moisture	MOIST	160.3M	%	4.4		4.6		4.44
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	0.72	J	1.7	UJ	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1	J	1.3	J	26.09
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	UJ	0.49	J	200.00
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	0.77	J	3.3	J	124.32
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	0.94	J	5.2	J	138.76
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	2.2	J	6.9	J	103.30
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	UJ	4.4	J	200.00
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	0.94	J	3.7	J	118.97
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	9.3		7.5		21.43
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	10	J	13	J	26.09
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	3.9	J	8	J	68.91
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	UJ	1.2	J	200.00
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	10	J	19	UJ	200.00
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.7	J	6.5	J	117.07
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	0.7	J	3.4	J	131.71
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	2.4		2.3		4.26
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.4	J	3.2	J	78.26
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-501		8_DG-501		RPD
				Sample Name:	SL-801-SA8-SB-0.0-0.5		SL-501-SA8-SB-0.0-0.5		
				Sample Date	07/15/2013		07/15/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	2.1	J	6.9	J	106.67
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	13	J	8.1	J	46.45
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	35	U	35	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	35	U	35	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.3	J	2.7	J	70.00
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.8		2		10.53
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	2	U	2	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	18	U	18	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.87	U	0.86	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	7	U	6.9	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	34	U	34	U	--
pH	pH	pH	9045M	pH	7.77		6.26		21.53
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	2.4	J	2.6	J	8.00
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	20		24		18.18
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	41		51		21.74

				Location	8_DG-501		8_DG-501		RPD
				Sample Name:	SL-801-SA8-SB-0.0-0.5		SL-501-SA8-SB-0.0-0.5		
				Sample Date	07/15/2013		07/15/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-504		8_DG-504		RPD
				Sample Name:	SL-804-SA8-SB-2.5-3.5		SL-504-SA8-SB-2.5-3.5		
				Sample Date	07/16/2013		07/16/2013		
				Start Depth:	2.5		2.5		
				End Depth:	3.5		3.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	2.15	J	5.08	UJ	200.00
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	0.44	J	5.08	UJ	200.00
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	0.13	J	0.0343	J	116.49
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.19	UJ	5.08	UJ	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	0.158	J	5.08	UJ	200.00
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.253	J	0.0391	J	146.46
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.197	J	5.08	UJ	200.00
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.181	J	5.08	UJ	200.00
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	5.19	UJ	5.08	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	1.07	J	0.203	J	136.21
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.168	J	5.08	UJ	200.00
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.19	UJ	5.08	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.203	J	0.0347	J	141.61
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.04	U	1.02	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.04	U	1.02	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	18.8	J	1.89	J	163.46
Dioxins	OCDF	39001-02-0	1613B	ng/kg	0.988	J	10.2	UJ	200.00
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.116		0.016		151.52
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg	0.43	UJ	1.4	J	200.00
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0171	U	0.0168	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	12100		11800		2.51
Metals	Antimony	7440-36-0	6010C	mg/kg	4.05	UJ	4.08	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	3.68	J	3.88	J	5.29
Metals	Barium	7440-39-3	6010C	mg/kg	88.4		84.4		4.63
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.449	J	0.394	J	13.05
Metals	Boron	7440-42-8	6010C	mg/kg	16		18.1		12.32
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.33	J	0.37	J	11.43
Metals	Calcium	7440-70-2	6010C	mg/kg	3610		3670		1.65
Metals	Chromium	7440-47-3	6010C	mg/kg	22	J	21.8	J	0.91
Metals	Cobalt	7440-48-4	6010C	mg/kg	5.16		4.81		7.02
Metals	Copper	7440-50-8	6010C	mg/kg	10.9		10.6		2.79
Metals	Iron	7439-89-6	6010C	mg/kg	23200		22900		1.30
Metals	Lead	7439-92-1	6010C	mg/kg	4.49		4.43		1.35
Metals	Lithium	7439-93-2	6010C	mg/kg	29.5	J	29.8	J	1.01
Metals	Magnesium	7439-95-4	6010C	mg/kg	6410		6080		5.28
Metals	Manganese	7439-96-5	6010C	mg/kg	313		422		29.66
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.02	UJ	2.04	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	13		12.6		3.13
Metals	Phosphorus	7723-14-0	6010C	mg/kg	424		423		0.24
Metals	Potassium	7440-09-7	6010C	mg/kg	2240	J	2220	J	0.90
Metals	Selenium	7782-49-2	6020A	mg/kg	0.405	U	0.408	U	--
Metals	Silver	7440-22-4	6020A	mg/kg	0.202	U	0.204	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	197		177		10.70
Metals	Strontium	7440-24-6	6020A	mg/kg	14.9		14.9		0.00
Metals	Thallium	7440-28-0	6020A	mg/kg	0.212		0.238		11.56
Metals	Tin	7440-31-5	6010C	mg/kg	10.1	U	10.2	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1480		1460		1.36
Metals	Vanadium	7440-62-2	6010C	mg/kg	43.2		43.8		1.38
Metals	Zinc	7440-66-6	6010C	mg/kg	58.6		53.6		8.91
Metals	Zirconium	7440-67-7	6010C	mg/kg	2.85	J	3.17	J	10.63
Moisture Content	Moisture	MOIST	160.3M	%	4		3.9		2.53
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-504		8_DG-504		RPD
				Sample Name:	SL-804-SA8-SB-2.5-3.5		SL-504-SA8-SB-2.5-3.5		
				Sample Date	07/16/2013		07/16/2013		
				Start Depth:	2.5		2.5		
				End Depth:	3.5		3.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	34	U	34	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg	5.2	U	5.2	U	--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.55		8.56		0.12
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg	35	U	35	U	--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg	35	U	35	U	--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg	35	U	35	U	--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg	35	U	35	U	--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg	35	U	35	U	--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg	35	U	35	U	--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg	35	U	35	U	--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg	35	U	35	U	--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg	35	U	35	U	--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg	35	U	35	U	--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg	690	U	680	U	--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg	35	U	35	U	--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg	34	U	34	U	--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg	35	U	35	U	--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg	35	U	35	U	--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg	35	U	35	U	--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg	35	U	35	U	--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg	350	U	350	U	--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg	170	U	170	U	--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg	170	U	170	U	--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg	520	U	520	U	--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg	35	U	35	U	--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg	35	U	35	U	--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg	35	U	35	U	--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg	35	U	35	U	--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg	35	U	35	U	--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg	170	U	170	U	--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg	520	U	520	U	--
SVOC	Aniline	62-53-3	8270D	µg/kg	350	U	350	U	--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg	1700	U	1700	UJ	--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg	520	U	520	U	--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg	350	U	350	U	--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg	35	U	35	U	--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg	35	U	35	U	--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg	35	U	35	U	--
SVOC	Carbazole	86-74-8	8270D	µg/kg	35	U	35	U	--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg	35	U	35	U	--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg	170	U	170	U	--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg	18	U	18	U	--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg	35	U	35	U	--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg	520	U	520	U	--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg	170	U	170	U	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg	35	U	35	U	--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg	35	U	35	U	--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg	35	U	35	U	--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg	35	U	35	U	--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg	180	U	180	U	--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg	35	U	35	U	--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg	170	U	170	U	--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.2	U	5.2	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	10	U	10	U	--

				Location	8_DG-504		8_DG-504		RPD
				Sample Name:	SL-804-SA8-SB-2.5-3.5		SL-504-SA8-SB-2.5-3.5		
				Sample Date	07/16/2013		07/16/2013		
				Start Depth:	2.5		2.5		
				End Depth:	3.5		3.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg	5	U	5	U	--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg	5	U	5	U	--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg	5	U	5	U	--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg	5	U	5	U	--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg	5	U	5	U	--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg	5	U	5	U	--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg	5	U	5	U	--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg	5	U	5	U	--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg	5	U	5	U	--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg	5	U	5	U	--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg	5	U	5	U	--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg	5	U	5	U	--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg	5	U	5	U	--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg	5	U	5	U	--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg	5	U	5	U	--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg	5	U	5	U	--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg	5	U	5	U	--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg	5	U	5	U	--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg	5	U	5	U	--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg	5	U	5	U	--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg	5	U	5	U	--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg	5	U	5	U	--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg	5	U	5	U	--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg	10	U	10	U	--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg	5	U	5	U	--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg	10	U	10	U	--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg	5	U	5	U	--
VOC	2-Hexanone	591-78-6	8260B	µg/kg	10	U	10	U	--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg	5	U	5	U	--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg	5	U	5	U	--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg	10	U	10	U	--
VOC	Acetone	67-64-1	8260B	µg/kg	21	U	20	U	--
VOC	Acrolein	107-02-8	8260B	µg/kg	100	U	100	U	--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg	21	U	20	U	--
VOC	Benzene	71-43-2	8260B	µg/kg	5	U	5	U	--
VOC	Bromobenzene	108-86-1	8260B	µg/kg	5	U	5	U	--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg	5	U	5	U	--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg	5	U	5	U	--
VOC	Bromoform	75-25-2	8260B	µg/kg	5	U	5	U	--
VOC	Bromomethane	74-83-9	8260B	µg/kg	5	U	5	U	--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg	5	U	5	U	--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg	5	U	5	U	--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg	5	U	5	U	--
VOC	Chloroethane	75-00-3	8260B	µg/kg	5	U	5	U	--
VOC	Chloroform	67-66-3	8260B	µg/kg	5	U	5	U	--
VOC	Chloromethane	74-87-3	8260B	µg/kg	5	U	5	U	--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg	5	U	5	U	--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg	5	U	5	U	--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg	5	U	5	U	--
VOC	Cymene	99-87-6	8260B	µg/kg	5	U	5	U	--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg	5	U	5	U	--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg	5	U	5	U	--
VOC	Dibromomethane	74-95-3	8260B	µg/kg	5	U	5	U	--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg	5	U	5	U	--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg	5	U	5	U	--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg	5	U	5	U	--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg	5	U	5	U	--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg	5	U	5	U	--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg	5	U	5	U	--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg	5	U	5	U	--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg	5	U	5	U	--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg	5	U	5	U	--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg	5	U	5	U	--
VOC	o-Xylene	95-47-6	8260B	µg/kg	5	U	5	U	--
VOC	Styrene	100-42-5	8260B	µg/kg	5	U	5	U	--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg	5	U	5	U	--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg	5	U	5	U	--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg	5	U	5	U	--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg	52	U	51	U	--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg	5	U	5	U	--
VOC	Toluene	108-88-3	8260B	µg/kg	5	U	5	U	--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg	5	U	5	U	--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg	5	U	5	U	--
VOC	Trichloroethene	79-01-6	8260B	µg/kg	5	U	5	U	--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg	5	U	5	U	--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg	10	U	10	U	--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg	5	U	5	U	--

Notes:
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 only were estimated "J"

				Location	8_DG-523		8_DG-523		RPD
				Sample Name:	SL-823-SA8-SB-4.0-5.0		SL-523-SA8-SB-4.0-5.0		
				Sample Date	07/25/2013		07/25/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg	0.56	U	0.57	U	--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.67	U	5.69	U	--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	0.0755	J	0.0361	J	70.61
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	0.126	J	0.0426	J	98.93
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.67	UJ	5.69	UJ	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	0.114	J	0.0376	J	100.79
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.109	J	0.0765	J	35.04
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.67	UJ	5.69	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.188	J	0.189	J	0.53
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.139	J	0.215	J	42.94
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.67	U	5.69	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.67	U	5.69	U	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.0896	J	5.69	UJ	200.00
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.0762	J	5.69	UJ	200.00
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.13	U	1.14	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.13	U	1.14	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	11.3	U	11.4	U	--
Dioxins	OCDF	39001-02-0	1613B	ng/kg	11.3	UJ	11.4	UJ	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.0235		0.0411		54.49
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0186	U	0.0189	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	31300		28600		9.02
Metals	Antimony	7440-36-0	6010C	mg/kg	4.39	UJ	4.5	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	3.25	J	3.09	J	5.05
Metals	Barium	7440-39-3	6010C	mg/kg	148		140		5.56
Metals	Beryllium	7440-41-7	6010C	mg/kg	1.06	J	1.03	J	2.87
Metals	Boron	7440-42-8	6010C	mg/kg	1.62	J	1.92	J	16.95
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.356	J	0.371	J	4.13
Metals	Calcium	7440-70-2	6010C	mg/kg	7400		7340		0.81
Metals	Chromium	7440-47-3	6010C	mg/kg	39.4		36.8		6.82
Metals	Cobalt	7440-48-4	6010C	mg/kg	10.3		10.5		1.92
Metals	Copper	7440-50-8	6010C	mg/kg	22.4		21.4		4.57
Metals	Iron	7439-89-6	6010C	mg/kg	31600	J	26100	J	19.06
Metals	Lead	7439-92-1	6010C	mg/kg	10.2		11.1		8.45
Metals	Lithium	7439-93-2	6010C	mg/kg	26.3		23.7		10.40
Metals	Magnesium	7439-95-4	6010C	mg/kg	7680		7210		6.31
Metals	Manganese	7439-96-5	6010C	mg/kg	456		479		4.92
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.19	U	2.25	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	20.9		20.7		0.96
Metals	Phosphorus	7723-14-0	6010C	mg/kg	300		295		1.68
Metals	Potassium	7440-09-7	6010C	mg/kg	4010	J	4140	J	3.19
Metals	Selenium	7782-49-2	6020A	mg/kg	0.176	J	0.192	J	8.70
Metals	Silver	7440-22-4	6020A	mg/kg	0.0417	J	0.0484	J	14.87
Metals	Sodium	7440-23-5	6010C	mg/kg	179		159		11.83
Metals	Strontium	7440-24-6	6020A	mg/kg	35.8		34.8		2.83
Metals	Thallium	7440-28-0	6020A	mg/kg	0.355		0.339		4.61
Metals	Tin	7440-31-5	6010C	mg/kg	11	U	11.3	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1210		996		19.40
Metals	Vanadium	7440-62-2	6010C	mg/kg	67.8		62.2		8.62
Metals	Zinc	7440-66-6	6010C	mg/kg	71.7		70.6		1.55
Metals	Zirconium	7440-67-7	6010C	mg/kg	4.85	J	4.53	J	6.82
Moisture Content	Moisture	MOIST	160.3M	%	12.3		12.9		4.76
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-523		8_DG-523		RPD
				Sample Name:	SL-823-SA8-SB-4.0-5.0		SL-523-SA8-SB-4.0-5.0		
				Sample Date	07/25/2013		07/25/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.1		8.01		1.12
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg	38	U	38	U	--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg	38	U	38	U	--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg	38	U	38	U	--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg	38	U	38	U	--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg	750	U	760	U	--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg	38	U	38	U	--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg	38	U	38	U	--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg	38	U	38	U	--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg	38	U	38	U	--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg	38	U	38	U	--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg	38	U	38	U	--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg	380	U	380	U	--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg	190	U	190	U	--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg	190	U	190	U	--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg	570	U	570	U	--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg	38	U	38	U	--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg	38	U	38	U	--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg	190	U	190	U	--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg	570	U	570	U	--
SVOC	Aniline	62-53-3	8270D	µg/kg	380	U	380	U	--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg	1900	U			--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg	570	U	570	U	--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg	380	U	380	U	--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg	38	U	38	U	--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg	38	U	38	U	--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg	38	U	38	U	--
SVOC	Carbazole	86-74-8	8270D	µg/kg	38	U	38	U	--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg	38	U	38	U	--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg	190	U	190	U	--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg	19	U	20	U	--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg	38	U	38	U	--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg	570	U	570	U	--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg	190	U	190	U	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg	38	U	38	U	--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg	38	U	38	U	--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg	38	U	38	U	--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg	38	U	38	U	--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg	190	U	200	U	--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg	38	U	38	U	--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg	190	U	190	U	--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.7	U	5.7	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.7	U	5.7	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.7	U	5.7	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.7	U	5.7	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--

				Location	8_DG-523		8_DG-523		RPD
				Sample Name:	SL-823-SA8-SB-4.0-5.0		SL-523-SA8-SB-4.0-5.0		
				Sample Date	07/25/2013		07/25/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.1	U	1.2	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-530		8_DG-530		RPD
				Sample Name:	SL-830-SA8-SB-4.0-5.0		SL-530-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.46	U	5.46	U	--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	0.062	J	0.0212	J	98.08
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.0499	J	5.46	UJ	200.00
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.0771	J	0.0392	J	65.18
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.46	U	5.46	U	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.46	UJ	5.46	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.46	U	5.46	U	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.09	U	1.09	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.09	U	1.09	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	10.9	UJ	1.59	J	200.00
Dioxins	OCDF	39001-02-0	1613B	ng/kg	10.9	U	10.9	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.0134		0.000454		186.89
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0181	U	0.0184	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	16900		19400		13.77
Metals	Antimony	7440-36-0	6010C	mg/kg	4.43	UJ	4.54	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	3.12	J	3.64	J	15.38
Metals	Barium	7440-39-3	6010C	mg/kg	93.4		97.6		4.40
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.631	J	0.661	J	4.64
Metals	Boron	7440-42-8	6010C	mg/kg	4.11	J	5.86	J	35.11
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.964	J	1.09	J	12.27
Metals	Calcium	7440-70-2	6010C	mg/kg	7280	J	14200	J	64.43
Metals	Chromium	7440-47-3	6010C	mg/kg	23.7		27.9		16.28
Metals	Cobalt	7440-48-4	6010C	mg/kg	6.66	J	7.07	J	5.97
Metals	Copper	7440-50-8	6010C	mg/kg	13.2		16.4		21.62
Metals	Iron	7439-89-6	6010C	mg/kg	23300	J	25600	J	9.41
Metals	Lead	7439-92-1	6010C	mg/kg	6.18		6.63		7.03
Metals	Lithium	7439-93-2	6010C	mg/kg	18.9		21.5		12.87
Metals	Magnesium	7439-95-4	6010C	mg/kg	5570		6470		14.95
Metals	Manganese	7439-96-5	6010C	mg/kg	373		332		11.63
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.21	UJ	2.27	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	16.2		15.6		3.77
Metals	Phosphorus	7723-14-0	6010C	mg/kg	281		360		24.65
Metals	Potassium	7440-09-7	6010C	mg/kg	1440	J	1840	J	24.39
Metals	Selenium	7782-49-2	6020A	mg/kg	0.443	U	0.454	U	--
Metals	Silver	7440-22-4	6020A	mg/kg	0.0357	J	0.0556	J	43.59
Metals	Sodium	7440-23-5	6010C	mg/kg	538		631		15.91
Metals	Strontium	7440-24-6	6020A	mg/kg	25.1	J	32.1	J	24.48
Metals	Thallium	7440-28-0	6020A	mg/kg	0.212	J	0.245		14.44
Metals	Tin	7440-31-5	6010C	mg/kg	11.1	U	11.4	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1170		1440		20.69
Metals	Vanadium	7440-62-2	6010C	mg/kg	43.5		51.2		16.26
Metals	Zinc	7440-66-6	6010C	mg/kg	46.7		54.9		16.14
Metals	Zirconium	7440-67-7	6010C	mg/kg	2.39	J	2.57	J	7.26
Moisture Content	Moisture	MOIST	160.3M	%	10.6		11.9		11.56
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	7.2	J	20	UJ	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	UJ	0.48	J	200.00
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-530		8_DG-530		RPD
				Sample Name:	SL-830-SA8-SB-4.0-5.0		SL-530-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.72		8.41		3.62
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	4.8	J	7.1	J	38.66
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	4.8	J	6.1	J	23.85

				Location	8_DG-530		8_DG-530		RPD
				Sample Name:	SL-830-SA8-SB-4.0-5.0		SL-530-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.3	U	1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-538		8_DG-538		RPD
				Sample Name:	SL-838-SA8-SB-4.0-5.0		SL-538-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	18.2	J	6.07	J	99.96
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	1.43	J	0.543	J	89.91
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	1.07	J	5.55	UJ	200.00
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.526	J	5.55	UJ	200.00
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.72	UJ	5.55	UJ	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.106	J	1.11	UJ	200.00
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.104	J	1.11	UJ	200.00
Dioxins	OCDD	3268-87-9	1613B	ng/kg	166	J	56.6	J	98.29
Dioxins	OCDF	39001-02-0	1613B	ng/kg	1.45	J	11.1	UJ	200.00
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.419		0.161		88.97
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0182	U	0.0191	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	28300		28000		1.07
Metals	Antimony	7440-36-0	6010C	mg/kg	4.48	UJ	4.52	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.72		6.65		15.04
Metals	Barium	7440-39-3	6010C	mg/kg	98		96.2		1.85
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.888	J	0.841	J	5.44
Metals	Boron	7440-42-8	6010C	mg/kg	8.43	J	8.87	J	5.09
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.12	U	1.13	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	17800	J	31300	J	54.99
Metals	Chromium	7440-47-3	6010C	mg/kg	35.9		34.1		5.14
Metals	Cobalt	7440-48-4	6010C	mg/kg	9.43		8.54		9.91
Metals	Copper	7440-50-8	6010C	mg/kg	16.5		15.1		8.86
Metals	Iron	7439-89-6	6010C	mg/kg	32500		30700		5.70
Metals	Lead	7439-92-1	6010C	mg/kg	10.3		9.62		6.83
Metals	Lithium	7439-93-2	6010C	mg/kg	25.5		25.4		0.39
Metals	Magnesium	7439-95-4	6010C	mg/kg	7330		7020		4.32
Metals	Manganese	7439-96-5	6010C	mg/kg	457		409		11.09
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.24	U	2.26	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	19.3	J	17.8	J	8.09
Metals	Phosphorus	7723-14-0	6010C	mg/kg	371		347		6.69
Metals	Potassium	7440-09-7	6010C	mg/kg	3440	J	3340	J	2.95
Metals	Selenium	7782-49-2	6020A	mg/kg	0.195	J	0.19	J	2.60
Metals	Silver	7440-22-4	6020A	mg/kg	0.0412	J	0.0323	J	24.22
Metals	Sodium	7440-23-5	6010C	mg/kg	95.5	J	93.5	J	2.12
Metals	Strontium	7440-24-6	6020A	mg/kg	52.8	J	47.2	J	11.20
Metals	Thallium	7440-28-0	6020A	mg/kg	0.431	J	0.411	J	4.75
Metals	Tin	7440-31-5	6010C	mg/kg	11.2	U	11.3	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1520		1580		3.87
Metals	Vanadium	7440-62-2	6010C	mg/kg	65.5		62		5.49
Metals	Zinc	7440-66-6	6010C	mg/kg	63.5		61.3		3.53
Metals	Zirconium	7440-67-7	6010C	mg/kg	8.38		8.3		0.96
Moisture Content	Moisture	MOIST	160.3M	%	13.3		13.3		0.00
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	21	UJ	7.3	J	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	0.47	J	1.9	UJ	200.00
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	21	U	21	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-538		8_DG-538		RPD
				Sample Name:	SL-838-SA8-SB-4.0-5.0		SL-538-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	20	U	20	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	38	U	38	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	38	U	38	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	38	U	38	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.95		7.86		1.14
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.8	U	5.8	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.8	U	5.8	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.8	U	5.8	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	3.3	J	5.8	UJ	200.00
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	5.6	J	12	UJ	200.00

				Location	8_DG-538		8_DG-538		RPD
				Sample Name:	SL-838-SA8-SB-4.0-5.0		SL-538-SA8-SB-4.0-5.0		
				Sample Date	08/09/2013		08/09/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.4	U	1.2	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-543		8_DG-543		RPD
				Sample Name:	SL-843-SA8-SB-4.0-5.0		SL-543-SA8-SB-4.0-5.0		
				Sample Date	08/13/2013		08/13/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	0.69	J	0.436	J	45.12
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.37	UJ	5.54	UJ	--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.37	UJ	5.54	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.0875	J	5.54	UJ	200.00
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.37	UJ	5.54	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.22	J	0.245	J	10.75
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.37	U	5.54	U	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.386	J	0.38	J	1.57
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.607	J	0.359	J	51.35
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	0.219	J	0.181	J	19.00
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.37	UJ	5.54	UJ	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.112	J	5.54	UJ	200.00
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.37	UJ	5.54	UJ	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.07	U	1.11	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.07	U	1.11	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	5.06	J	2.26	J	76.50
Dioxins	OCDF	39001-02-0	1613B	ng/kg	10.7	U	11.1	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.247		0.0444		139.05
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0185	U	0.0176	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	35700		36500		2.22
Metals	Antimony	7440-36-0	6010C	mg/kg	4.5	UJ	4.43	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	3.25	J	2.6	J	22.22
Metals	Barium	7440-39-3	6010C	mg/kg	159		160		0.63
Metals	Beryllium	7440-41-7	6010C	mg/kg	1.07	J	1.08	J	0.93
Metals	Boron	7440-42-8	6010C	mg/kg	7.1	J	7.6	J	6.80
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.12	U	1.11	U	--
Metals	Calcium	7440-70-2	6010C	mg/kg	10700		8040		28.39
Metals	Chromium	7440-47-3	6010C	mg/kg	41.1		41.1		0.00
Metals	Cobalt	7440-48-4	6010C	mg/kg	10.8		10.1		6.70
Metals	Copper	7440-50-8	6010C	mg/kg	19.1		18.9		1.05
Metals	Iron	7439-89-6	6010C	mg/kg	36100		36500		1.10
Metals	Lead	7439-92-1	6010C	mg/kg	11.7		11.6		0.86
Metals	Lithium	7439-93-2	6010C	mg/kg	27.8		27.9		0.36
Metals	Magnesium	7439-95-4	6010C	mg/kg	7810		7890		1.02
Metals	Manganese	7439-96-5	6010C	mg/kg	498		445		11.24
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.25	U	2.21	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	23.1		21.9		5.33
Metals	Phosphorus	7723-14-0	6010C	mg/kg	287	J	261	J	9.49
Metals	Potassium	7440-09-7	6010C	mg/kg	5050		4910		2.81
Metals	Selenium	7782-49-2	6020A	mg/kg	0.262	J	0.198	J	27.83
Metals	Silver	7440-22-4	6020A	mg/kg	0.0616	J	0.0507	J	19.41
Metals	Sodium	7440-23-5	6010C	mg/kg	257		320		21.84
Metals	Strontium	7440-24-6	6020A	mg/kg	59	J	49.2	J	18.11
Metals	Thallium	7440-28-0	6020A	mg/kg	0.445	J	0.401	J	10.40
Metals	Tin	7440-31-5	6010C	mg/kg	11.2	U	11.1	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1830		1890		3.23
Metals	Vanadium	7440-62-2	6010C	mg/kg	75.9		76.9		1.31
Metals	Zinc	7440-66-6	6010C	mg/kg	75.2		74.6		0.80
Metals	Zirconium	7440-67-7	6010C	mg/kg	8.28		8.3		0.24
Moisture Content	Moisture	MOIST	160.3M	%	11.1		10.6		4.61
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	0.94	J	1.9	UJ	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.1	J	1.9	UJ	200.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	7.5	J	20	UJ	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	0.48	J	1.9	UJ	200.00
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.6	J	1.1	J	37.04
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-543		8_DG-543		RPD
				Sample Name:	SL-843-SA8-SB-4.0-5.0		SL-543-SA8-SB-4.0-5.0		
				Sample Date	08/13/2013		08/13/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	8.09		7.63		5.85
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--

				Location	8_DG-543		8_DG-543		RPD
				Sample Name:	SL-843-SA8-SB-4.0-5.0		SL-543-SA8-SB-4.0-5.0		
				Sample Date	08/13/2013		08/13/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.1	U	1.1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-551		8_DG-551		RPD
				Sample Name:	SL-851-SA8-SB-4.0-5.0		SL-551-SA8-SB-4.0-5.0		
				Sample Date	07/23/2013		07/23/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.71	U	4.99	U	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.71	UJ	4.99	UJ	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.14	UJ	0.997	UJ	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.14	UJ	0.0673	J	200.00
Dioxins	OCDD	3268-87-9	1613B	ng/kg	11.4	UJ	9.97	UJ	--
Dioxins	OCDF	39001-02-0	1613B	ng/kg	11.4	U	9.97	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.111		0.0282		118.97
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.018	U	0.0167	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	32600		33200		1.82
Metals	Antimony	7440-36-0	6010C	mg/kg	4.5	UJ	4.02	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	7.88		7.35		6.96
Metals	Barium	7440-39-3	6010C	mg/kg	107		125		15.52
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.994	J	0.937	J	5.90
Metals	Boron	7440-42-8	6010C	mg/kg	3.64	J	2.35	J	43.07
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.278	J	0.158	J	55.05
Metals	Calcium	7440-70-2	6010C	mg/kg	85800	J	43700	J	65.02
Metals	Chromium	7440-47-3	6010C	mg/kg	35.1		34.9		0.57
Metals	Cobalt	7440-48-4	6010C	mg/kg	7.43	J	15.1	J	68.09
Metals	Copper	7440-50-8	6010C	mg/kg	14.8	J	16.4	J	10.26
Metals	Iron	7439-89-6	6010C	mg/kg	30900		31200		0.97
Metals	Lead	7439-92-1	6010C	mg/kg	9.41		10.5		10.95
Metals	Lithium	7439-93-2	6010C	mg/kg	25.6		26.4		3.08
Metals	Magnesium	7439-95-4	6010C	mg/kg	7130		6690		6.37
Metals	Manganese	7439-96-5	6010C	mg/kg	288	J	445	J	42.84
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.25	U	2.01	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	17.8		18.2		2.22
Metals	Phosphorus	7723-14-0	6010C	mg/kg	127		91.6		32.39
Metals	Potassium	7440-09-7	6010C	mg/kg	2190	J	2310	J	5.33
Metals	Selenium	7782-49-2	6020A	mg/kg	0.12	J	0.402	UJ	200.00
Metals	Silver	7440-22-4	6020A	mg/kg	0.0716	J	0.0527	J	30.41
Metals	Sodium	7440-23-5	6010C	mg/kg	153		139		9.59
Metals	Strontium	7440-24-6	6020A	mg/kg	98.3	J	61.2	J	46.52
Metals	Thallium	7440-28-0	6020A	mg/kg	0.351	J	0.278	J	23.21
Metals	Tin	7440-31-5	6010C	mg/kg	11.3	U	10.1	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1330		1140		15.38
Metals	Vanadium	7440-62-2	6010C	mg/kg	68.9		67.7		1.76
Metals	Zinc	7440-66-6	6010C	mg/kg	55.2		55.5		0.54
Metals	Zirconium	7440-67-7	6010C	mg/kg	7.77		6.76		13.90
Moisture Content	Moisture	MOIST	160.3M	%	12.9		4.4		98.27
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.1	J	1.7	UJ	200.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	18	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	21	U	19	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	2.9	J	1.7	UJ	200.00
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.7	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-551		8_DG-551		RPD
				Sample Name:	SL-851-SA8-SB-4.0-5.0		SL-551-SA8-SB-4.0-5.0		
				Sample Date	07/23/2013		07/23/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.7	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	20	U	18	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	38	U	35	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	38	U	35	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	38	U	35	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.97		7.42		7.15
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.7	U	5.2	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.7	U	5.2	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.7	U	5.2	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.7	U	5.2	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	10	U	--

				Location	8_DG-551		8_DG-551		RPD
				Sample Name:	SL-851-SA8-SB-4.0-5.0		SL-551-SA8-SB-4.0-5.0		
				Sample Date	07/23/2013		07/23/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	0.9	U	0.9	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-553		8_DG-553		RPD
				Sample Name:	SL-853-SA8-SB-4.0-5.0		SL-553-SA8-SB-4.0-5.0		
				Sample Date	08/27/2013		08/27/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.59	U	5.48	U	--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.59	U	0.309	J	200.00
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.59	UJ	5.48	UJ	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	5.59	UJ	5.48	UJ	--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.59	UJ	5.48	UJ	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.311	J	5.48	U	200.00
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.156	J	5.48	UJ	200.00
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.446	J	5.48	U	200.00
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.736	J	0.705	J	4.30
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.59	U	5.48	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	5.59	UJ	5.48	UJ	--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.59	UJ	5.48	UJ	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	5.59	U	5.48	U	--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.12	UJ	0.0496	J	200.00
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.0616	J	1.1	UJ	200.00
Dioxins	OCDD	3268-87-9	1613B	ng/kg	11.2	U	2.73	J	200.00
Dioxins	OCDF	39001-02-0	1613B	ng/kg	11.2	U	11	U	--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.0781		0.219		94.85
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	100	U	100	U	--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	1.9	U	1.9	U	--
Herbicides	2,4-D	94-75-7	8151A	µg/kg	41	U	41	U	--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	19	U	19	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	14	U	14	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	19	U	19	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	27	U	27	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	1300	J	2800	UJ	200.00
Herbicides	MCPP	93-65-2	8151A	µg/kg	2800	U	2800	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.9	U	1.9	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0181	U	0.0184	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	25700		24300		5.60
Metals	Antimony	7440-36-0	6010C	mg/kg	4.46	UJ	4.46	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	6.43		6.33		1.57
Metals	Barium	7440-39-3	6010C	mg/kg	134		137		2.21
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.977	J	0.979	J	0.20
Metals	Boron	7440-42-8	6010C	mg/kg	5.7	J	7.73	J	30.23
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.184	J	0.221	J	18.27
Metals	Calcium	7440-70-2	6010C	mg/kg	7530	J	7840	J	4.03
Metals	Chromium	7440-47-3	6010C	mg/kg	32.8		32.2		1.85
Metals	Cobalt	7440-48-4	6010C	mg/kg	9.27		9.33		0.65
Metals	Copper	7440-50-8	6010C	mg/kg	19.9		20.4		2.48
Metals	Iron	7439-89-6	6010C	mg/kg	33000		33400		1.20
Metals	Lead	7439-92-1	6010C	mg/kg	10.2		10.2		0.00
Metals	Lithium	7439-93-2	6010C	mg/kg	22.3		20.7		7.44
Metals	Magnesium	7439-95-4	6010C	mg/kg	6890		6660		3.39
Metals	Manganese	7439-96-5	6010C	mg/kg	428		488		13.10
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.23	U	2.23	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	19.4		19.5		0.51
Metals	Phosphorus	7723-14-0	6010C	mg/kg	288		307		6.39
Metals	Potassium	7440-09-7	6010C	mg/kg	4680		4800		2.53
Metals	Selenium	7782-49-2	6020A	mg/kg	0.3	J	0.265	J	12.39
Metals	Silver	7440-22-4	6020A	mg/kg	0.0663	J	0.0515	J	25.13
Metals	Sodium	7440-23-5	6010C	mg/kg	96.3	J	90.6	J	6.10
Metals	Strontium	7440-24-6	6020A	mg/kg	51.7	J	44.7	J	14.52
Metals	Thallium	7440-28-0	6020A	mg/kg	0.453	J	0.421	J	7.32
Metals	Tin	7440-31-5	6010C	mg/kg	11.2	U	11.2	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	859	J	822	J	4.40
Metals	Vanadium	7440-62-2	6010C	mg/kg	62.1		60.9		1.95
Metals	Zinc	7440-66-6	6010C	mg/kg	70.8		71.2		0.56
Metals	Zirconium	7440-67-7	6010C	mg/kg	6.2		6.08		1.95
Moisture Content	Moisture	MOIST	160.3M	%	11.3		11.3		0.00
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	UJ	1.2	J	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	0.93	J	1.9	UJ	200.00
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.2	J	0.84	J	35.29
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-553		8_DG-553		RPD
				Sample Name:	SL-853-SA8-SB-4.0-5.0		SL-553-SA8-SB-4.0-5.0		
				Sample Date	08/27/2013		08/27/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.9	U	1.9	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	5		3.8	J	27.27
Pesticides	Chlordane	57-74-9	8081B	µg/kg	19	U	19	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	2	U	2	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.93	U	0.92	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	7.5	U	7.4	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	37	U	37	U	--
pH	pH	pH	9045M	pH	7.68		7.79		1.42
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--

				Location	8_DG-553		8_DG-553		RPD
				Sample Name:	SL-853-SA8-SB-4.0-5.0		SL-553-SA8-SB-4.0-5.0		
				Sample Date	08/27/2013		08/27/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-574		8_DG-574		RPD
				Sample Name:	SL-874-SA8-SB-14.0-15.0		SL-574-SA8-SB-14.0-15.0		
				Sample Date	07/11/2013		07/11/2013		
				Start Depth:	14		14		
				End Depth:	15		15		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.017	U	0.0174	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	13600		18200		28.93
Metals	Antimony	7440-36-0	6010C	mg/kg	4.17	UJ	4.38	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	5.89		6.86		15.22
Metals	Barium	7440-39-3	6010C	mg/kg	65.5		89.1		30.53
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.493	J	0.681	J	32.03
Metals	Boron	7440-42-8	6010C	mg/kg	4	J	5.22	J	26.46
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.447	J	0.508	J	12.77
Metals	Calcium	7440-70-2	6010C	mg/kg	5690	J	9730	J	52.40
Metals	Chromium	7440-47-3	6010C	mg/kg	19.4	J	31.9	J	48.73
Metals	Cobalt	7440-48-4	6010C	mg/kg	6.2		9.05		37.38
Metals	Copper	7440-50-8	6010C	mg/kg	11		16.8		41.73
Metals	Iron	7439-89-6	6010C	mg/kg	21200	J	27600	J	26.23
Metals	Lead	7439-92-1	6010C	mg/kg	4.56		6.13		29.37
Metals	Lithium	7439-93-2	6010C	mg/kg	19.6	J	26.1	J	28.45
Metals	Magnesium	7439-95-4	6010C	mg/kg	4510		6550		36.89
Metals	Manganese	7439-96-5	6010C	mg/kg	267	J	328	J	20.50
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.08	U	2.19	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	10.2		16.5		47.19
Metals	Phosphorus	7723-14-0	6010C	mg/kg	417		683		48.36
Metals	Potassium	7440-09-7	6010C	mg/kg	2590	J	2720	J	4.90
Metals	Selenium	7782-49-2	6020A	mg/kg	0.417	U	0.438	U	--
Metals	Silver	7440-22-4	6020A	mg/kg	0.208	U	0.219	U	--
Metals	Sodium	7440-23-5	6010C	mg/kg	300		448		39.57
Metals	Strontium	7440-24-6	6020A	mg/kg	24.5		38.7		44.94
Metals	Thallium	7440-28-0	6020A	mg/kg	0.303		0.408		29.54
Metals	Tin	7440-31-5	6010C	mg/kg	10.4	U	11	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1390		1670		18.30
Metals	Vanadium	7440-62-2	6010C	mg/kg	41.4		54.4		27.14
Metals	Zinc	7440-66-6	6010C	mg/kg	52.6	J	75.1	J	35.24
Metals	Zirconium	7440-67-7	6010C	mg/kg	1.5	J	5.48	UJ	200.00
Moisture Content	Moisture	MOIST	160.3M	%	6.8		9.6		34.15
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	18	U	19	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	19	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.8	U	1.8	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-574		8_DG-574		RPD
				Sample Name:	SL-874-SA8-SB-14.0-15.0		SL-574-SA8-SB-14.0-15.0		
				Sample Date	07/11/2013		07/11/2013		
				Start Depth:	14		14		
				End Depth:	15		15		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.8	U	1.8	U	--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	18	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	35	U	36	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	35	U	36	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	35	U	36	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.96		8.1		1.74
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.3	U	5.5	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.3	U	5.5	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.3	U	5.5	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.3	U	5.5	U	--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	11	U	11	U	--

				Location	8_DG-574		8_DG-574		RPD
				Sample Name:	SL-874-SA8-SB-14.0-15.0		SL-574-SA8-SB-14.0-15.0		
				Sample Date	07/11/2013		07/11/2013		
				Start Depth:	14		14		
				End Depth:	15		15		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1	U	1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg	6	U	5	U	--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg	6	U	5	U	--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg	6	U	5	U	--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg	6	U	5	U	--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg	6	U	5	U	--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg	6	U	5	U	--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg	6	U	5	U	--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg	6	U	5	U	--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg	6	U	5	U	--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg	6	U	5	U	--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg	6	U	5	U	--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg	6	U	5	U	--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg	6	U	5	U	--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg	6	U	5	U	--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg	6	U	5	U	--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg	6	U	5	U	--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg	6	U	5	U	--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg	6	U	5	U	--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg	6	U	5	U	--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg	6	U	5	U	--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg	6	U	5	U	--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg	6	U	5	U	--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg	6	U	5	U	--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg	11	U	10	U	--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg	6	U	5	U	--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg	11	U	10	U	--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg	6	U	5	U	--
VOC	2-Hexanone	591-78-6	8260B	µg/kg	11	U	10	U	--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg	6	U	5	U	--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg	6	U	5	U	--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg	11	U	10	U	--
VOC	Acetone	67-64-1	8260B	µg/kg	23	U	20	U	--
VOC	Acrolein	107-02-8	8260B	µg/kg	110	U	100	U	--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg	23	U	20	U	--
VOC	Benzene	71-43-2	8260B	µg/kg	6	U	5	U	--
VOC	Bromobenzene	108-86-1	8260B	µg/kg	6	U	5	U	--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg	6	U	5	U	--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg	6	U	5	U	--
VOC	Bromoform	75-25-2	8260B	µg/kg	6	U	5	U	--
VOC	Bromomethane	74-83-9	8260B	µg/kg	6	U	5	U	--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg	6	U	5	U	--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg	6	U	5	U	--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg	6	U	5	U	--
VOC	Chloroethane	75-00-3	8260B	µg/kg	6	U	5	U	--
VOC	Chloroform	67-66-3	8260B	µg/kg	6	U	5	U	--
VOC	Chloromethane	74-87-3	8260B	µg/kg	6	U	5	U	--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg	6	U	5	U	--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg	6	U	5	U	--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg	6	U	5	U	--
VOC	Cymene	99-87-6	8260B	µg/kg	6	U	5	U	--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg	6	U	5	U	--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg	6	U	5	U	--
VOC	Dibromomethane	74-95-3	8260B	µg/kg	6	U	5	U	--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg	6	U	5	U	--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg	6	U	5	U	--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg	6	U	5	U	--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg	6	U	5	U	--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg	6	U	5	U	--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg	6	U	5	U	--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg	6	U	5	U	--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg	6	U	5	U	--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg	6	U	5	U	--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg	6	U	5	U	--
VOC	o-Xylene	95-47-6	8260B	µg/kg	6	U	5	U	--
VOC	Styrene	100-42-5	8260B	µg/kg	6	U	5	U	--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg	6	U	5	U	--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg	6	U	5	U	--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg	6	U	5	U	--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg	57	U	51	U	--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg	6	U	5	U	--
VOC	Toluene	108-88-3	8260B	µg/kg	6	U	5	U	--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg	6	U	5	U	--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg	6	U	5	U	--
VOC	Trichloroethene	79-01-6	8260B	µg/kg	6	U	5	U	--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg	6	U	5	U	--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg	11	U	10	U	--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg	6	U	5	U	--

Notes:
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 only were estimated "J"

				Location	8_DG-578		8_DG-578		RPD
				Sample Name:	SL-878-SA8-SB-4.0-5.0		SL-578-SA8-SB-4.0-5.0		
				Sample Date	07/12/2013		07/12/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.4	U	1.41	J	200.00
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.4	U	0.204	J	200.00
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.4	U	5.49	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.0627	J	0.0838	J	28.81
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	5.4	U	5.49	U	--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.43	J	0.52	J	18.95
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	5.4	U	5.49	U	--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.735	J	0.8	J	8.47
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	1.06	J	0.901	J	16.22
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.4	U	5.49	U	--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.144	J	5.49	U	200.00
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	5.4	U	5.49	U	--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.0415	J	0.131	J	103.77
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	1.08	U	1.1	U	--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	1.08	U	1.1	U	--
Dioxins	OCDD	3268-87-9	1613B	ng/kg	1.52	J	13.2		158.70
Dioxins	OCDF	39001-02-0	1613B	ng/kg	0.147	J	0.414	J	95.19
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.23		0.206		11.01
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0177	U	0.0179	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	31500		25300		21.83
Metals	Antimony	7440-36-0	6010C	mg/kg	4.3	UJ	4.44	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	6.49		5.71		12.79
Metals	Barium	7440-39-3	6010C	mg/kg	135	J	116	J	15.14
Metals	Beryllium	7440-41-7	6010C	mg/kg	1.02	J	0.83	J	20.54
Metals	Boron	7440-42-8	6010C	mg/kg	3.04	J	2.75	J	10.02
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.408	J	0.533	J	26.57
Metals	Calcium	7440-70-2	6010C	mg/kg	5050		5110		1.18
Metals	Chromium	7440-47-3	6010C	mg/kg	36.2	J	29.7	J	19.73
Metals	Cobalt	7440-48-4	6010C	mg/kg	10.1		8.52		16.97
Metals	Copper	7440-50-8	6010C	mg/kg	17.7	J	16.9	J	4.62
Metals	Iron	7439-89-6	6010C	mg/kg	32600		27500		16.97
Metals	Lead	7439-92-1	6010C	mg/kg	8.91		8.58		3.77
Metals	Lithium	7439-93-2	6010C	mg/kg	24.3		20.5		16.96
Metals	Magnesium	7439-95-4	6010C	mg/kg	6350		5560		13.27
Metals	Manganese	7439-96-5	6010C	mg/kg	524	J	373	J	33.67
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.15	U	2.22	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	20.8		17.9		14.99
Metals	Phosphorus	7723-14-0	6010C	mg/kg	242	J	286	J	16.67
Metals	Potassium	7440-09-7	6010C	mg/kg	5300		5200		1.90
Metals	Selenium	7782-49-2	6020A	mg/kg	0.326	J	0.277	J	16.25
Metals	Silver	7440-22-4	6020A	mg/kg	0.0645	J	0.0557	J	14.64
Metals	Sodium	7440-23-5	6010C	mg/kg	207		214		3.33
Metals	Strontium	7440-24-6	6020A	mg/kg	34.1	J	33.4	J	2.07
Metals	Thallium	7440-28-0	6020A	mg/kg	0.588	J	0.402	J	37.58
Metals	Tin	7440-31-5	6010C	mg/kg	10.7	U	11.1	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1340		1210		10.20
Metals	Vanadium	7440-62-2	6010C	mg/kg	66.8	J	55	J	19.38
Metals	Zinc	7440-66-6	6010C	mg/kg	70.2		65.4		7.08
Metals	Zirconium	7440-67-7	6010C	mg/kg	7.25		7.25		0.00
Moisture Content	Moisture	MOIST	160.3M	%	11.4		11.6		1.74
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.9	U	0.89	J	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.9	U	0.92	J	200.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.9	U	0.77	J	200.00
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg			8	J	--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	0.88	J			--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.1	J	6.3		140.54
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	2.4		9.9		121.95
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	19	U	5	J	200.00
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.9	U	3.1		200.00
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	1.1	J	4.6		122.81
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	20	U	7.8	J	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg			9	J	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	2.4				--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.9	U	1.2	J	200.00
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	20	U	20	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg			8	J	--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	1.8	J			--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.9	U	2.2		200.00
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.9	U	1.9	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg			5	J	--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.5	J			--
PAHs	Pyrene	129-00-0	8270D	µg/kg			11	J	--

				Location	8_DG-578		8_DG-578		RPD
				Sample Name:	SL-878-SA8-SB-4.0-5.0		SL-578-SA8-SB-4.0-5.0		
				Sample Date	07/12/2013		07/12/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	1.6	J			--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	19	U	19	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	37	U	37	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	37	U	37	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	5.91		6.12		3.49
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg	38	U	38	U	--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg	38	U	38	U	--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg	38	U	38	U	--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg	38	U	38	U	--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg	38	U	38	U	--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg	38	U	38	U	--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg	740	U	750	U	--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg	38	UJ	38	UJ	--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg	37	U	37	U	--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg	38	U	38	U	--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg	38	U	38	U	--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg	38	U	38	U	--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg	38	U	38	U	--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg	380	U	380	U	--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg	190	U	190	U	--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg	190	U	190	U	--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg	560	U	570	U	--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg	38	U	38	U	--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg	38	U	38	U	--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg	38	U	38	U	--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg	190	U	190	U	--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg	560	U	570	U	--
SVOC	Aniline	62-53-3	8270D	µg/kg	380	U	380	U	--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg	1900	U			--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg			8	J	--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg	560	U	570	U	--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg	380	U	380	U	--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg	38	U	38	U	--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg	38	U	38	U	--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg	38	U	38	U	--
SVOC	Carbazole	86-74-8	8270D	µg/kg	38	U	38	U	--
SVOC	Chrysene	218-01-9	8270D	µg/kg			9	J	--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg	38	U	38	U	--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg	190	U	190	U	--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg			8	J	--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg	19	U	19	U	--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg	38	U	38	U	--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg	560	U	570	U	--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg	190	U	190	U	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg	38	U	38	U	--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg	38	U	38	U	--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg	38	U	38	U	--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg	38	U	38	U	--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg	190	U	190	U	--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg			5	J	--
SVOC	Phenol	108-95-2	8270D	µg/kg	38	U	38	U	--
SVOC	Pyrene	129-00-0	8270D	µg/kg			11	J	--
SVOC	Pyridine	110-86-1	8270D	µg/kg	190	U	190	U	--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5.6	U	5.6	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	5.6		5.7	J	1.77
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	18		28	J	43.48

				Location	8_DG-578		8_DG-578		RPD
				Sample Name:	SL-878-SA8-SB-4.0-5.0		SL-578-SA8-SB-4.0-5.0		
				Sample Date	07/12/2013		07/12/2013		
				Start Depth:	4		4		
				End Depth:	5		5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg	1.1	U	1.1	U	--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-583		8_DG-583		RPD
				Sample Name:	SL-883-SA8-SB-0.0-0.5		SL-583-SA8-SB-0.0-0.5		
				Sample Date	08/06/2013		08/06/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	45.6	J	12.8	J	112.33
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	5.73	J	1.65	J	110.57
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	0.551	J	4.95	UJ	200.00
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.778	J	0.266	J	98.08
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	1.37	J	0.347	J	119.16
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	2.27	J	0.87	J	89.17
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	1.11	J	0.403	J	93.46
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	1.93	J	0.861	J	76.60
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.642	J	0.396	J	47.40
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	5.96	J	2.1	J	95.78
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.548	J	4.95	UJ	200.00
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.767	J	0.237	J	105.58
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	1.66	J	0.252	J	147.28
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.055	J	0.99	UJ	200.00
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	2.32	J	0.581	J	119.89
Dioxins	OCDD	3268-87-9	1613B	ng/kg	414	J	122	J	108.96
Dioxins	OCDF	39001-02-0	1613B	ng/kg	11.5	J	3.08	J	115.50
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	3.04		0.843		113.16
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg	92	U			--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg	2.3		1.7		30.00
Herbicides	2,4-D	94-75-7	8151A	µg/kg	23	J	23	J	0.00
Herbicides	2,4-DB	94-82-6	8151A	µg/kg	35	U	30	U	--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg	12	U	12	U	--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg	17	U	17	U	--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg	24	U	24	U	--
Herbicides	MCPA	94-74-6	8151A	µg/kg	2600	U	2500	U	--
Herbicides	MCPP	93-65-2	8151A	µg/kg	2600	U	2500	U	--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg	1.7	U	1.7	U	--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0359		0.0225		45.89
Metals	Aluminum	7429-90-5	6010C	mg/kg	18800		18000		4.35
Metals	Antimony	7440-36-0	6010C	mg/kg	8.98	J	4	UJ	200.00
Metals	Arsenic	7440-38-2	6010C	mg/kg	2.32	J	1.72	J	29.70
Metals	Barium	7440-39-3	6010C	mg/kg	93.7		92.1		1.72
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.614	J	0.621	J	1.13
Metals	Boron	7440-42-8	6010C	mg/kg	12.9		12.2		5.58
Metals	Cadmium	7440-43-9	6010C	mg/kg	1.39	J	0.584	J	81.66
Metals	Calcium	7440-70-2	6010C	mg/kg	3400		3380		0.59
Metals	Chromium	7440-47-3	6010C	mg/kg	22.6		20		12.21
Metals	Cobalt	7440-48-4	6010C	mg/kg	5.76	J	5.46	J	5.35
Metals	Copper	7440-50-8	6010C	mg/kg	17.2		14.8		15.00
Metals	Iron	7439-89-6	6010C	mg/kg	21000		20400		2.90
Metals	Lead	7439-92-1	6010C	mg/kg	27.3	J	15.4	J	55.74
Metals	Lithium	7439-93-2	6010C	mg/kg	20.4	J	19.6	J	4.00
Metals	Magnesium	7439-95-4	6010C	mg/kg	4130		4040		2.20
Metals	Manganese	7439-96-5	6010C	mg/kg	296		288		2.74
Metals	Molybdenum	7439-98-7	6010C	mg/kg	2.05	UJ	2	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	12.8		11.8		8.13
Metals	Phosphorus	7723-14-0	6010C	mg/kg	443		416		6.29
Metals	Potassium	7440-09-7	6010C	mg/kg	3440	J	3290	J	4.46
Metals	Selenium	7782-49-2	6020A	mg/kg	0.215	J	0.144	J	39.55
Metals	Silver	7440-22-4	6020A	mg/kg	0.101	J	0.0432	J	80.17
Metals	Sodium	7440-23-5	6010C	mg/kg	66.7	J	64.5	J	3.35
Metals	Strontium	7440-24-6	6020A	mg/kg	34.7	J	23.4	J	38.90
Metals	Thallium	7440-28-0	6020A	mg/kg	0.381	J	0.262	J	37.01
Metals	Tin	7440-31-5	6010C	mg/kg	10.2	U	9.99	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1050		980		6.90
Metals	Vanadium	7440-62-2	6010C	mg/kg	39		37		5.26
Metals	Zinc	7440-66-6	6010C	mg/kg	219	J	106	J	69.54
Metals	Zirconium	7440-67-7	6010C	mg/kg	1.94	J	2.53	J	26.40
Moisture Content	Moisture	MOIST	160.3M	%	2.3		1.9		19.05
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	0.79	J	1.7	UJ	200.00
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	2.2	J	1	J	75.00
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg	3	J			--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg			1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg	5	J	7	J	33.33
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg	8	J			--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg			1.1	J	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg	9	J	8	J	11.76
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	4.5	J	17	UJ	200.00
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg	6	J			--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg			0.71	J	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg	4	J	8	J	66.67
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	29	J	11	J	90.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	27	J	18	UJ	200.00
PAHs	Chrysene	218-01-9	8270D	µg/kg			7	J	--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	11				--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	0.69	J	1.7	UJ	200.00
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg	8	J	4	J	66.67
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg	5	J			--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg			1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	2.3	J	1.2	J	62.86
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg	6	J	5	J	18.18
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D	µg/kg	10	J	8	J	22.22

				Location	8_DG-583		8_DG-583		RPD
				Sample Name:	SL-883-SA8-SB-0.0-0.5		SL-583-SA8-SB-0.0-0.5		
				Sample Date	08/06/2013		08/06/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	96	J	20	J	131.03
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	17	UJ	9.2	J	200.00
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	34	U	34	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	22	J	34	UJ	200.00
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg	1.7	U	3.3	U	--
Pesticides	Aldrin	309-00-2	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg	1.9	U	1.9	U	--
Pesticides	Chlordane	57-74-9	8081B	µg/kg	17	U	17	U	--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg	1.8	U	1.7	U	--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin	72-20-8	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg	1.8	U	1.8	U	--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg	0.85	U	0.84	U	--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg	6.8	U	6.8	U	--
Pesticides	Mirex	2385-85-5	8081B	µg/kg	1.7	U	1.7	U	--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg	34	U	34	U	--
pH	pH	pH	9045M	pH	6.71		6.52		2.87
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg	34	U	34	U	--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg	34	U	34	U	--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg	34	U	34	U	--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg	34	U	34	U	--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg	34	U	34	U	--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg	34	U	34	U	--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg	34	U	34	U	--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg	34	U	34	U	--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg	34	U	34	U	--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg	34	U	34	U	--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg	670	U	670	U	--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg	34	U	34	U	--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg	34	U	34	U	--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg	34	U	34	U	--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg	34	U	34	U	--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg	34	U	34	U	--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg	34	U	34	U	--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg	340	U	340	U	--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg	170	U	170	U	--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg	170	U	170	U	--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg	510	U	510	U	--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg	34	U	34	U	--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg	34	U	34	U	--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg	34	U	34	U	--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg	34	U	34	U	--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg	34	U	34	U	--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg	170	U	170	U	--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg	510	U	510	U	--
SVOC	Aniline	62-53-3	8270D	µg/kg	340	U	340	U	--
SVOC	Anthracene	120-12-7	8270D	µg/kg	3	J			--
SVOC	Benzidine	92-87-5	8270D	µg/kg	1700	U			--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg	5	J	7	J	33.33
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg	8	J			--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg	9	J	8	J	11.76
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg	6	J			--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg	4	J	8	J	66.67
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg	510	U	510	U	--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg	340	U	340	U	--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg	34	U	34	U	--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg	34	U	34	U	--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg	34	U	34	U	--
SVOC	Carbazole	86-74-8	8270D	µg/kg	34	U	34	U	--
SVOC	Chrysene	218-01-9	8270D	µg/kg			7	J	--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg	34	U	34	U	--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg	170	U	170	U	--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg	8	J	4	J	66.67
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg	17	U	17	U	--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg	34	U	34	U	--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg	510	U	510	U	--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg	170	U	170	U	--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg	5	J			--
SVOC	Isophorone	78-59-1	8270D	µg/kg	34	U	34	U	--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg	34	U	34	U	--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg	34	U	34	U	--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg	34	U	34	U	--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg	170	U	170	U	--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg	6	J	5	J	18.18
SVOC	Phenol	108-95-2	8270D	µg/kg	34	U	34	U	--
SVOC	Pyrene	129-00-0	8270D	µg/kg	10	J	8	J	22.22
SVOC	Pyridine	110-86-1	8270D	µg/kg	170	U	170	U	--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5.1	U	5.1	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5.1	U	5.1	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	2.4	J	5.1	UJ	200.00
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	24	J	13	J	59.46
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	66	J	34	J	64.00

				Location	8_DG-583		8_DG-583		RPD
				Sample Name:	SL-883-SA8-SB-0.0-0.5		SL-583-SA8-SB-0.0-0.5		
				Sample Date	08/06/2013		08/06/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-588		8_DG-588		RPD
				Sample Name:	SL-888-SA8-SB-0.0-0.5		SL-588-SA8-SB-0.0-0.5		
				Sample Date	07/08/2013		07/08/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg	5.63		6.94		20.84
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg	0.91	J	0.972	J	6.59
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg	5.03	U	4.91	U	--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg	0.152	J	0.13	J	15.60
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg	0.19	J	0.27	J	34.78
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg	0.41	J	0.46	J	11.49
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg	0.206	J	0.223	J	7.93
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg	0.484	J	0.467	J	3.58
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg	0.304	J	0.309	J	1.63
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg	0.307	J	0.397	J	25.57
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg	0.148	J	0.178	J	18.40
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg	0.184	J	0.243	J	27.63
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg	0.33	J	0.518	J	44.34
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg	0.0222	J	0.0397	J	56.54
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg	0.265	J	0.345	J	26.23
Dioxins	OCDD	3268-87-9	1613B	ng/kg	55.8		70.3	J	23.00
Dioxins	OCDF	39001-02-0	1613B	ng/kg	1.73	J	1.8	J	3.97
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg	0.344		0.666		63.76
Fluoride	Fluoride	16984-48-8	300.0	mg/kg					--
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0099	J	0.012	J	19.18
Metals	Aluminum	7429-90-5	6010C	mg/kg	16600		16000		3.68
Metals	Antimony	7440-36-0	6010C	mg/kg	3.96	UJ	3.96	UJ	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	4.22		4.15		1.67
Metals	Barium	7440-39-3	6010C	mg/kg	109		103		5.66
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.551	J	0.522	J	5.41
Metals	Boron	7440-42-8	6010C	mg/kg	2.49	J	2.63	J	5.47
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.441	J	0.423	J	4.17
Metals	Calcium	7440-70-2	6010C	mg/kg	2320	J	2210	J	4.86
Metals	Chromium	7440-47-3	6010C	mg/kg	16.5		16		3.08
Metals	Cobalt	7440-48-4	6010C	mg/kg	4.55		4.35		4.49
Metals	Copper	7440-50-8	6010C	mg/kg	10.7		10.4		2.84
Metals	Iron	7439-89-6	6010C	mg/kg	18000		17100		5.13
Metals	Lead	7439-92-1	6010C	mg/kg	8.79		9		2.36
Metals	Lithium	7439-93-2	6010C	mg/kg	21.1		20.1		4.85
Metals	Magnesium	7439-95-4	6010C	mg/kg	3680		3500		5.01
Metals	Manganese	7439-96-5	6010C	mg/kg	341		325		4.80
Metals	Molybdenum	7439-98-7	6010C	mg/kg	1.98	U	1.98	U	--
Metals	Nickel	7440-02-0	6010C	mg/kg	10.5		10.3		1.92
Metals	Phosphorus	7723-14-0	6010C	mg/kg	501		493		1.61
Metals	Potassium	7440-09-7	6010C	mg/kg	3950	J	3690	J	6.81
Metals	Selenium	7782-49-2	6020A	mg/kg	0.181	J	0.102	J	55.83
Metals	Silver	7440-22-4	6020A	mg/kg	0.0312	J	0.0326	J	4.39
Metals	Sodium	7440-23-5	6010C	mg/kg	67.3	J	66.5	J	1.20
Metals	Strontium	7440-24-6	6020A	mg/kg	20.8	J	19.3	J	7.48
Metals	Thallium	7440-28-0	6020A	mg/kg	0.249		0.24		3.68
Metals	Tin	7440-31-5	6010C	mg/kg	9.9	U	9.9	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	1050		1020		2.90
Metals	Vanadium	7440-62-2	6010C	mg/kg	30.7		28.9		6.04
Metals	Zinc	7440-66-6	6010C	mg/kg	65.2	J	62.4	J	4.39
Metals	Zirconium	7440-67-7	6010C	mg/kg	3.65	J	3.62	J	0.83
Moisture Content	Moisture	MOIST	160.3M	%	0.97		0.95		2.08
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg					--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg	0.71	J	0.82	J	14.38
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg	17	U	17	U	--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg	4.9		4.1		17.78
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg	18	UJ	10	J	200.00
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg	0.94	J	1.1	J	15.69
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg	18	U	18	U	--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg	0.9	J	0.87	J	3.39
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg	1.7	U	1.7	U	--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-588		8_DG-588		RPD
				Sample Name:	SL-888-SA8-SB-0.0-0.5		SL-588-SA8-SB-0.0-0.5		
				Sample Date	07/08/2013		07/08/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg	0.67	J	0.73	J	8.57
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg	17	U	17	U	--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg	33	U	33	U	--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg	33	U	33	U	--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg	33	U	33	U	--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg	5	UJ	3	J	200.00
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	6.42		6.56		2.16
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg	5	U	5	U	--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg	5	U	5	U	--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg	5	U	5	U	--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg	10		9.3	J	7.25
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg	27		25		7.69

				Location	8_DG-588		8_DG-588		RPD
				Sample Name:	SL-888-SA8-SB-0.0-0.5		SL-588-SA8-SB-0.0-0.5		
				Sample Date	07/08/2013		07/08/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

				Location	8_DG-604		8_DG-604		RPD
				Sample Name:	SL-904-SA8-SB-0.0-0.5		SL-604-SA8-SB-0.0-0.5		
				Sample Date	08/29/2013		08/29/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
MAG:	Chemical Name:	CAS No.:	Lab Method:	Result Unit					
Cyanide	Cyanide	57-12-5	9012B	mg/kg					--
Dioxins	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1613B	ng/kg					--
Dioxins	1,2,3,4,6,7,8-HPCDF	67562-39-4	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8,9-HPCDF	55673-89-7	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1613B	ng/kg					--
Dioxins	1,2,3,4,7,8-HXCDF	70648-26-9	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1613B	ng/kg					--
Dioxins	1,2,3,6,7,8-HXCDF	57117-44-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1613B	ng/kg					--
Dioxins	1,2,3,7,8,9-HXCDF	72918-21-9	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1613B	ng/kg					--
Dioxins	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1613B	ng/kg					--
Dioxins	2,3,4,6,7,8-HXCDF	60851-34-5	1613B	ng/kg					--
Dioxins	2,3,4,7,8-PECDF	57117-31-4	1613B	ng/kg					--
Dioxins	2,3,7,8-TCDD	1746-01-6	1613B	ng/kg					--
Dioxins	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1613B	ng/kg					--
Dioxins	OCDD	3268-87-9	1613B	ng/kg					--
Dioxins	OCDF	39001-02-0	1613B	ng/kg					--
Dioxins	TCDD TEQ	TCDD TEQ	1613B	ng/kg					--
Fluoride	Fluoride	16984-48-8	300.0	mg/kg	1.4	J	0.87	J	46.70
Herbicides	2,2-Dichlor-Propionic Acid	75-99-0	8151A	µg/kg					--
Herbicides	2,4,5-T	93-76-5	8151A	µg/kg					--
Herbicides	2,4-D	94-75-7	8151A	µg/kg					--
Herbicides	2,4-DB	94-82-6	8151A	µg/kg					--
Herbicides	Dicamba	1918-00-9	8151A	µg/kg					--
Herbicides	Dichlorprop	120-36-5	8151A	µg/kg					--
Herbicides	Dinitrobutyl Phenol	88-85-7	8151A	µg/kg					--
Herbicides	MCPA	94-74-6	8151A	µg/kg					--
Herbicides	MCPP	93-65-2	8151A	µg/kg					--
Herbicides	Silvex (2,4,5-TP)	93-72-1	8151A	µg/kg					--
Hexavalent Chromium	Chromium (Hexavalent Compounds)	18540-29-9	7199	mg/kg					--
Mercury	Mercury	7439-97-6	7471B	mg/kg	0.0164	U	0.0165	U	--
Metals	Aluminum	7429-90-5	6010C	mg/kg	3310	J	1980	J	50.28
Metals	Antimony	7440-36-0	6010C	mg/kg	3.91	U	3.98	U	--
Metals	Arsenic	7440-38-2	6010C	mg/kg	2.78	J	3.98	U	200.00
Metals	Barium	7440-39-3	6010C	mg/kg	58.6		59.4		1.36
Metals	Beryllium	7440-41-7	6010C	mg/kg	0.978	U	0.996	U	--
Metals	Boron	7440-42-8	6010C	mg/kg	5.52	J	4.65	J	17.11
Metals	Cadmium	7440-43-9	6010C	mg/kg	0.174	J	0.11	J	45.07
Metals	Calcium	7440-70-2	6010C	mg/kg	305000		358000		15.99
Metals	Chromium	7440-47-3	6010C	mg/kg	4.73		2.89	J	48.29
Metals	Cobalt	7440-48-4	6010C	mg/kg	1.43	J	0.584	J	84.01
Metals	Copper	7440-50-8	6010C	mg/kg	3.39	J	2.11	J	46.55
Metals	Iron	7439-89-6	6010C	mg/kg	3540	J	1750	J	67.67
Metals	Lead	7439-92-1	6010C	mg/kg	2.97	J	3.47	J	15.53
Metals	Lithium	7439-93-2	6010C	mg/kg	5.5	J	3.8	J	36.56
Metals	Magnesium	7439-95-4	6010C	mg/kg	2160		1930		11.25
Metals	Manganese	7439-96-5	6010C	mg/kg	59.1	J	31.9	J	59.78
Metals	Molybdenum	7439-98-7	6010C	mg/kg	1.96	UJ	1.99	UJ	--
Metals	Nickel	7440-02-0	6010C	mg/kg	3.83	J	2.14	J	56.62
Metals	Phosphorus	7723-14-0	6010C	mg/kg	140		146		4.20
Metals	Potassium	7440-09-7	6010C	mg/kg	480	J	325	J	38.51
Metals	Selenium	7782-49-2	6020A	mg/kg	0.114	J	0.398	UJ	200.00
Metals	Silver	7440-22-4	6020A	mg/kg	0.0382	J	0.199	UJ	200.00
Metals	Sodium	7440-23-5	6010C	mg/kg	132		152		14.08
Metals	Strontium	7440-24-6	6020A	mg/kg	185		189		2.14
Metals	Thallium	7440-28-0	6020A	mg/kg	0.0378	J	0.199	UJ	200.00
Metals	Tin	7440-31-5	6010C	mg/kg	9.78	U	9.96	U	--
Metals	Titanium	7440-32-6	6010C	mg/kg	120	J	73	J	48.70
Metals	Vanadium	7440-62-2	6010C	mg/kg	9.27	J	5.27	J	55.02
Metals	Zinc	7440-66-6	6010C	mg/kg	11.8	J	6.43	J	58.91
Metals	Zirconium	7440-67-7	6010C	mg/kg	0.963	J	1.26	J	26.72
Moisture Content	Moisture	MOIST	160.3M	%	0.75		0.6		22.22
Nitrates	Nitrite-NO2	14797-65-0	300.0	mg/kg	1	U	1	U	--
PAHs	1-Methylnaphthalene	90-12-0	8270D SIM	µg/kg					--
PAHs	2-Methylnaphthalene	91-57-6	8270D SIM	µg/kg					--
PAHs	Acenaphthene	83-32-9	8270D SIM	µg/kg					--
PAHs	Acenaphthylene	208-96-8	8270D SIM	µg/kg					--
PAHs	Anthracene	120-12-7	8270D	µg/kg					--
PAHs	Anthracene	120-12-7	8270D SIM	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
PAHs	Benzo(a)anthracene	56-55-3	8270D SIM	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
PAHs	Benzo(a)pyrene	50-32-8	8270D SIM	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
PAHs	Benzo(b)fluoranthene	205-99-2	8270D SIM	µg/kg					--
PAHs	Benzo(e)pyrene	192-97-2	8270D SIM	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
PAHs	Benzo(g,h,i)perylene	191-24-2	8270D SIM	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
PAHs	Benzo(k)fluoranthene	207-08-9	8270D SIM	µg/kg					--
PAHs	Bis(2-ethylhexyl)phthalate	117-81-7	8270D SIM	µg/kg					--
PAHs	Butylbenzylphthalate	85-68-7	8270D SIM	µg/kg					--
PAHs	Chrysene	218-01-9	8270D	µg/kg					--
PAHs	Chrysene	218-01-9	8270D SIM	µg/kg					--
PAHs	Dibenzo(a,h)anthracene	53-70-3	8270D SIM	µg/kg					--
PAHs	Diethylphthalate	84-66-2	8270D SIM	µg/kg					--
PAHs	Dimethylphthalate	131-11-3	8270D SIM	µg/kg					--
PAHs	Di-n-butylphthalate	84-74-2	8270D SIM	µg/kg					--
PAHs	Di-n-octylphthalate	117-84-0	8270D SIM	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D	µg/kg					--
PAHs	Fluoranthene	206-44-0	8270D SIM	µg/kg					--
PAHs	Fluorene	86-73-7	8270D SIM	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
PAHs	Indeno(1,2,3-cd)pyrene	193-39-5	8270D SIM	µg/kg					--
PAHs	Naphthalene	91-20-3	8270D SIM	µg/kg					--
PAHs	N-Nitrosodimethylamine	62-75-9	8270D SIM	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D	µg/kg					--
PAHs	Phenanthrene	85-01-8	8270D SIM	µg/kg					--
PAHs	Pyrene	129-00-0	8270D	µg/kg					--

				Location	8_DG-604		8_DG-604		RPD
				Sample Name:	SL-904-SA8-SB-0.0-0.5		SL-604-SA8-SB-0.0-0.5		
				Sample Date	08/29/2013		08/29/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
PAHs	Pyrene	129-00-0	8270D SIM	µg/kg					--
PCBPCTs	Aroclor 1016	12674-11-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1221	11104-28-2	8082A	µg/kg					--
PCBPCTs	Aroclor 1232	11141-16-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1242	53469-21-9	8082A	µg/kg					--
PCBPCTs	Aroclor 1248	12672-29-6	8082A	µg/kg					--
PCBPCTs	Aroclor 1254	11097-69-1	8082A	µg/kg					--
PCBPCTs	Aroclor 1260	11096-82-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1262	37324-23-5	8082A	µg/kg					--
PCBPCTs	Aroclor 1268	11100-14-4	8082A	µg/kg					--
PCBPCTs	Aroclor 5432	63496-31-1	8082A	µg/kg					--
PCBPCTs	Aroclor 5442	12642-23-8	8082A	µg/kg					--
PCBPCTs	Aroclor 5460	11126-42-4	8082A	µg/kg					--
Perchlorate	Perchlorate	14797-73-0	6850	µg/kg					--
Pesticides	4,4'-DDD	72-54-8	8081B	µg/kg					--
Pesticides	4,4'-DDE	72-55-9	8081B	µg/kg					--
Pesticides	4,4'-DDT	50-29-3	8081B	µg/kg					--
Pesticides	Aldrin	309-00-2	8081B	µg/kg					--
Pesticides	Alpha-Bhc	319-84-6	8081B	µg/kg					--
Pesticides	Beta-Bhc	319-85-7	8081B	µg/kg					--
Pesticides	Chlordane	57-74-9	8081B	µg/kg					--
Pesticides	Delta-Bhc	319-86-8	8081B	µg/kg					--
Pesticides	Dieldrin	60-57-1	8081B	µg/kg					--
Pesticides	Endosulfan I	959-98-8	8081B	µg/kg					--
Pesticides	Endosulfan II	33213-65-9	8081B	µg/kg					--
Pesticides	Endosulfan Sulfate	1031-07-8	8081B	µg/kg					--
Pesticides	Endrin	72-20-8	8081B	µg/kg					--
Pesticides	Endrin Aldehyde	7421-93-4	8081B	µg/kg					--
Pesticides	Endrin Ketone	53494-70-5	8081B	µg/kg					--
Pesticides	Gamma-Bhc (Lindane)	58-89-9	8081B	µg/kg					--
Pesticides	Heptachlor	76-44-8	8081B	µg/kg					--
Pesticides	Heptachlor Epoxide	1024-57-3	8081B	µg/kg					--
Pesticides	Methoxychlor	72-43-5	8081B	µg/kg					--
Pesticides	Mirex	2385-85-5	8081B	µg/kg					--
Pesticides	Technical Toxaphene	8001-35-2	8081B	µg/kg					--
pH	pH	pH	9045M	pH	7.99		7.88		1.39
SVOC	1,1'-Biphenyl	92-52-4	8270D	µg/kg					--
SVOC	1,2,4-Trichlorobenzene	120-82-1	8270D	µg/kg					--
SVOC	1,2-Dichlorobenzene	95-50-1	8270D	µg/kg					--
SVOC	1,2-Diphenylhydrazine	122-66-7	8270D	µg/kg					--
SVOC	1,3-Dichlorobenzene	541-73-1	8270D	µg/kg					--
SVOC	1,4-Dichlorobenzene	106-46-7	8270D	µg/kg					--
SVOC	2,4,5-Trichlorophenol	95-95-4	8270D	µg/kg					--
SVOC	2,4,6-Trichlorophenol	88-06-2	8270D	µg/kg					--
SVOC	2,4-Dichlorophenol	120-83-2	8270D	µg/kg					--
SVOC	2,4-Dimethylphenol	105-67-9	8270D	µg/kg					--
SVOC	2,4-Dinitrophenol	51-28-5	8270D	µg/kg					--
SVOC	2,6-Dichlorophenol	87-65-0	8270D	µg/kg					--
SVOC	2-Chloronaphthalene	91-58-7	8270D	µg/kg					--
SVOC	2-Chlorophenol	95-57-8	8270D	µg/kg					--
SVOC	2-Methylphenol	95-48-7	8270D	µg/kg					--
SVOC	2-Nitroaniline	88-74-4	8270D	µg/kg					--
SVOC	2-Nitrophenol	88-75-5	8270D	µg/kg					--
SVOC	3,3'-Dichlorobenzidine	91-94-1	8270D	µg/kg					--
SVOC	3,5-Dimethylphenol	108-68-9	8270D	µg/kg					--
SVOC	3-Nitroaniline	99-09-2	8270D	µg/kg					--
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	8270D	µg/kg					--
SVOC	4-Bromophenyl-phenylether	101-55-3	8270D	µg/kg					--
SVOC	4-Chloro-3-methylphenol	59-50-7	8270D	µg/kg					--
SVOC	4-Chloroaniline	106-47-8	8270D	µg/kg					--
SVOC	4-Chlorophenyl-phenylether	7005-72-3	8270D	µg/kg					--
SVOC	4-Methylphenol	106-44-5	8270D	µg/kg					--
SVOC	4-Nitroaniline	100-01-6	8270D	µg/kg					--
SVOC	4-Nitrophenol	100-02-7	8270D	µg/kg					--
SVOC	Aniline	62-53-3	8270D	µg/kg					--
SVOC	Anthracene	120-12-7	8270D	µg/kg					--
SVOC	Benzidine	92-87-5	8270D	µg/kg					--
SVOC	Benzo(a)anthracene	56-55-3	8270D	µg/kg					--
SVOC	Benzo(a)pyrene	50-32-8	8270D	µg/kg					--
SVOC	Benzo(b)fluoranthene	205-99-2	8270D	µg/kg					--
SVOC	Benzo(g,h,i)perylene	191-24-2	8270D	µg/kg					--
SVOC	Benzo(k)fluoranthene	207-08-9	8270D	µg/kg					--
SVOC	Benzoic Acid	65-85-0	8270D	µg/kg					--
SVOC	Benzyl Alcohol	100-51-6	8270D	µg/kg					--
SVOC	bis(2-chloroethoxy)methane	111-91-1	8270D	µg/kg					--
SVOC	bis(2-chloroethyl) ether	111-44-4	8270D	µg/kg					--
SVOC	bis(2-chloroisopropyl) ether	39638-32-9	8270D	µg/kg					--
SVOC	Carbazole	86-74-8	8270D	µg/kg					--
SVOC	Chrysene	218-01-9	8270D	µg/kg					--
SVOC	Dibenzofuran	132-64-9	8270D	µg/kg					--
SVOC	Diphenylamine	NDPA122-39-4	8270D	µg/kg					--
SVOC	Fluoranthene	206-44-0	8270D	µg/kg					--
SVOC	Hexachlorobenzene	118-74-1	8270D	µg/kg					--
SVOC	Hexachlorobutadiene	87-68-3	8270D	µg/kg					--
SVOC	Hexachlorocyclopentadiene	77-47-4	8270D	µg/kg					--
SVOC	Hexachloroethane	67-72-1	8270D	µg/kg					--
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	8270D	µg/kg					--
SVOC	Isophorone	78-59-1	8270D	µg/kg					--
SVOC	Nitrobenzene	98-95-3	8270D	µg/kg					--
SVOC	N-Nitroso-di-n-propylamine	621-64-7	8270D	µg/kg					--
SVOC	N-Nitrosodiphenylamine	86-30-6	8270D	µg/kg					--
SVOC	Pentachlorophenol	87-86-5	8270D	µg/kg					--
SVOC	Phenanthrene	85-01-8	8270D	µg/kg					--
SVOC	Phenol	108-95-2	8270D	µg/kg					--
SVOC	Pyrene	129-00-0	8270D	µg/kg					--
SVOC	Pyridine	110-86-1	8270D	µg/kg					--
TPH-EFH	EFH (C8-C11)	PHCC8C11	8015M	mg/kg					--
TPH-EFH	EFH (C12-C14)	PHCC12C14	8015M	mg/kg					--
TPH-EFH	EFH (C15-C20)	PHCC15C20	8015M	mg/kg					--
TPH-EFH	EFH (C21-C30)	PHCC21C30	8015M	mg/kg					--
TPH-EFH	EFH (C30-C40)	PHCC30C40	8015M	mg/kg					--

				Location	8_DG-604		8_DG-604		RPD
				Sample Name:	SL-904-SA8-SB-0.0-0.5		SL-604-SA8-SB-0.0-0.5		
				Sample Date	08/29/2013		08/29/2013		
				Start Depth:	0		0		
				End Depth:	0.5		0.5		
				Area:	8_DG		8_DG		
				Matrix:	SO		SO		
				Sample Type:	FD		N		
TPH-GRO	Gasoline Range Organics (C5-C12)	GROC5C12	8015M	mg/kg					--
VOC	1,1,1,2-Tetrachloroethane	630-20-6	8260B	µg/kg					--
VOC	1,1,1-Trichloroethane	71-55-6	8260B	µg/kg					--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	8260B	µg/kg					--
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	µg/kg					--
VOC	1,1,2-Trichloroethane	79-00-5	8260B	µg/kg					--
VOC	1,1-Dichloroethane	75-34-3	8260B	µg/kg					--
VOC	1,1-Dichloroethene	75-35-4	8260B	µg/kg					--
VOC	1,1-Dichloropropene	563-58-6	8260B	µg/kg					--
VOC	1,2,3-Trichlorobenzene	87-61-6	8260B	µg/kg					--
VOC	1,2,3-Trichloropropane	96-18-4	8260B	µg/kg					--
VOC	1,2,4-Trichlorobenzene	120-82-1	8260B	µg/kg					--
VOC	1,2,4-Trimethylbenzene	95-63-6	8260B	µg/kg					--
VOC	1,2-Dibromo-3-chloropropane	96-12-8	8260B	µg/kg					--
VOC	1,2-Dibromoethane	106-93-4	8260B	µg/kg					--
VOC	1,2-Dichlorobenzene	95-50-1	8260B	µg/kg					--
VOC	1,2-Dichloroethane	107-06-2	8260B	µg/kg					--
VOC	1,2-Dichloropropane	78-87-5	8260B	µg/kg					--
VOC	1,3,5-Trimethylbenzene	108-67-8	8260B	µg/kg					--
VOC	1,3-Dichlorobenzene	541-73-1	8260B	µg/kg					--
VOC	1,3-Dichloropropane	142-28-9	8260B	µg/kg					--
VOC	1,4-Dichlorobenzene	106-46-7	8260B	µg/kg					--
VOC	1-Chlorohexane	544-10-5	8260B	µg/kg					--
VOC	2,2-Dichloropropane	594-20-7	8260B	µg/kg					--
VOC	2-Butanone (MEK)	78-93-3	8260B	µg/kg					--
VOC	2-Chloro-1,1,1-trifluoroethane	75-88-7	8260B	µg/kg					--
VOC	2-Chloroethyl Vinyl Ether	110-75-8	8260B	µg/kg					--
VOC	2-Chlorotoluene	95-49-8	8260B	µg/kg					--
VOC	2-Hexanone	591-78-6	8260B	µg/kg					--
VOC	2-Phenylbutane	135-98-8	8260B	µg/kg					--
VOC	4-Chlorotoluene	106-43-4	8260B	µg/kg					--
VOC	4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	µg/kg					--
VOC	Acetone	67-64-1	8260B	µg/kg					--
VOC	Acrolein	107-02-8	8260B	µg/kg					--
VOC	Acrylonitrile	107-13-1	8260B	µg/kg					--
VOC	Benzene	71-43-2	8260B	µg/kg					--
VOC	Bromobenzene	108-86-1	8260B	µg/kg					--
VOC	Bromochloromethane	74-97-5	8260B	µg/kg					--
VOC	Bromodichloromethane	75-27-4	8260B	µg/kg					--
VOC	Bromoform	75-25-2	8260B	µg/kg					--
VOC	Bromomethane	74-83-9	8260B	µg/kg					--
VOC	Carbon Disulfide	75-15-0	8260B	µg/kg					--
VOC	Carbon Tetrachloride	56-23-5	8260B	µg/kg					--
VOC	Chlorobenzene	108-90-7	8260B	µg/kg					--
VOC	Chloroethane	75-00-3	8260B	µg/kg					--
VOC	Chloroform	67-66-3	8260B	µg/kg					--
VOC	Chloromethane	74-87-3	8260B	µg/kg					--
VOC	Chlorotrifluoroethylene	79-38-9	8260B	µg/kg					--
VOC	cis-1,2-Dichloroethene	156-59-2	8260B	µg/kg					--
VOC	cis-1,3-Dichloropropene	10061-01-5	8260B	µg/kg					--
VOC	Cymene	99-87-6	8260B	µg/kg					--
VOC	Di isopropyl Ether	108-20-3	8260B	µg/kg					--
VOC	Dibromochloromethane	124-48-1	8260B	µg/kg					--
VOC	Dibromomethane	74-95-3	8260B	µg/kg					--
VOC	Dichlorodifluoromethane	75-71-8	8260B	µg/kg					--
VOC	Ethylbenzene	100-41-4	8260B	µg/kg					--
VOC	Hexachloro-1,3-butadiene	87-68-3	8260B	µg/kg					--
VOC	Isopropylbenzene	98-82-8	8260B	µg/kg					--
VOC	m,p-Xylene	179601-23-1	8260B	µg/kg					--
VOC	Methyl Iodide	74-88-4	8260B	µg/kg					--
VOC	Methyl Tert-Butyl Ether	1634-04-4	8260B	µg/kg					--
VOC	Methylene Chloride	75-09-2	8260B	µg/kg					--
VOC	n-Butylbenzene	104-51-8	8260B	µg/kg					--
VOC	n-Propylbenzene	103-65-1	8260B	µg/kg					--
VOC	o-Xylene	95-47-6	8260B	µg/kg					--
VOC	Styrene	100-42-5	8260B	µg/kg					--
VOC	tert-Butyl ethyl ether	637-92-3	8260B	µg/kg					--
VOC	tert-Butylbenzene	98-06-6	8260B	µg/kg					--
VOC	Tertiary amyl methyl ether	994-05-8	8260B	µg/kg					--
VOC	Tertiary butyl alcohol	75-65-0	8260B	µg/kg					--
VOC	Tetrachloroethene	127-18-4	8260B	µg/kg					--
VOC	Toluene	108-88-3	8260B	µg/kg					--
VOC	trans-1,2-Dichloroethene	156-60-5	8260B	µg/kg					--
VOC	trans-1,3-Dichloropropene	10061-02-6	8260B	µg/kg					--
VOC	Trichloroethene	79-01-6	8260B	µg/kg					--
VOC	Trichlorofluoromethane	75-69-4	8260B	µg/kg					--
VOC	Vinyl Acetate	108-05-4	8260B	µg/kg					--
VOC	Vinyl Chloride	75-01-4	8260B	µg/kg					--

Notes:
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 only were estimated "J"

Table C-10 Summary of Data Completeness Following Data Validation – Subarea 5D

	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 – 1613B	169	621	--	867	35	1,692	100
Fluoride - 300	13	89	--	--	--	102	100
Metals - 6010C	2,853	1,204	--	433	112	4,602	100
Metals – 6020A	249	358	--	99	2	708	100
Perchlorate – 6850	--	2	--	20	--	22	100
Hexavalent Chromium – 7199	5	6	--	3	1	15	100
Mercury – 7471B	36	59	--	82	--	177	100
TPH-EFH/GRO – 8015M	101	70	--	818	13	1,002	100
Pesticides – 8081B	9	36	--	1,589	4	1,638	100
PCB/PCTs – 8082A	5	12	--	2,075	32	2,124	100
Herbicides – 8151A	--	--	7	378	5	390	98.21
SVOCs – 8270D	--	--	--	444	--	444	100
SVOC SIM – 8270C SIM	221	377	--	4,168	18	4,784	100
Completeness Total for Phase 3 Subarea 5D Samples Collected and Judged Valid							**99.96**

Table C-11 Summary of Data Completeness Following Data Validation – Subarea 8

	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 – 1613B	354	1,353	--	1,579	62	3,348	100
Fluoride - 300	2	2	--	2	--	6	100
Sulfite – 377.1	--	--	--	--	2	2	100
Metals - 6010C	3,439	1,439	--	537	175	5,590	100
Metals – 6020A	270	483	--	100	7	860	100
Perchlorate - 6850	--	3	--	15	--	18	100
Hexavalent Chromium - 7199	1	9	--	5	1	16	100
Mercury– 7471B	55	54	--	106	--	215	100
TPH-EFH/GRO – 8015M	229	102	--	832	3	1,166	100
Pesticides – 8081B	4	18	--	671	--	693	100
PCB/PCTs – 8082A	23	38	--	2,530	1	2,592	100
Herbicides – 8151A	6	6	10	280	28	330	96.97
VOCs – 8260B	--	--	--	692	1	693	100
SVOCs – 8270D	1	22	4	1,043	13	1,083	99.63
SVOC SIM – 8270D SIM	379	601	--	4,482	17	5,479	100
Cyanide – 9012B	--	--	--	2	--	2	100
Completeness Total for Phase 3 Subarea 8 Samples Collected and Judged Valid							**99.94**

Subarea 5D Samples by SDG

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
	FB-041113	PH029	WQ	4/11/2013	FIELD
	FB-041613	PH032	WQ	4/16/2013	FIELD
5D_DG	SL-548-SA5D-SB-0.0-0.5	PH093	SO	8/26/2013	FIELD
5D_DG	SL-548-SA5D-SB-4.0-5.0	PH093	SO	8/26/2013	FIELD
	TB-082613	PH093	WQ	8/26/2013	FIELD
	EB1-082813	PH095	WQ	8/28/2013	FIELD
	EB2-082813	PH095	WQ	8/28/2013	FIELD
5D_DG	SL-536-SA5D-SB-0.0-0.5	PH095	SO	8/28/2013	FIELD
5D_DG	SL-536-SA5D-SB-3.5-4.5	PH095	SO	8/28/2013	FIELD
5D_DG	SL-537-SA5D-SB-0.0-0.5	PH095	SO	8/28/2013	FIELD
5D_DG	SL-537-SA5D-SB-2.5-3.5	PH095	SO	8/28/2013	FIELD
5D_DG	SL-538-SA5D-SB-0.0-0.5	PH095	SO	8/28/2013	FIELD
5D_DG	SL-538-SA5D-SB-3.0-4.0	PH095	SO	8/28/2013	FIELD
	TB2-082813	PH095	WQ	8/28/2013	FIELD
5D_DG	SL-526-SA5D-SB-0.0-0.5	PH098	SO	8/29/2013	FIELD
5D_DG	SL-526-SA5D-SB-3.0-4.0	PH098	SO	8/29/2013	FIELD
5D_DG	SL-539-SA5D-SB-0.0-0.5	PH098	SO	8/29/2013	FIELD
5D_DG	SL-539-SA5D-SB-3.0-4.0	PH098	SO	8/29/2013	FIELD
5D_DG	SL-542-SA5D-SB-0.0-0.5	PH098	SO	8/29/2013	FIELD
5D_DG	SL-542-SA5D-SB-4.0-5.0	PH098	SO	8/29/2013	FIELD
5D_DG	SL-543-SA5D-SB-0.0-0.5	PH098	SO	8/29/2013	FIELD
5D_DG	SL-543-SA5D-SB-4.0-5.0	PH098	SO	8/29/2013	FIELD
	TB-082913	PH098	WQ	8/29/2013	FIELD
5D_DG	SL-530-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-530-SA5D-SB-2.5-3.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-531-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-532-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-532-SA5D-SB-2.5-3.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-533-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-533-SA5D-SB-2.5-3.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-534-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-534-SA5D-SB-6.5-7.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-535-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
5D_DG	SL-535-SA5D-SB-2.0-3.0	PH099	SO	8/30/2013	FIELD
5D_DG	SL-835-SA5D-SB-0.0-0.5	PH099	SO	8/30/2013	FIELD
	TB-083013	PH099	WQ	8/30/2013	FIELD
5D_DG	SL-525-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-525-SA5D-SB-2.5-3.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-527-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-527-SA5D-SB-4.0-5.0	PH100	SO	9/3/2013	FIELD
5D_DG	SL-528-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-528-SA5D-SB-2.5-3.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-540-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-540-SA5D-SB-5.0-6.0	PH100	SO	9/3/2013	FIELD
5D_DG	SL-541-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-541-SA5D-SB-2.5-3.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-545-SA5D-SB-0.0-0.5	PH100	SO	9/3/2013	FIELD
5D_DG	SL-545-SA5D-SB-6.0-7.0	PH100	SO	9/3/2013	FIELD
	TB-090313	PH100	WQ	9/3/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
	EB-090413	PH101	WQ	9/4/2013	FIELD
5D_DG	SL-524-SA5D-SB-0.0-0.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-524-SA5D-SB-5.5-6.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-544-SA5D-SB-0.0-0.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-544-SA5D-SB-6.5-7.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-546-SA5D-SB-0.0-0.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-546-SA5D-SB-4.0-5.0	PH101	SO	9/4/2013	FIELD
5D_DG	SL-547-SA5D-SB-0.0-0.5	PH101	SO	9/4/2013	FIELD
5D_DG	SL-547-SA5D-SB-4.0-5.0	PH101	SO	9/4/2013	FIELD
5D_DG	SL-824-SA5D-SB-5.5-6.5	PH101	SO	9/4/2013	FIELD
	TB-090413	PH101	WQ	9/4/2013	FIELD
5D_DG	SL-554-SA5D-SB-0.0-0.5	PH102	SO	9/5/2013	FIELD
5D_DG	SL-554-SA5D-SB-4.0-5.0	PH102	SO	9/5/2013	FIELD
5D_DG	SL-554-SA5D-SB-7.0-8.0	PH102	SO	9/5/2013	FIELD
5D_DG	SL-555-SA5D-SB-0.0-0.5	PH102	SO	9/5/2013	FIELD
5D_DG	SL-555-SA5D-SB-10.5-11.5	PH102	SO	9/5/2013	FIELD
5D_DG	SL-555-SA5D-SB-4.0-5.0	PH102	SO	9/5/2013	FIELD
5D_DG	SL-556-SA5D-SB-0.0-0.5	PH102	SO	9/5/2013	FIELD
5D_DG	SL-556-SA5D-SB-11.0-12.0	PH102	SO	9/5/2013	FIELD
5D_DG	SL-556-SA5D-SB-4.0-5.0	PH102	SO	9/5/2013	FIELD
5D_DG	SL-559-SA5D-SB-0.0-0.5	PH102	SO	9/5/2013	FIELD
5D_DG	SL-559-SA5D-SB-6.0-7.0	PH102	SO	9/5/2013	FIELD
	TB-090513	PH102	WQ	9/5/2013	FIELD
5D_DG	SL-550-SA5D-SB-0.0-0.5	PH103	SO	9/6/2013	FIELD
5D_DG	SL-550-SA5D-SB-4.0-5.0	PH103	SO	9/6/2013	FIELD
5D_DG	SL-552-SA5D-SB-0.0-0.5	PH103	SO	9/6/2013	FIELD
5D_DG	SL-552-SA5D-SB-4.0-5.0	PH103	SO	9/6/2013	FIELD
5D_DG	SL-590-SA5D-SB-0.0-0.5	PH103	SO	9/6/2013	FIELD
5D_DG	SL-590-SA5D-SB-11.0-12.0	PH103	SO	9/6/2013	FIELD
5D_DG	SL-590-SA5D-SB-4.0-5.0	PH103	SO	9/6/2013	FIELD
5D_DG	SL-850-SA5D-SB-4.0-5.0	PH103	SO	9/6/2013	FIELD
5D_DG	SL-890-SA5D-SB-4.0-5.0	PH103	SO	9/6/2013	FIELD
	TB-090613	PH103	WQ	9/6/2013	FIELD
5D_DG	SL-515-SA5D-SB-0.0-0.5	PH104	SO	9/9/2013	FIELD
5D_DG	SL-515-SA5D-SB-22.0-23.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-515-SA5D-SB-4.0-5.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-515-SA5D-SB-9.0-10.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-0.0-0.5	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-14.0-15.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-19.0-20.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-22.0-23.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-4.0-5.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-599-SA5D-SB-9.0-10.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-601-SA5D-SB-0.0-0.5	PH104	SO	9/9/2013	FIELD
5D_DG	SL-601-SA5D-SB-14.0-15.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-601-SA5D-SB-20.5-21.5	PH104	SO	9/9/2013	FIELD
5D_DG	SL-601-SA5D-SB-4.0-5.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-601-SA5D-SB-9.0-10.0	PH104	SO	9/9/2013	FIELD
5D_DG	SL-815-SA5D-SB-0.0-0.5	PH104	SO	9/9/2013	FIELD
	TB-090913	PH104	WQ	9/9/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
5D_DG	SL-518-SA5D-SB-0.0-0.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-518-SA5D-SB-15.0-16.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-518-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-518-SA5D-SB-9.0-10.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-603-SA5D-SB-0.0-0.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-603-SA5D-SB-13.0-14.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-603-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-603-SA5D-SB-9.0-10.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-604-SA5D-SB-0.0-0.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-604-SA5D-SB-16.5-17.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-604-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-604-SA5D-SB-9.0-10.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-605-SA5D-SB-0.0-0.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-605-SA5D-SB-14.5-15.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-605-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-605-SA5D-SB-9.0-10.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-905-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-606-SA5D-SB-0.0-0.5	PH105	SO	9/10/2013	FIELD
5D_DG	SL-606-SA5D-SB-13.0-14.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-606-SA5D-SB-4.0-5.0	PH105	SO	9/10/2013	FIELD
5D_DG	SL-606-SA5D-SB-9.0-10.0	PH105	SO	9/10/2013	FIELD
	TB-091013	PH105	WQ	9/10/2013	FIELD
	EB-091113	PH106	WQ	9/11/2013	FIELD
5D_DG	SL-506-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-506-SA5D-SB-4.0-5.0	PH106	SO	9/11/2013	FIELD
5D_DG	SL-519-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-519-SA5D-SB-4.0-5.0	PH106	SO	9/11/2013	FIELD
5D_DG	SL-520-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-520-SA5D-SB-4.0-5.0	PH106	SO	9/11/2013	FIELD
5D_DG	SL-520-SA5D-SB-8.0-9.0	PH106	SO	9/11/2013	FIELD
5D_DG	SL-521-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-521-SA5D-SB-5.5-6.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-522-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-522-SA5D-SB-6.0-7.0	PH106	SO	9/11/2013	FIELD
5D_DG	SL-523-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-529-SA5D-SB-0.0-0.5	PH106	SO	9/11/2013	FIELD
5D_DG	SL-529-SA5D-SB-3.0-4.0	PH106	SO	9/11/2013	FIELD
	TB-091113	PH106	WQ	9/11/2013	FIELD
	EB-091213	PH107	WQ	9/12/2013	FIELD
5D_DG	SL-551-SA5D-SB-0.0-0.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-551-SA5D-SB-14.0-15.0	PH107	SO	9/12/2013	FIELD
5D_DG	SL-551-SA5D-SB-17.5-18.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-551-SA5D-SB-4.0-5.0	PH107	SO	9/12/2013	FIELD
5D_DG	SL-551-SA5D-SB-9.0-10.0	PH107	SO	9/12/2013	FIELD
5D_DG	SL-553-SA5D-SB-0.0-0.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-553-SA5D-SB-4.5-5.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-591-SA5D-SB-0.0-0.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-591-SA5D-SB-6.5-7.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-592-SA5D-SB-0.0-0.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-592-SA5D-SB-10.5-11.5	PH107	SO	9/12/2013	FIELD
5D_DG	SL-592-SA5D-SB-4.0-5.0	PH107	SO	9/12/2013	FIELD
5D_DG	SL-853-SA5D-SB-0.0-0.5	PH107	SO	9/12/2013	FIELD
	TB-091213	PH107	WQ	9/12/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
5D_DG	SL-505-SA5D-SB-0.0-0.5	PH108	SO	9/16/2013	FIELD
5D_DG	SL-505-SA5D-SB-14.0-15.0	PH108	SO	9/16/2013	FIELD
5D_DG	SL-505-SA5D-SB-19.0-20.0	PH108	SO	9/16/2013	FIELD
5D_DG	SL-505-SA5D-SB-4.0-5.0	PH108	SO	9/16/2013	FIELD
5D_DG	SL-505-SA5D-SB-9.0-10.0	PH108	SO	9/16/2013	FIELD
	TB-091613	PH108	WQ	9/16/2013	FIELD
5D_DG	SL-501-SA5D-SB-0.0-0.5	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-14.0-15.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-19.0-20.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-24.0-25.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-28.0-29.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-4.0-5.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-501-SA5D-SB-9.0-10.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-503-SA5D-SB-0.0-0.5	PH109	SO	9/17/2013	FIELD
5D_DG	SL-503-SA5D-SB-4.0-5.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-504-SA5D-SB-0.0-0.5	PH109	SO	9/17/2013	FIELD
5D_DG	SL-504-SA5D-SB-16.0-17.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-504-SA5D-SB-4.0-5.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-504-SA5D-SB-9.0-10.0	PH109	SO	9/17/2013	FIELD
5D_DG	SL-804-SA5D-SB-4.0-5.0	PH109	SO	9/17/2013	FIELD
	TB-091713	PH109	WQ	9/17/2013	FIELD
	EB1-091813	PH110	WQ	9/18/2013	FIELD
	EB2-091813	PH110	WQ	9/18/2013	FIELD
5D_DG	SL-509-SA5D-SB-0.0-0.5	PH110	SO	9/18/2013	FIELD
5D_DG	SL-509-SA5D-SB-4.0-5.0	PH110	SO	9/18/2013	FIELD
5D_DG	SL-510-SA5D-SB-0.0-0.5	PH110	SO	9/18/2013	FIELD
5D_DG	SL-510-SA5D-SB-4.0-5.0	PH110	SO	9/18/2013	FIELD
5D_DG	SL-513-SA5D-SB-0.0-0.5	PH110	SO	9/18/2013	FIELD
5D_DG	SL-513-SA5D-SB-16.0-17.0	PH110	SO	9/18/2013	FIELD
5D_DG	SL-513-SA5D-SB-4.0-5.0	PH110	SO	9/18/2013	FIELD
5D_DG	SL-513-SA5D-SB-9.0-10.0	PH110	SO	9/18/2013	FIELD
5D_DG	SL-514-SA5D-SB-0.0-0.5	PH110	SO	9/18/2013	FIELD
5D_DG	SL-514-SA5D-SB-4.0-5.0	PH110	SO	9/18/2013	FIELD
	TB-091813	PH110	WQ	9/18/2013	FIELD
5D_DG	SL-576-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-576-SA5D-SB-3.5-4.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-577-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-578-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-579-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-580-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-581-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-581-SA5D-SB-2.5-3.5	PH111	SO	9/19/2013	FIELD
5D_DG	SL-879-SA5D-SB-0.0-0.5	PH111	SO	9/19/2013	FIELD
	TB-091913	PH111	WQ	9/19/2013	FIELD
5D_DG	SL-568-SA5D-SB-0.0-0.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-568-SA5D-SB-2.5-3.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-571-SA5D-SB-0.0-0.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-572-SA5D-SB-0.0-0.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-574-SA5D-SB-0.0-0.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-583-SA5D-SB-0.0-0.5	PH112	SO	9/23/2013	FIELD
5D_DG	SL-868-SA5D-SB-2.5-3.5	PH112	SO	9/23/2013	FIELD
	TB-092313	PH112	WQ	9/23/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
5D_DG	SL-557-SA5D-SB-0.0-0.5	PH113	SO	9/24/2013	FIELD
5D_DG	SL-558-SA5D-SB-0.0-0.5	PH113	SO	9/24/2013	FIELD
5D_DG	SL-558-SA5D-SB-4.0-5.0	PH113	SO	9/24/2013	FIELD
5D_DG	SL-565-SA5D-SB-0.0-0.5	PH113	SO	9/24/2013	FIELD
5D_DG	SL-566-SA5D-SB-0.0-0.5	PH113	SO	9/24/2013	FIELD
5D_DG	SL-566-SA5D-SB-4.0-5.0	PH113	SO	9/24/2013	FIELD
5D_DG	SL-865-SA5D-SB-0.0-0.5	PH113	SO	9/24/2013	FIELD
	TB-092413	PH113	WQ	9/24/2013	FIELD
	EB1-092513	PH114	WQ	9/25/2013	FIELD
5D_DG	SL-562-SA5D-SB-0.0-0.5	PH114	SO	9/25/2013	FIELD
5D_DG	SL-562-SA5D-SB-4.0-5.0	PH114	SO	9/25/2013	FIELD
5D_DG	SL-563-SA5D-SB-0.0-0.5	PH114	SO	9/25/2013	FIELD
5D_DG	SL-563-SA5D-SB-4.0-5.0	PH114	SO	9/25/2013	FIELD
5D_DG	SL-569-SA5D-SB-0.0-0.5	PH114	SO	9/25/2013	FIELD
5D_DG	SL-573-SA5D-SB-0.0-0.5	PH114	SO	9/25/2013	FIELD
5D_DG	SL-573-SA5D-SB-4.0-5.0	PH114	SO	9/25/2013	FIELD
5D_DG	SL-863-SA5D-SB-4.0-5.0	PH114	SO	9/25/2013	FIELD
	TB-092513	PH114	WQ	9/25/2013	FIELD
5D_DG	SL-512-SA5D-SB-0.0-0.5	PH116	SO	9/26/2013	FIELD
5D_DG	SL-512-SA5D-SB-4.0-5.0	PH116	SO	9/26/2013	FIELD
	TB1-092613	PH116	WQ	9/26/2013	FIELD
5D_DG	SL-582-SA5D-SB-0.0-0.5	PH118	SO	9/30/2013	FIELD
5D_DG	SL-582-SA5D-SB-10.0-11.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-582-SA5D-SB-4.0-5.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-595-SA5D-SB-0.0-0.5	PH118	SO	9/30/2013	FIELD
5D_DG	SL-595-SA5D-SB-14.0-15.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-595-SA5D-SB-17.0-18.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-595-SA5D-SB-4.0-5.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-595-SA5D-SB-9.0-10.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-596-SA5D-SB-0.0-0.5	PH118	SO	9/30/2013	FIELD
5D_DG	SL-596-SA5D-SB-11.5-12.5	PH118	SO	9/30/2013	FIELD
5D_DG	SL-596-SA5D-SB-4.0-5.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-597-SA5D-SB-0.0-0.5	PH118	SO	9/30/2013	FIELD
5D_DG	SL-597-SA5D-SB-14.0-15.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-597-SA5D-SB-17.0-18.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-597-SA5D-SB-4.0-5.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-597-SA5D-SB-9.0-10.0	PH118	SO	9/30/2013	FIELD
5D_DG	SL-882-SA5D-SB-4.0-5.0	PH118	SO	9/30/2013	FIELD
	TB-093013	PH118	WQ	9/30/2013	FIELD
5D_DG	SL-564-SA5D-SB-0.0-0.5	PH119	SO	10/1/2013	FIELD
5D_DG	SL-564-SA5D-SB-4.0-5.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-570-SA5D-SB-0.0-0.5	PH119	SO	10/1/2013	FIELD
5D_DG	SL-570-SA5D-SB-4.0-5.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-598-SA5D-SB-0.0-0.5	PH119	SO	10/1/2013	FIELD
5D_DG	SL-598-SA5D-SB-14.0-15.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-598-SA5D-SB-18.0-19.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-598-SA5D-SB-4.0-5.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-598-SA5D-SB-9.0-10.0	PH119	SO	10/1/2013	FIELD
5D_DG	SL-607-SA5D-SB-0.0-0.5	PH119	SO	10/1/2013	FIELD
5D_DG	SL-607-SA5D-SB-4.0-5.0	PH119	SO	10/1/2013	FIELD
	TB-100113	PH119	WQ	10/1/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
	EB1-100213	PH120	WQ	10/2/2013	FIELD
5D_DG	SL-589-SA5D-SB-0.0-0.5	PH120	SO	10/2/2013	FIELD
5D_DG	SL-589-SA5D-SB-4.0-5.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-594-SA5D-SB-0.0-0.5	PH120	SO	10/2/2013	FIELD
5D_DG	SL-594-SA5D-SB-4.0-5.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-594-SA5D-SB-7.0-8.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-600-SA5D-SB-0.0-0.5	PH120	SO	10/2/2013	FIELD
5D_DG	SL-600-SA5D-SB-14.0-15.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-600-SA5D-SB-18.5-19.5	PH120	SO	10/2/2013	FIELD
5D_DG	SL-600-SA5D-SB-4.0-5.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-600-SA5D-SB-9.0-10.0	PH120	SO	10/2/2013	FIELD
5D_DG	SL-900-SA5D-SB-0.0-0.5	PH120	SO	10/2/2013	FIELD
	TB1-100213	PH120	WQ	10/2/2013	FIELD
5D_DG	SL-502-SA5D-SB-0.0-0.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-502-SA5D-SB-6.5-7.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-507-SA5D-SB-0.0-0.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-507-SA5D-SB-10.5-11.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-507-SA5D-SB-4.0-5.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-0.0-0.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-14.0-15.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-19.0-20.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-23.0-24.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-4.0-5.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-508-SA5D-SB-9.0-10.0	PH122	SO	10/3/2013	FIELD
5D_DG	SL-608-SA5D-SB-0.0-0.5	PH122	SO	10/3/2013	FIELD
5D_DG	SL-608-SA5D-SB-4.0-5.0	PH122	SO	10/3/2013	FIELD
	TB-100313	PH122	WQ	10/3/2013	FIELD
5D_DG	SL-567-SA5D-SB-0.0-0.5	PH123	SO	10/7/2013	FIELD
5D_DG	SL-567-SA5D-SB-3.5-4.5	PH123	SO	10/7/2013	FIELD
5D_DG	SL-575-SA5D-SB-0.0-0.5	PH123	SO	10/7/2013	FIELD
5D_DG	SL-575-SA5D-SB-3.0-4.0	PH123	SO	10/7/2013	FIELD
5D_DG	SL-593-SA5D-SB-0.0-0.5	PH123	SO	10/7/2013	FIELD
5D_DG	SL-593-SA5D-SB-3.5-4.5	PH123	SO	10/7/2013	FIELD
	TB-100713	PH123	WQ	10/7/2013	FIELD
	EB-100813	PH124	WQ	10/8/2013	FIELD
5D_DG	SL-561-SA5D-SB-0.0-0.5	PH124	SO	10/8/2013	FIELD
5D_DG	SL-561-SA5D-SB-4.0-5.0	PH124	SO	10/8/2013	FIELD
5D_DG	SL-561-SA5D-SB-9.0-10.0	PH124	SO	10/8/2013	FIELD
5D_DG	SL-602-SA5D-SB-0.0-0.5	PH124	SO	10/8/2013	FIELD
5D_DG	SL-602-SA5D-SB-4.0-5.0	PH124	SO	10/8/2013	FIELD
5D_DG	SL-602-SA5D-SB-9.0-10.0	PH124	SO	10/8/2013	FIELD
	TB-100813	PH124	WQ	10/8/2013	FIELD
	EB1-111213	PH127	WQ	11/12/2013	FIELD
5D_DG	SL-549-SA5D-SB-0.0-0.5	PH127	SO	11/12/2013	FIELD
5D_DG	SL-549-SA5D-SB-11.0-12.0	PH127	SO	11/12/2013	FIELD
5D_DG	SL-549-SA5D-SB-4.0-5.0	PH127	SO	11/12/2013	FIELD
5D_DG	SL-560-SA5D-SB-0.0-0.5	PH127	SO	11/12/2013	FIELD
5D_DG	SL-560-SA5D-SB-4.0-5.0	PH127	SO	11/12/2013	FIELD
5D_DG	SL-560-SA5D-SB-7.0-8.0	PH127	SO	11/12/2013	FIELD
5D_DG	SL-860-SA5D-SB-4.0-5.0	PH127	SO	11/12/2013	FIELD
	TB1-111213	PH127	WQ	11/12/2013	FIELD
	EB-111413	PH129	WQ	11/14/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
5D_DG	SL-516-SA5D-SB-0.0-0.5	PH130	SO	11/15/2013	FIELD
5D_DG	SL-516-SA5D-SB-13.0-14.0	PH130	SO	11/15/2013	FIELD
5D_DG	SL-516-SA5D-SB-4.0-5.0	PH130	SO	11/15/2013	FIELD
5D_DG	SL-516-SA5D-SB-9.0-10.0	PH130	SO	11/15/2013	FIELD
5D_DG	SL-609-SA5D-SB-0.0-0.5	PH130	SO	11/15/2013	FIELD
5D_DG	SL-816-SA5D-SB-4.0-5.0	PH130	SO	11/15/2013	FIELD
	TB-111513	PH130	WQ	11/15/2013	FIELD

Subarea 8 Samples by SDG

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
	FB-041113	PH029	WQ	4/11/2013	
8_DG	SL-586-SA8-SB-0.0-0.5	PH062	SO	7/8/2013	FIELD
8_DG	SL-588-SA8-SB-0.0-0.5	PH062	SO	7/8/2013	FIELD
8_DG	SL-588-SA8-SB-2.0-3.0	PH062	SO	7/8/2013	FIELD
8_DG	SL-888-SA8-SB-0.0-0.5	PH062	SO	7/8/2013	FIELD
	TB-070813	PH062	WQ	7/8/2013	FIELD
8_DG	SL-561-SA8-SB-0.0-0.5	PH063	SO	7/9/2013	FIELD
8_DG	SL-561-SA8-SB-4.0-5.0	PH063	SO	7/9/2013	FIELD
8_DG	SL-562-SA8-SB-0.0-0.5	PH063	SO	7/9/2013	FIELD
8_DG	SL-563-SA8-SB-0.0-0.5	PH063	SO	7/9/2013	FIELD
8_DG	SL-563-SA8-SB-2.0-3.0	PH063	SO	7/9/2013	FIELD
	TB-070913	PH063	WQ	7/9/2013	FIELD
	EB1-071013	PH064	WQ	7/10/2013	FIELD
	EB2-071013	PH064	WQ	7/10/2013	FIELD
8_DG	SL-571-SA8-SB-0.0-0.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-571-SA8-SB-12.5-13.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-571-SA8-SB-6.5-7.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-572-SA8-SB-0.0-0.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-572-SA8-SB-14.0-15.0	PH064	SO	7/10/2013	FIELD
8_DG	SL-572-SA8-SB-18.5-19.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-572-SA8-SB-4.0-5.0	PH064	SO	7/10/2013	FIELD
8_DG	SL-572-SA8-SB-9.0-10.0	PH064	SO	7/10/2013	FIELD
8_DG	SL-573-SA8-SB-0.0-0.5	PH064	SO	7/10/2013	FIELD
8_DG	SL-573-SA8-SB-4.0-5.0	PH064	SO	7/10/2013	FIELD
8_DG	SL-573-SA8-SB-9.5-10.5	PH064	SO	7/10/2013	FIELD
	TB-071013	PH064	WQ	7/10/2013	FIELD
8_DG	SL-570-SA8-SB-0.0-0.5	PH065	SO	7/11/2013	FIELD
8_DG	SL-570-SA8-SB-4.0-5.0	PH065	SO	7/11/2013	FIELD
8_DG	SL-574-SA8-SB-0.0-0.5	PH065	SO	7/11/2013	FIELD
8_DG	SL-574-SA8-SB-14.0-15.0	PH065	SO	7/11/2013	FIELD
8_DG	SL-574-SA8-SB-4.0-5.0	PH065	SO	7/11/2013	FIELD
8_DG	SL-574-SA8-SB-9.0-10.0	PH065	SO	7/11/2013	FIELD
8_DG	SL-874-SA8-SB-14.0-15.0	PH065	SO	7/11/2013	FIELD
	TB-071113	PH065	WQ	7/11/2013	FIELD
8_DG	SL-578-SA8-SB-0.0-0.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-578-SA8-SB-4.0-5.0	PH066	SO	7/12/2013	FIELD
8_DG	SL-578-SA8-SB-9.0-10.0	PH066	SO	7/12/2013	FIELD
8_DG	SL-580-SA8-SB-0.0-0.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-580-SA8-SB-10.5-11.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-580-SA8-SB-4.0-5.0	PH066	SO	7/12/2013	FIELD
8_DG	SL-581-SA8-SB-0.0-0.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-581-SA8-SB-4.5-5.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-587-SA8-SB-0.0-0.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-587-SA8-SB-6.5-7.5	PH066	SO	7/12/2013	FIELD
8_DG	SL-878-SA8-SB-4.0-5.0	PH066	SO	7/12/2013	FIELD
	TB-071213	PH066	WQ	7/12/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
8_DG	SL-501-SA8-SB-0.0-0.5	PH067	SO	7/15/2013	FIELD
8_DG	SL-501-SA8-SB-12.0-13.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-501-SA8-SB-4.0-5.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-501-SA8-SB-9.0-10.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-502-SA8-SB-0.0-0.5	PH067	SO	7/15/2013	FIELD
8_DG	SL-502-SA8-SB-4.0-5.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-502-SA8-SB-7.5-8.5	PH067	SO	7/15/2013	FIELD
8_DG	SL-503-SA8-SB-0.0-0.5	PH067	SO	7/15/2013	FIELD
8_DG	SL-503-SA8-SB-3.0-4.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-511-SA8-SB-0.0-0.5	PH067	SO	7/15/2013	FIELD
8_DG	SL-511-SA8-SB-6.0-7.0	PH067	SO	7/15/2013	FIELD
8_DG	SL-801-SA8-SB-0.0-0.5	PH067	SO	7/15/2013	FIELD
	TB-071513	PH067	WQ	7/15/2013	FIELD
8_DG	SL-504-SA8-SB-0.0-0.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-504-SA8-SB-2.5-3.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-505-SA8-SB-0.0-0.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-505-SA8-SB-4.0-5.0	PH068	SO	7/16/2013	FIELD
8_DG	SL-507-SA8-SB-0.0-0.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-507-SA8-SB-3.0-4.0	PH068	SO	7/16/2013	FIELD
8_DG	SL-508-SA8-SB-0.0-0.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-510-SA8-SB-0.0-0.5	PH068	SO	7/16/2013	FIELD
8_DG	SL-804-SA8-SB-2.5-3.5	PH068	SO	7/16/2013	FIELD
	TB-071613	PH068	WQ	7/16/2013	FIELD
	EB1-071713	PH069	WQ	7/17/2013	FIELD
	EB2-071713	PH069	WQ	7/17/2013	FIELD
8_DG	SL-512-SA8-SB-0.0-0.5	PH069	SO	7/17/2013	FIELD
8_DG	SL-513-SA8-SB-0.0-0.5	PH069	SO	7/17/2013	FIELD
8_DG	SL-513-SA8-SB-4.0-5.0	PH069	SO	7/17/2013	FIELD
8_DG	SL-513-SA8-SB-8.0-9.0	PH069	SO	7/17/2013	FIELD
8_DG	SL-514-SA8-SB-0.0-0.5	PH069	SO	7/17/2013	FIELD
8_DG	SL-514-SA8-SB-4.0-5.0	PH069	SO	7/17/2013	FIELD
8_DG	SL-514-SA8-SB-7.5-8.5	PH069	SO	7/17/2013	FIELD
8_DG	SL-515-SA8-SB-0.0-0.5	PH069	SO	7/17/2013	FIELD
8_DG	SL-515-SA8-SB-14.0-15.0	PH069	SO	7/17/2013	FIELD
8_DG	SL-515-SA8-SB-4.0-5.0	PH069	SO	7/17/2013	FIELD
8_DG	SL-515-SA8-SB-9.0-10.0	PH069	SO	7/17/2013	FIELD
	TB-071713	PH069	WQ	7/17/2013	FIELD
8_DG	SL-506-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-506-SA8-SB-4.0-5.0	PH070	SO	7/18/2013	FIELD
8_DG	SL-509-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-509-SA8-SB-4.0-5.0	PH070	SO	7/18/2013	FIELD
8_DG	SL-519-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-519-SA8-SB-3.5-4.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-520-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-531-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-531-SA8-SB-4.0-5.0	PH070	SO	7/18/2013	FIELD
8_DG	SL-601-SA8-SB-0.0-0.5	PH070	SO	7/18/2013	FIELD
8_DG	SL-601-SA8-SB-4.0-5.0	PH070	SO	7/18/2013	FIELD
	TB-071813	PH070	WQ	7/18/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
8_DG	SL-516-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-517-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-517-SA8-SB-3.0-4.0	PH071	SO	7/19/2013	FIELD
8_DG	SL-518-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-518-SA8-SB-4.0-5.0	PH071	SO	7/19/2013	FIELD
8_DG	SL-521-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-532-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-532-SA8-SB-6.5-7.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-606-SA8-SB-0.0-0.5	PH071	SO	7/19/2013	FIELD
8_DG	SL-606-SA8-SB-4.0-5.0	PH071	SO	7/19/2013	FIELD
	TB-071913	PH071	WQ	7/19/2013	FIELD
8_DG	SL-550-SA8-SB-0.0-0.5	PH072	SO	7/22/2013	FIELD
8_DG	SL-550-SA8-SB-14.0-15.0	PH072	SO	7/22/2013	FIELD
8_DG	SL-550-SA8-SB-17.0-18.0	PH072	SO	7/22/2013	FIELD
8_DG	SL-550-SA8-SB-4.0-5.0	PH072	SO	7/22/2013	FIELD
8_DG	SL-550-SA8-SB-9.0-10.0	PH072	SO	7/22/2013	FIELD
8_DG	SL-554-SA8-SB-0.0-0.5	PH072	SO	7/22/2013	FIELD
8_DG	SL-554-SA8-SB-4.0-5.0	PH072	SO	7/22/2013	FIELD
8_DG	SL-556-SA8-SB-0.0-0.5	PH072	SO	7/22/2013	FIELD
8_DG	SL-556-SA8-SB-4.0-5.0	PH072	SO	7/22/2013	FIELD
	TB-072213	PH072	WQ	7/22/2013	FIELD
8_DG	SL-551-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-551-SA8-SB-14.0-15.0	PH073	SO	7/23/2013	FIELD
8_DG	SL-551-SA8-SB-19.0-20.0	PH073	SO	7/23/2013	FIELD
8_DG	SL-551-SA8-SB-4.0-5.0	PH073	SO	7/23/2013	FIELD
8_DG	SL-551-SA8-SB-9.0-10.0	PH073	SO	7/23/2013	FIELD
8_DG	SL-555-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-555-SA8-SB-4.0-5.0	PH073	SO	7/23/2013	FIELD
8_DG	SL-557A-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-557B-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-557C-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-557D-SA8-SB-0.0-0.5	PH073	SO	7/23/2013	FIELD
8_DG	SL-851-SA8-SB-4.0-5.0	PH073	SO	7/23/2013	FIELD
	TB-072313	PH073	WQ	7/23/2013	FIELD
8_DG	L-522-SA8-SB-0.0-0.5-DTS	PH074	SO	7/24/2013	FIELD
8_DG	SL-527-SA8-SB-0.0-0.5	PH074	SO	7/24/2013	FIELD
8_DG	SL-527-SA8-SB-4.0-5.0	PH074	SO	7/24/2013	FIELD
8_DG	L-528-SA8-SB-0.0-0.5-DTS	PH074	SO	7/24/2013	FIELD
8_DG	SL-528-SA8-SB-4.0-5.0	PH074	SO	7/24/2013	FIELD
8_DG	L-536-SA8-SB-0.0-0.5-DTS	PH074	SO	7/24/2013	FIELD
8_DG	L-538-SA8-SB-0.0-0.5-DTS	PH074	SO	7/24/2013	FIELD
	TB-072413	PH074	WQ	7/24/2013	FIELD
	EB1-072513	PH075	WQ	7/25/2013	FIELD
	EB2-072513	PH075	WQ	7/25/2013	FIELD
8_DG	SL-523-SA8-SB-4.0-5.0	PH075	SO	7/25/2013	FIELD
8_DG	SL-524-SA8-SB-4.0-5.0	PH075	SO	7/25/2013	FIELD
8_DG	SL-525-SA8-SB-0.0-0.5	PH075	SO	7/25/2013	FIELD
8_DG	SL-525-SA8-SB-4.0-5.0	PH075	SO	7/25/2013	FIELD
8_DG	SL-823-SA8-SB-4.0-5.0	PH075	SO	7/25/2013	FIELD
	TB-072513	PH075	WQ	7/25/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
8_DG	SL-522-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-522-SA8-SB-4.0-5.0	PH076	SO	7/26/2013	FIELD
8_DG	SL-539A-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-539B-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-539B-SA8-SB-2.0-3.0	PH076	SO	7/26/2013	FIELD
8_DG	SL-539C-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-539D-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-540-SA8-SB-0.0-0.5	PH076	SO	7/26/2013	FIELD
8_DG	SL-540-SA8-SB-4.0-5.0	PH076	SO	7/26/2013	FIELD
	TB-072613	PH076	WQ	7/26/2013	FIELD
8_DG	SL-526-SA8-SB-0.0-0.5	PH078	SO	7/29/2013	FIELD
8_DG	SL-526-SA8-SB-4.0-5.0	PH078	SO	7/29/2013	FIELD
8_DG	SL-529-SA8-SB-0.0-0.5	PH078	SO	7/29/2013	FIELD
8_DG	SL-529-SA8-SB-4.0-5.0	PH078	SO	7/29/2013	FIELD
	TB1-072913	PH078	WQ	7/29/2013	FIELD
8_DG	SL-549-SA8-SB-0.0-0.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-549-SA8-SB-4.0-5.0	PH080	SO	7/30/2013	FIELD
8_DG	SL-560-SA8-SB-0.0-0.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-560-SA8-SB-4.0-5.0	PH080	SO	7/30/2013	FIELD
8_DG	SL-589-SA8-SB-0.0-0.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-589-SA8-SB-2.5-3.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-596-SA8-SB-0.0-0.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-612-SA8-SB-0.0-0.5	PH080	SO	7/30/2013	FIELD
8_DG	SL-612-SA8-SB-4.0-5.0	PH080	SO	7/30/2013	FIELD
	TB-073013	PH080	WQ	7/30/2013	FIELD
8_DG	SL-536-SA8-SB-0.0-0.5	PH081	SO	7/31/2013	FIELD
8_DG	SL-536-SA8-SB-4.0-5.0	PH081	SO	7/31/2013	FIELD
8_DG	SL-537-SA8-SB-0.0-0.5	PH081	SO	7/31/2013	FIELD
8_DG	SL-537-SA8-SB-4.0-5.0	PH081	SO	7/31/2013	FIELD
8_DG	SL-598-SA8-SB-0.0-0.5	PH081	SO	7/31/2013	FIELD
8_DG	SL-598-SA8-SB-4.5-5.5	PH081	SO	7/31/2013	FIELD
8_DG	SL-599-SA8-SB-0.0-0.5	PH081	SO	7/31/2013	FIELD
8_DG	SL-599-SA8-SB-3.0-4.0	PH081	SO	7/31/2013	FIELD
	TB-073113	PH081	WQ	7/31/2013	FIELD
	EB1-080113	PH082	WQ	8/1/2013	FIELD
	EB2-080113	PH082	WQ	8/1/2013	FIELD
8_DG	SL-608-SA8-SB-0.0-0.5	PH082	SO	8/1/2013	FIELD
8_DG	SL-608-SA8-SB-4.0-5.0	PH082	SO	8/1/2013	FIELD
8_DG	SL-608-SA8-SB-7.0-8.0	PH082	SO	8/1/2013	FIELD
8_DG	SL-610-SA8-SB-0.0-0.5	PH082	SO	8/1/2013	FIELD
8_DG	SL-610-SA8-SB-4.0-5.0	PH082	SO	8/1/2013	FIELD
8_DG	SL-610-SA8-SB-6.8-7.8	PH082	SO	8/1/2013	FIELD
	TB-080113	PH082	WQ	8/1/2013	FIELD
8_DG	SL-552-SA8-SB-0.0-0.5	PH083	SO	8/2/2013	FIELD
8_DG	SL-552-SA8-SB-4.0-5.0	PH083	SO	8/2/2013	FIELD
8_DG	SL-552-SA8-SB-7.5-8.5	PH083	SO	8/2/2013	FIELD
8_DG	SL-558-SA8-SB-0.0-0.5	PH083	SO	8/2/2013	FIELD
8_DG	SL-558-SA8-SB-12.5-13.5	PH083	SO	8/2/2013	FIELD
8_DG	SL-558-SA8-SB-4.0-5.0	PH083	SO	8/2/2013	FIELD
8_DG	SL-558-SA8-SB-9.0-10.0	PH083	SO	8/2/2013	FIELD
8_DG	SL-559-SA8-SB-0.0-0.5	PH083	SO	8/2/2013	FIELD
8_DG	SL-559-SA8-SB-4.0-5.0	PH083	SO	8/2/2013	FIELD
	TB-080213	PH083	WQ	8/2/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
8_DG	SL-568-SA8-SB-0.0-0.5	PH084	SO	8/5/2013	FIELD
8_DG	SL-568-SA8-SB-4.0-5.0	PH084	SO	8/5/2013	FIELD
8_DG	SL-569-SA8-SB-0.0-0.5	PH084	SO	8/5/2013	FIELD
8_DG	SL-569-SA8-SB-4.0-5.0	PH084	SO	8/5/2013	FIELD
8_DG	SL-569-SA8-SB-7.0-8.0	PH084	SO	8/5/2013	FIELD
	TB-080513	PH084	WQ	8/5/2013	FIELD
8_DG	SL-564-SA8-SB-0.0-0.5	PH085	SO	8/6/2013	FIELD
8_DG	SL-582-SA8-SB-0.0-0.5	PH085	SO	8/6/2013	FIELD
8_DG	SL-582-SA8-SB-2.5-3.5	PH085	SO	8/6/2013	FIELD
8_DG	SL-583-SA8-SB-0.0-0.5	PH085	SO	8/6/2013	FIELD
8_DG	SL-584-SA8-SB-0.0-0.5	PH085	SO	8/6/2013	FIELD
8_DG	SL-883-SA8-SB-0.0-0.5	PH085	SO	8/6/2013	FIELD
	TB-080613	PH085	WQ	8/6/2013	FIELD
	EB-080713	PH086	WQ	8/7/2013	FIELD
8_DG	SL-566-SA8-SB-0.0-0.5	PH086	SO	8/7/2013	FIELD
8_DG	SL-566-SA8-SB-4.0-5.0	PH086	SO	8/7/2013	FIELD
8_DG	SL-575-SA8-SB-0.0-0.5	PH086	SO	8/7/2013	FIELD
8_DG	SL-575-SA8-SB-4.0-5.0	PH086	SO	8/7/2013	FIELD
8_DG	SL-575-SA8-SB-9.0-10.0	PH086	SO	8/7/2013	FIELD
	TB-080713	PH086	WQ	8/7/2013	FIELD
8_DG	SL-565-SA8-SB-0.0-0.5	PH087	SO	8/8/2013	FIELD
8_DG	SL-565-SA8-SB-4.0-5.0	PH087	SO	8/8/2013	FIELD
8_DG	SL-567-SA8-SB-0.0-0.5	PH087	SO	8/8/2013	FIELD
8_DG	SL-567-SA8-SB-4.0-5.0	PH087	SO	8/8/2013	FIELD
8_DG	SL-567-SA8-SB-9.0-10.0	PH087	SO	8/8/2013	FIELD
	TB-080813	PH087	WQ	8/8/2013	FIELD
8_DG	SL-530-SA8-SB-0.0-0.5	PH088	SO	8/9/2013	FIELD
8_DG	SL-530-SA8-SB-4.0-5.0	PH088	SO	8/9/2013	FIELD
8_DG	SL-538-SA8-SB-0.0-0.5	PH088	SO	8/9/2013	FIELD
8_DG	SL-538-SA8-SB-4.0-5.0	PH088	SO	8/9/2013	FIELD
8_DG	SL-541-SA8-SB-0.0-0.5	PH088	SO	8/9/2013	FIELD
8_DG	SL-541-SA8-SB-4.0-5.0	PH088	SO	8/9/2013	FIELD
8_DG	SL-607-SA8-SB-0.0-0.5	PH088	SO	8/9/2013	FIELD
8_DG	SL-607-SA8-SB-5.0-6.0	PH088	SO	8/9/2013	FIELD
8_DG	SL-830-SA8-SB-4.0-5.0	PH088	SO	8/9/2013	FIELD
8_DG	SL-838-SA8-SB-4.0-5.0	PH088	SO	8/9/2013	FIELD
	TB-080913	PH088	WQ	8/9/2013	FIELD
8_DG	SL-585-SA8-SB-0.0-0.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-590-SA8-SB-0.0-0.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-590-SA8-SB-4.0-5.0	PH089	SO	8/12/2013	FIELD
8_DG	SL-590-SA8-SB-7.0-8.0	PH089	SO	8/12/2013	FIELD
8_DG	SL-591-SA8-SB-0.0-0.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-592-SA8-SB-0.0-0.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-592-SA8-SB-3.5-4.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-593-SA8-SB-0.0-0.5	PH089	SO	8/12/2013	FIELD
8_DG	SL-593-SA8-SB-4.0-5.0	PH089	SO	8/12/2013	FIELD
	TB-081213	PH089	WQ	8/12/2013	FIELD

Task Code	System Sample Code	Lab SDG	Matrix Code	Sample Date	Sample Source
8_DG	SL-543-SA8-SB-0.0-0.5	PH090	SO	8/13/2013	FIELD
8_DG	SL-543-SA8-SB-4.0-5.0	PH090	SO	8/13/2013	FIELD
8_DG	SL-609-SA8-SB-0.0-0.5	PH090	SO	8/13/2013	FIELD
8_DG	SL-609-SA8-SB-4.0-5.0	PH090	SO	8/13/2013	FIELD
8_DG	SL-614-SA8-SB-0.0-0.5	PH090	SO	8/13/2013	FIELD
8_DG	SL-614-SA8-SB-4.0-5.0	PH090	SO	8/13/2013	FIELD
8_DG	SL-843-SA8-SB-4.0-5.0	PH090	SO	8/13/2013	FIELD
	TB-081313	PH090	WQ	8/13/2013	FIELD
	EB-081413	PH091	WQ	8/14/2013	FIELD
8_DG	SL-600-SA8-SB-0.0-0.5	PH091	SO	8/14/2013	FIELD
8_DG	SL-600-SA8-SB-4.0-5.0	PH091	SO	8/14/2013	FIELD
8_DG	SL-602-SA8-SB-0.0-0.5	PH091	SO	8/14/2013	FIELD
8_DG	SL-602-SA8-SB-4.0-5.0	PH091	SO	8/14/2013	FIELD
8_DG	SL-613-SA8-SB-0.0-0.5	PH091	SO	8/14/2013	FIELD
8_DG	SL-613-SA8-SB-4.0-5.0	PH091	SO	8/14/2013	FIELD
	TB-081413	PH091	WQ	8/14/2013	FIELD
8_DG	SL-594-SA8-SB-0.0-0.5	PH092	SO	8/15/2013	FIELD
8_DG	SL-595-SA8-SB-0.0-0.5	PH092	SO	8/15/2013	FIELD
8_DG	SL-597-SA8-SB-0.0-0.5	PH092	SO	8/15/2013	FIELD
8_DG	SL-553-SA8-SB-0.0-0.5	PH094	SO	8/27/2013	FIELD
8_DG	SL-553-SA8-SB-4.0-5.0	PH094	SO	8/27/2013	FIELD
8_DG	SL-615-SA8-SB-0.0-0.5	PH094	SO	8/27/2013	FIELD
8_DG	SL-853-SA8-SB-4.0-5.0	PH094	SO	8/27/2013	FIELD
	TB-082713	PH094	WQ	8/27/2013	FIELD
	EB3-082813	PH096	WQ	8/28/2013	FIELD
	EB4-082813	PH096	WQ	8/28/2013	FIELD
8_DG	SL-553-SA8-SB-14.0-15.0	PH096	SO	8/28/2013	FIELD
8_DG	SL-553-SA8-SB-18.0-19.0	PH096	SO	8/28/2013	FIELD
8_DG	SL-553-SA8-SB-9.0-10.0	PH096	SO	8/28/2013	FIELD
	TB1-082813	PH096	WQ	8/28/2013	FIELD
8_DG	SL-604-SA8-SB-0.0-0.5	PH097	SO	8/29/2013	FIELD
8_DG	SL-605-SA8-SB-0.0-0.5	PH097	SO	8/29/2013	FIELD
8_DG	SL-904-SA8-SB-0.0-0.5	PH097	SO	8/29/2013	FIELD
	EB2-092513	PH115	WQ	9/25/2013	FIELD
8_DG	SL-542-SA8-SB-0.0-0.5	PH117	SO	9/26/2013	FIELD
8_DG	SL-542-SA8-SB-14.0-15.0	PH117	SO	9/26/2013	FIELD
8_DG	SL-542-SA8-SB-17.5-18.5	PH117	SO	9/26/2013	FIELD
8_DG	SL-542-SA8-SB-4.0-5.0	PH117	SO	9/26/2013	FIELD
8_DG	SL-542-SA8-SB-9.0-10.0	PH117	SO	9/26/2013	FIELD
	TB2-092613	PH117	WQ	9/26/2013	FIELD

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

CDM
555 17th Street, Suite 1100
Denver, CO 80202
ATTN: Mrs. Cherie Zakowski

November 21, 2013

SUBJECT: Santa Susana Field Laboratory, Subarea 5D Data Validation

Dear Mrs. Zakowski,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on October 28, 2013. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 30673:

SDG #	Fraction
PH093 & PH095	Semivolatiles, Chlorinated Pesticides, Polychlorinated Biphenyls, Metals, Herbicides, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Extractables, Dioxins/Dibenzofurans

The data validation was performed under Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan for Santa Susana Field Laboratory, RCRA Facility Investigation, Surficial Media Operable Unit, March 2009, Revision 4
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- Polychlorinated Dioxins/Dibenzofurans Data Review, September 2005
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Shauna McKellar
Project Manager/Chemist

105 pages-CD

Attachment 1

90/10 ADR/IV

LDC #30673 (CDM Federal Programs-Chantilly VA / Santa Susana Field Laboratory, Subarea 5D)

LDC	SDG#	DATE REC'D	(4) DATE DUE	SVOA (8270D -SIM)		Pest. (8081B)		PCBs (8082A)		Metals & Hg (SW846)		Herbs. (8151A)		TPH-G (8015M)		TPH-E (8015M)		Dioxins (1613B)																					
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	PH093	10/28/13	11/25/13	0	2	-	-	0	2	0	2	-	-	1	1	0	2	0	1																				
B	PH095	10/28/13	11/25/13	2	6	1	0	2	6	2	6	1	0	3	3	2	6	2	3																				
Total	T/SM			2	8	1	0	2	8	2	8	1	0	4	4	2	8	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56

Shaded cells indicate Level IV validation (all other cells are ADR review). These sample counts do not include MS/MSD, and DUPs

30673ST-SA5D.wpd

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH093

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc.
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

November 20, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on August 26, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005), and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by Environmental Protection Agency (EPA) SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, equipment blanks, field blanks and trip blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

I. Technical Holding Times

All technical holding time requirements were met.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for metals. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the exception of one DUP for metals. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

IX. 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.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

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-548-SA5D-SB-0.0-0.5	Copper	20 (≤10)	SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0	J(all detects) UJ(all non-detects)	A

The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH093	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No contaminants were found in the trip blank.

One equipment blank (from SDG PH095) was collected and analyzed for SVOCs, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had several detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for several SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified.

The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Aug-2013	TB-082613	7176112	TB	5030B	8015M	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	3050B	6010C	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	3546	8015M	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	3546	8082A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	3546	8270D SIM	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	METHOD	1613B	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5	7176110	N	METHOD	7471B	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5DUP	P176110D221004	DUP	3050B	6010C	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5DUP	P176110D221119A	DUP	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5DUP	P176110D221119B	DUP	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MSD	P176110M221012	MSD	3050B	6010C	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MSD	P176110M221124A	MSD	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MSD	P176110M221124B	MSD	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MS	P176110R221008	MS	3050B	6010C	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MS	P176110R221121A	MS	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-0.0-0.5MS	P176110R221121B	MS	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	3050B	6010C	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	3050B	6020A	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	3546	8015M	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	3546	8082A	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	3546	8270D SIM	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	5035A	8015M	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0	7176111	N	METHOD	7471B	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0DUP	P176111D221209	DUP	METHOD	7471B	III
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0MSD	P176111M221213	MSD	METHOD	7471B	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
26-Aug-2013	SL-548-SA5D-SB-4.0-5.0MS	P176111R221211	MS	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-548-SA5D-SB-0.0-0.5** ***Collected:*** **8/26/2013 1:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	7.14	J	0.855	MDL	10.2	PQL	mg/Kg	J	Z

Sample ID: **SL-548-SA5D-SB-0.0-0.5** ***Collected:*** **8/26/2013 1:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.07	U	0.753	MDL	4.07	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.877	J	0.0682	MDL	1.02	PQL	mg/Kg	J	Z
CADMIUM	0.325	J	0.0773	MDL	1.02	PQL	mg/Kg	J	Z
COBALT	9.27		0.101	MDL	1.02	PQL	mg/Kg	J	E
COPPER	18.7		0.295	MDL	2.04	PQL	mg/Kg	J	A
MANGANESE	496		0.0845	MDL	1.02	PQL	mg/Kg	J	E
MOLYBDENUM	0.425	J	0.173	MDL	2.04	PQL	mg/Kg	U	F, F
SODIUM	87.1	J	17.0	MDL	102	PQL	mg/Kg	J	Z
TIN	3.31	J	0.224	MDL	10.2	PQL	mg/Kg	U	B
ZINC	73.9		0.204	MDL	4.07	PQL	mg/Kg	J	Q

Sample ID: **SL-548-SA5D-SB-4.0-5.0** ***Collected:*** **8/26/2013 2:35:00** ***Analysis Type:*** **REA2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	6.76	J	0.910	MDL	10.8	PQL	mg/Kg	J	Z

Sample ID: **SL-548-SA5D-SB-4.0-5.0** ***Collected:*** **8/26/2013 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
ANTIMONY	4.33	U	0.802	MDL	4.33	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.865	J	0.0726	MDL	1.08	PQL	mg/Kg	J	Z
CADMIUM	0.168	J	0.0824	MDL	1.08	PQL	mg/Kg	J	Z
COBALT	8.57		0.107	MDL	1.08	PQL	mg/Kg	J	E
COPPER	16.1		0.314	MDL	2.17	PQL	mg/Kg	J	A
MANGANESE	329		0.0899	MDL	1.08	PQL	mg/Kg	J	E
MOLYBDENUM	0.185	J	0.184	MDL	2.17	PQL	mg/Kg	U	F, F
SODIUM	91.3	J	18.1	MDL	108	PQL	mg/Kg	J	Z
TIN	3.13	J	0.238	MDL	10.8	PQL	mg/Kg	U	B
ZINC	72.2		0.217	MDL	4.33	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-548-SA5D-SB-0.0-0.5 **Collected: 8/26/2013 1:00:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.214	J	0.102	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: SL-548-SA5D-SB-0.0-0.5 **Collected: 8/26/2013 1:00:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0521	J	0.0265	MDL	0.204	PQL	mg/Kg	J	Z
STRONTIUM	30.4		0.0692	MDL	0.407	PQL	mg/Kg	J	Q
THALLIUM	0.367		0.0305	MDL	0.204	PQL	mg/Kg	J	Q

Sample ID: SL-548-SA5D-SB-4.0-5.0 **Collected: 8/26/2013 2:35:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.265	J	0.108	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-548-SA5D-SB-4.0-5.0 **Collected: 8/26/2013 2:35:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0483	J	0.0282	MDL	0.217	PQL	mg/Kg	J	Z
STRONTIUM	43.6		0.0737	MDL	0.433	PQL	mg/Kg	J	Q
THALLIUM	0.465		0.0325	MDL	0.217	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-548-SA5D-SB-4.0-5.0 **Collected: 8/26/2013 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
MERCURY	0.0164	J	0.0110	MDL	0.0184	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 1613B **Matrix:** SO

Sample ID: SL-548-SA5D-SB-0.0-0.5 **Collected:** 8/26/2013 1:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.48	JB	0.0149	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.140	JBQ	0.0201	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.188	JB	0.0344	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.193	JB	0.0225	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.669	JB	0.0358	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.191	JB	0.0211	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.667	JB	0.0346	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.534	JB	0.0221	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.236	JB	0.0442	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.468	JB	0.0274	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.201	JB	0.0213	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.356	JB	0.0271	MDL	5.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0631	JQ	0.0464	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.181	J	0.0582	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	4.10	JB	0.0285	MDL	10.2	PQL	ng/Kg	J	Z

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-548-SA5D-SB-4.0-5.0 **Collected:** 8/26/2013 2:35:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	8.3	J	4.5	MDL	11	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8270D SIM **Matrix:** SO

Sample ID: SL-548-SA5D-SB-0.0-0.5 **Collected:** 8/26/2013 1:00:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.4	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.6	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.6	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-548-SA5D-SB-0.0-0.5** ***Collected:*** **8/26/2013 1:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	1.1	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-548-SA5D-SB-0.0-0.5** ***Collected:*** **8/26/2013 1:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	1.0	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-548-SA5D-SB-4.0-5.0** ***Collected:*** **8/26/2013 2:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.1	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	0.48	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.87	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.1	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH093

Method Blank Outlier Report

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2480B371919	9/6/2013 7:19:00 PM	1,2,3,4,6,7,8-HPCDD	0.122 ng/Kg	SL-548-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0567 ng/Kg	
		1,2,3,4,7,8,9-HPCDF	0.0816 ng/Kg	
		1,2,3,4,7,8-HxCDD	0.0423 ng/Kg	
		1,2,3,4,7,8-HXCDF	0.0557 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0502 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0251 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0844 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0604 ng/Kg	
		1,2,3,7,8-PECDD	0.0657 ng/Kg	
		1,2,3,7,8-PECDF	0.0612 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0455 ng/Kg	
		2,3,4,7,8-PECDF	0.0677 ng/Kg	
		OCDD	0.464 ng/Kg	
		OCDF	0.216 ng/Kg	

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-548-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.140 ng/Kg	0.140U ng/Kg
SL-548-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.188 ng/Kg	0.188U ng/Kg
SL-548-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.193 ng/Kg	0.193U ng/Kg
SL-548-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.236 ng/Kg	0.236U ng/Kg
SL-548-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.201 ng/Kg	0.201U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P23937AB220948	9/2/2013 9:48:00 AM	CALCIUM	6.47 mg/Kg	SL-548-SA5D-SB-0.0-0.5
		TIN	1.64 mg/Kg	SL-548-SA5D-SB-4.0-5.0
		ZINC	0.280 mg/Kg	

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-548-SA5D-SB-0.0-0.5(RES)	TIN	3.31 mg/Kg	3.31U mg/Kg
SL-548-SA5D-SB-4.0-5.0(RES)	TIN	3.13 mg/Kg	3.13U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB2-082813(RES)	8/28/2013 2:30:00 PM	MOLYBDENUM	0.0022 mg/L	SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0

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-548-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.425 mg/Kg	0.425U mg/Kg
SL-548-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.185 mg/Kg	0.185U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0

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-548-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.425 mg/Kg	0.425U mg/Kg
SL-548-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.185 mg/Kg	0.185U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-548-SA5D-SB-0.0-0.5MS (TOT) SL-548-SA5D-SB-0.0-0.5MSD (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	ALUMINUM TITANIUM ZINC	2878 360 -	1876 297 133	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ALUMINUM TITANIUM ZINC	J (all detects) Al, Ti, No Qual, >4x
SL-548-SA5D-SB-0.0-0.5MS (TOT) SL-548-SA5D-SB-0.0-0.5MSD (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	IRON MAGNESIUM MANGANESE PHOSPHORUS	-850 148 -94 30	-1726 -21 -132 16	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	IRON MAGNESIUM MANGANESE PHOSPHORUS	No Qual, >4x
SL-548-SA5D-SB-0.0-0.5MS (TOT) SL-548-SA5D-SB-0.0-0.5MSD (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	ANTIMONY CALCIUM	48 -	50 59	75.00-125.00 75.00-125.00	- -	ANTIMONY CALCIUM	J(all detects) UJ(all non-detects) Ca, No Qual, >4x

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-548-SA5D-SB-0.0-0.5MSD (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	STRONTIUM THALLIUM	- -	201 133	75.00-125.00 75.00-125.00	- -	STRONTIUM THALLIUM	J(all detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-548-SA5D-SB-0.0-0.5DUP (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	ARSENIC	21	20.00	J (all detects) UJ (all non-detects)
	COBALT	26	20.00	
	MANGANESE	31	20.00	As, Mo, No Qual, OK by Difference
	MOLYBDENUM	26	20.00	

Method: 7471B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-548-SA5D-SB-4.0-5.0DUP (TOT) (SL-548-SA5D-SB-0.0-0.5 SL-548-SA5D-SB-4.0-5.0)	MERCURY	35	20.00	No Qual, OK by Difference

Reporting Limit Outliers

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.48	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.140	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.188	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.193	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.669	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.191	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.667	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.534	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.236	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.468	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.201	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.356	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0631	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.181	1.02	PQL	ng/Kg	
	OCDF	JB	4.10	10.2	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.877	1.02	PQL	mg/Kg	J (all detects)
	BORON	J	7.14	10.2	PQL	mg/Kg	
	CADMIUM	J	0.325	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.425	2.04	PQL	mg/Kg	
	SODIUM	J	87.1	102	PQL	mg/Kg	
	TIN	J	3.31	10.2	PQL	mg/Kg	
SL-548-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.865	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	6.76	10.8	PQL	mg/Kg	
	CADMIUM	J	0.168	1.08	PQL	mg/Kg	
	MOLYBDENUM	J	0.185	2.17	PQL	mg/Kg	
	SODIUM	J	91.3	108	PQL	mg/Kg	
	TIN	J	3.13	10.8	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-0.0-0.5	SELENIUM	J	0.214	0.407	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0521	0.204	PQL	mg/Kg	
SL-548-SA5D-SB-4.0-5.0	SELENIUM	J	0.265	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0483	0.217	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH093 **Laboratory: LL**

EDD Filename: PH093_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 7471B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-4.0-5.0	MERCURY	J	0.0164	0.0184	PQL	mg/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-4.0-5.0	EFH (C30-C40)	J	8.3	11	PQL	mg/Kg	J (all detects)

Method: 8270D SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	1.4	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.6	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.6	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.1	1.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.0	1.7	PQL	ug/Kg	
SL-548-SA5D-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.48	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.87	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.1	1.8	PQL	ug/Kg	

LDC #: 30673A4

SDG #: PH093

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/7/13

Page: 1 of 1

Reviewer: CL

2nd Reviewer: MG

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 8/26/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB= EB2-082813 FB= FB-041113

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate (PH095)
TB = Trip blank
EB = Equipment blank

(PH029)

Validated Samples: 5

1	SL-548-SA5D-SB-0.0-0.5	11		21		31	
2	SL-548-SA5D-SB-4.0-5.0	12		22		32	
3	(~~X~~1) MS	13		23		33	
4	MSD	14		24		34	
5	Dup	15		25		35	
6	(~~X~~2) MS (H8)	16		26		36	
7	MSD	17		27		37	
8	Dup	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30673A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CA
2nd Reviewer: MG

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-041113 (SDG: PH029)	Action Limit	1	2								
Cu	0.0036	1.8										
Mo	0.0036	1.8	0.43	0.19								

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB2-082813 (SDG: PH095)	Action Limit	1	2								
Mo	0.0022	1.1	0.43	0.19								

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH093
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7176110BKG Matrix Spike Lab Sample ID: 7176110MS Matrix Spike Duplicate Lab Sample ID: 7176110MSD
Batch Id(s): P23937A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		23966.2129		29666.0812		27680.5921		198.0198	198.0198	MG/KG	2878		-1876		7			20	P
Antimony		0.7327	U	23.8614		24.6089		49.5050	49.5050	MG/KG	48	N	50	N	3		75 - 125	20	P
Arsenic		7.7713		20.8762		20.5010		14.8515	14.8515	MG/KG	88		86		2		75 - 125	20	P
Barium		124.2257		308.0396		310.1653		198.0198	198.0198	MG/KG	93		94		1		75 - 125	20	P
Beryllium		0.8535	B	5.6376		5.3921		4.9505	4.9505	MG/KG	97		92		4		75 - 125	20	P
Boron		6.9446	B	187.8059		192.7950		198.0198	198.0198	MG/KG	91		94		3		75 - 125	20	P
Cadmium		0.3158	B	4.6574		4.7396		4.9505	4.9505	MG/KG	88		89		2		75 - 125	20	P
Calcium		5424.8158		5896.9178		5656.5634		396.0396	396.0396	MG/KG	119		59		4			20	P
Chromium		32.7317		51.9693		51.4129		19.8020	19.8020	MG/KG	97		94		1		75 - 125	20	P
Cobalt		9.0149		50.9703		50.4396		49.5050	49.5050	MG/KG	85		84		1		75 - 125	20	P
Copper		18.2030		42.4198		40.6168		24.7525	24.7525	MG/KG	98		91		4		75 - 125	20	P
Iron		29093.6574		28252.0218		27384.3782		99.0099	99.0099	MG/KG	-850		-1526		3			20	P
Lead		11.8119		24.0842		24.6436		14.8515	14.8515	MG/KG	83		86		2		75 - 125	20	P
Lithium		24.4455		121.2416		117.4772		99.0099	99.0099	MG/KG	98		94		3		75 - 125	20	P
Magnesium		6318.3455		6610.7079		6276.3980		198.0198	198.0198	MG/KG	148		-21		5			20	P
Manganese		482.8891		436.4713		417.3238		49.5050	49.5050	MG/KG	-94		-132		4			20	P
Molybdenum		0.4139	B	172.1693		171.4584		198.0198	198.0198	MG/KG	87		86		0		75 - 125	20	P
Nickel		18.0564		61.6366		60.1752		49.5050	49.5050	MG/KG	88		85		2		75 - 125	20	P
Phosphorus		544.1089		573.7050		559.5663		99.0099	99.0099	MG/KG	30		16		2			20	P
Potassium		5566.3356		6788.6772		6550.9634		990.0990	990.0990	MG/KG	123		99		4			20	P
Selenium	78	0.2079	B	2.1980		2.3941		1.9802	1.9802	MG/KG	100		110		9		75 - 125	20	MS
Silver	107	0.0507	B	10.7525		12.3624		9.9010	9.9010	MG/KG	108		124		14		75 - 125	20	MS
Sodium		84.7030	B	1018.8228		995.0911		990.0990	990.0990	MG/KG	94		92		2		75 - 125	20	P
Strontium	88	29.5446		37.9802		45.4851		7.9208	7.9208	MG/KG	106		201	N	18		75 - 125	20	MS
Thallium	203	0.3566		0.7598		0.8818		0.3960	0.3960	MG/KG	102		133	N	15		75 - 125	20	MS
Tin		3.2228	B	327.6554		327.6752		396.0396	396.0396	MG/KG	82		82		0		75 - 125	20	P
Titanium		1296.5772		1653.3248		1590.5792		99.0099	99.0099	MG/KG	360		297		4			20	P
Vanadium		63.9980		110.2099		109.2188		49.5050	49.5050	MG/KG	93		91		1		75 - 125	20	P
Zinc		71.8970		116.8485		137.7475		49.5050	49.5050	MG/KG	91		133	N	16		75 - 125	20	P
Zirconium		5.0792		91.8802		89.4683		99.0099	99.0099	MG/KG	88		85		3		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH093
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7176110BKG
Duplicate Lab Sample ID: 7176110DUP
Batch ID(s): P23937A
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			23966.2129		21164.5891		12		P
Antimony			-0.9980	B	-0.7465	B	-29		P
Arsenic		4.0	7.7713		6.2772		21		P
Barium			124.2257		108.3941		14		P
Beryllium			0.8535	B	0.7356	B	15		P
Boron			6.9446	B	6.3733	B	9		P
Cadmium			0.3158	B	0.3040	B	4		P
Calcium			5424.8158		4999.2485		8		P
Chromium			32.7317		29.5713		10		P
Cobalt			9.0149		6.9198		26	*	P
Copper			18.2030		15.5030		16		P
Iron			29093.6574		26321.3545		10		P
Lead		3.0	11.8119		10.1574		15		P
Lithium			24.4455		21.2762		14		P
Magnesium			6318.3455		5710.0891		10		P
Manganese			482.8891		351.6881		31	*	P
Molybdenum			0.4139	B	0.3198	B	26		P
Nickel			18.0564		15.3505		16		P
Phosphorus			544.1089		478.1119		13		P
Potassium			5566.3356		4867.3228		13		P
Selenium	78		0.2079	B	0.2319	B	11		MS
Silver	107		0.0507	B	0.0500	B	1		MS
Sodium			84.7030	B	77.7218	B	9		P
Strontium	88		29.5446		33.1287		11		MS
Thallium	203	0.2	0.3566		0.3834		7		MS
Tin			3.2228	B	2.8634	B	12		P
Titanium			1296.5772		1124.7960		14		P
Vanadium			63.9980		55.1851		15		P
Zinc			71.8970		64.7198		11		P
Zirconium		5.0	5.0792		5.8267		14		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH093
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7176111BKG
Duplicate Lab Sample ID: 7176111DUP
Batch ID(s): P23938B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Mercury	[illegible]	[illegible]	0.0147	B	0.0104	B	34	*	CV

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: PH093
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7176110BKG Serial Dilution Lab Sample ID: 7176110L
Batch ID(s): P23937A
Concentration Units: UG/L

SL-548-SA5D-SB -0.0-0.

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		242058.7500		246178.3000		2		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		78.4900		74.1000	B	6		P
Barium		1254.6800		1248.3500		1		P
Beryllium		8.6200	B	8.0500	B	7		P
Boron		70.1400	B	135.3500	B	93		P
Cadmium		3.1900	B	4.9000	B	54		P
Calcium		54790.6400		56004.8500		2		P
Chromium		330.5900		325.5500		2		P
Cobalt		91.0500		98.7000		8		P
Copper		183.8500		220.3500		20	E	P
Iron		146922.9700		151445.4000		3		P
Lead		119.3000		130.1000	B	9		P
Lithium		246.9000		254.6000		3		P
Magnesium		63815.2900		64661.9000		1		P
Manganese		4877.1800		5032.4000		3		P
Molybdenum		4.1800	B	8.5000	U	100		P
Nickel		182.3700		197.2500		8		P
Phosphorus		5495.5000		5537.6000		1		P
Potassium		56219.9900		56489.9500		0		P
Selenium	78	1.0500	B	2.5000	U	100		MS
Silver	107	0.2559	B	0.6500	U	100		MS
Sodium		855.5000	B	835.0000	U	100		P
Strontium	88	149.2000		152.8500		2		MS
Thallium	203	1.8010		2.0715	B	15		MS
Tin		32.5500	B	33.5000	B	3		P
Titanium		13095.4300		13197.8000		1		P
Vanadium		646.3800		633.3000		2		P
Zinc		726.1600		741.5500		2		P
Zirconium		51.3000		56.0500	B	9		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

[redacted] All

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
	FLAGS:
	E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH095

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc.
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

November 20, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on August 28, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005), and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by Environmental Protection Agency (EPA) SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081A
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, 7470A and 7471B
Herbicides by EPA SW 846 Method 8151A
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), method blanks, equipment blanks, field blanks and trip blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

I. Technical Holding Times

All technical holding time requirements were met.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for SVOCs, metals and dioxins The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the following exceptions:

SDG/ Method	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PH095/ 6010C	ICB/CCB	Molybdenum	3.3 ug/L	EB1-082813 EB2-082813

Sample concentrations were compared to concentrations detected in the initial and continuing blanks. The sample concentrations were not detected or were significantly greater than the concentrations found in the associated blanks with the following exceptions:

SDG/Method	Sample	Compound	Reported Concentration	Modified Final Concentration
PH095/ 6010C	EB1-082813	Molybdenum	8.0 ug/L	8.0U ug/L
PH095/ 6010C	EB2-082813	Molybdenum	2.2 ug/L	2.2U ug/L

V. 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 exception of one sample for PCBs. No data were qualified for due to high %Rs since the associated results were non-detected.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

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 Duplicates Sample

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for the samples in this SDG, and therefore laboratory duplicate analyses were not performed for this SDG.

IX. 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 with the exception of several LCS/LCSD pairs for pesticides, PCBs and TPH as extractables. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH095	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No contaminants were found in the trip blank.

Two equipment blanks were collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had several detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for several SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Aug-2013	TB2-082813	7179318	TB	5030B	8015M	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	3050B	6010C	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	3050B	6020A	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	3546	8015M	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	3546	8082A	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	3546	8270D SIM	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	METHOD	1613B	III
28-Aug-2013	SL-537-SA5D-SB-0.0-0.5	7179321	N	METHOD	7471B	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	3050B	6010C	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	3050B	6020A	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	3546	8015M	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	3546	8082A	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	3546	8270D SIM	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	5035A	8015M	III
28-Aug-2013	SL-537-SA5D-SB-2.5-3.5	7179322	N	METHOD	7471B	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	3050B	6010C	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	3050B	6020A	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	3546	8015M	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	3546	8082A	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	3546	8270D SIM	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	METHOD	1613B	III
28-Aug-2013	SL-536-SA5D-SB-0.0-0.5	7179319	N	METHOD	7471B	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	3050B	6010C	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	3050B	6020A	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	3546	8015M	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	3546	8082A	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
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	3546	8270D SIM	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	5035A	8015M	III
28-Aug-2013	SL-536-SA5D-SB-3.5-4.5	7179320	N	METHOD	7471B	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	3050B	6010C	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	3050B	6020A	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	3546	8015M	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	3546	8082A	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	3546	8270D SIM	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	METHOD	1613B	III
28-Aug-2013	SL-538-SA5D-SB-0.0-0.5	7179323	N	METHOD	7471B	III
28-Aug-2013	EB1-082813	7179316	EB	3005A	6010C	III
28-Aug-2013	EB1-082813	7179316	EB	3510C	8015M	III
28-Aug-2013	EB1-082813	7179316	EB	3510C	8081B	III
28-Aug-2013	EB1-082813	7179316	EB	3510C	8082A	III
28-Aug-2013	EB1-082813	7179316	EB	3510C	8270D SIM	III
28-Aug-2013	EB1-082813	7179316	EB	5030B	8015M	III
28-Aug-2013	EB1-082813	7179316	EB	M3010A	6020A	III
28-Aug-2013	EB1-082813	7179316	EB	METHOD	1613B	III
28-Aug-2013	EB1-082813	7179316	EB	METHOD	7470A	III
28-Aug-2013	EB1-082813	7179316	EB	METHOD	8151A	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	3050B	6010C	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	3050B	6020A	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	3546	8015M	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	3546	8082A	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	3546	8270D SIM	III
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	5035A	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
28-Aug-2013	SL-538-SA5D-SB-3.0-4.0	7179324	N	METHOD	7471B	III
28-Aug-2013	EB2-082813	7179317	EB	3005A	6010C	III
28-Aug-2013	EB2-082813	7179317	EB	3510C	8015M	III
28-Aug-2013	EB2-082813	7179317	EB	3510C	8082A	III
28-Aug-2013	EB2-082813	7179317	EB	3510C	8270D SIM	III
28-Aug-2013	EB2-082813	7179317	EB	5030B	8015M	III
28-Aug-2013	EB2-082813	7179317	EB	M3010A	6020A	III
28-Aug-2013	EB2-082813	7179317	EB	METHOD	1613B	III
28-Aug-2013	EB2-082813	7179317	EB	METHOD	7470A	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 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6010C **Matrix: AQ**

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	0.00035	J	0.00033	MDL	0.0100	PQL	mg/L	J	Z
MOLYBDENUM	0.0080	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

Sample ID: EB2-082813 *Collected:* 8/28/2013 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
MOLYBDENUM	0.0022	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-536-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 11:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.40	J	0.771	MDL	4.17	PQL	mg/Kg	J	Z
BERYLLIUM	0.524	J	0.0698	MDL	1.04	PQL	mg/Kg	J	Z
BORON	4.70	J	0.875	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.319	J	0.0792	MDL	1.04	PQL	mg/Kg	J	Z
MOLYBDENUM	0.185	J	0.177	MDL	2.08	PQL	mg/Kg	U	F, F
SODIUM	102	J	17.4	MDL	104	PQL	mg/Kg	J	Z
TIN	3.13	J	0.229	MDL	10.4	PQL	mg/Kg	U	B

Sample ID: SL-536-SA5D-SB-3.5-4.5 *Collected:* 8/28/2013 12:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.84	J	0.805	MDL	4.35	PQL	mg/Kg	J	Z
BORON	8.78	J	0.914	MDL	10.9	PQL	mg/Kg	J	Z
CADMIUM	0.601	J	0.0827	MDL	1.09	PQL	mg/Kg	J	Z
MOLYBDENUM	0.487	J	0.185	MDL	2.18	PQL	mg/Kg	U	F, F
TIN	4.70	J	0.239	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.47	J	0.914	MDL	5.44	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-537-SA5D-SB-0.0-0.5** ***Collected:*** **8/28/2013 10:20:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.981	J	0.776	MDL	4.19	PQL	mg/Kg	J	Z
BERYLLIUM	0.689	J	0.0702	MDL	1.05	PQL	mg/Kg	J	Z
BORON	6.45	J	0.881	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.481	J	0.0797	MDL	1.05	PQL	mg/Kg	J	Z
MOLYBDENUM	0.411	J	0.178	MDL	2.10	PQL	mg/Kg	U	F, F
TIN	2.94	J	0.231	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	1.84	J	0.881	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: **SL-537-SA5D-SB-2.5-3.5** ***Collected:*** **8/28/2013 10:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.22	J	0.773	MDL	4.18	PQL	mg/Kg	J	Z
BERYLLIUM	0.532	J	0.0700	MDL	1.04	PQL	mg/Kg	J	Z
BORON	4.76	J	0.878	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.292	J	0.0794	MDL	1.04	PQL	mg/Kg	J	Z
MOLYBDENUM	0.242	J	0.178	MDL	2.09	PQL	mg/Kg	U	F, F
TIN	3.41	J	0.230	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.41	J	0.878	MDL	5.22	PQL	mg/Kg	J	Z

Sample ID: **SL-538-SA5D-SB-0.0-0.5** ***Collected:*** **8/28/2013 1:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.01	J	0.750	MDL	4.05	PQL	mg/Kg	J	Z
BERYLLIUM	0.647	J	0.0679	MDL	1.01	PQL	mg/Kg	J	Z
BORON	5.78	J	0.851	MDL	10.1	PQL	mg/Kg	J	Z
CADMIUM	0.329	J	0.0770	MDL	1.01	PQL	mg/Kg	J	Z
MOLYBDENUM	0.404	J	0.172	MDL	2.03	PQL	mg/Kg	U	F, F
SODIUM	86.6	J	16.9	MDL	101	PQL	mg/Kg	J	Z
TIN	2.94	J	0.223	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	1.74	J	0.851	MDL	5.07	PQL	mg/Kg	J	Z

Sample ID: **SL-538-SA5D-SB-3.0-4.0** ***Collected:*** **8/28/2013 2:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.21	J	0.767	MDL	4.15	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-538-SA5D-SB-3.0-4.0 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.432	J	0.0694	MDL	1.04	PQL	mg/Kg	J	Z
BORON	4.28	J	0.870	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.307	J	0.0788	MDL	1.04	PQL	mg/Kg	J	Z
MOLYBDENUM	2.07	U	0.176	MDL	2.07	PQL	mg/Kg	U	F
TIN	3.22	J	0.228	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	1.79	J	0.870	MDL	5.18	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-536-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 11:00:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0836	J	0.0271	MDL	0.208	PQL	mg/Kg	J	Z
THALLIUM	0.189	J	0.0313	MDL	0.208	PQL	mg/Kg	J	Z

Sample ID: SL-536-SA5D-SB-3.5-4.5 *Collected:* 8/28/2013 12:00:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.144	J	0.0283	MDL	0.218	PQL	mg/Kg	J	Z

Sample ID: SL-536-SA5D-SB-3.5-4.5 *Collected:* 8/28/2013 12:00:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.252	J	0.109	MDL	0.435	PQL	mg/Kg	J	Z

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0501	J	0.0273	MDL	0.210	PQL	mg/Kg	J	Z

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.182	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-537-SA5D-SB-2.5-3.5 *Collected:* 8/28/2013 10:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0504	J	0.0272	MDL	0.209	PQL	mg/Kg	J	Z

Sample ID: SL-537-SA5D-SB-2.5-3.5 *Collected:* 8/28/2013 10:30:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.181	J	0.104	MDL	0.418	PQL	mg/Kg	J	Z

Sample ID: SL-538-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 1:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0630	J	0.0263	MDL	0.203	PQL	mg/Kg	J	Z

Sample ID: SL-538-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 1:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.145	J	0.101	MDL	0.405	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-536-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 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
MERCURY	0.0112	J	0.0103	MDL	0.0172	PQL	mg/Kg	J	Z

Sample ID: SL-536-SA5D-SB-3.5-4.5 *Collected:* 8/28/2013 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0140	J	0.0107	MDL	0.0178	PQL	mg/Kg	J	Z

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0130	J	0.010	MDL	0.0166	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-538-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0124	J	0.0102	MDL	0.0169	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.608	JBQ	0.423	MDL	9.67	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.299	JBQ	0.163	MDL	9.67	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.554	JBQ	0.193	MDL	9.67	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.222	JBQ	0.169	MDL	9.67	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.467	JBQ	0.163	MDL	9.67	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.471	JBQ	0.308	MDL	9.67	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.245	JB	0.189	MDL	9.67	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.501	JBQ	0.314	MDL	9.67	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.417	JBQ	0.167	MDL	9.67	PQL	pg/L	U	B
OCDD	1.43	JBQ	0.457	MDL	19.3	PQL	pg/L	U	B
OCDF	1.41	JBQ	0.612	MDL	19.3	PQL	pg/L	U	B

Sample ID: EB2-082813 *Collected:* 8/28/2013 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
1,2,3,4,6,7,8-HPCDD	0.721	JBQ	0.303	MDL	9.85	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.427	JBQ	0.102	MDL	9.85	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.404	JBQ	0.114	MDL	9.85	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.223	JBQ	0.119	MDL	9.85	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.352	JB	0.336	MDL	9.85	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.364	JB	0.203	MDL	9.85	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.302	JB	0.111	MDL	9.85	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.323	JB	0.181	MDL	9.85	PQL	pg/L	U	B
OCDD	1.48	JBQ	0.365	MDL	19.7	PQL	pg/L	U	B
OCDF	1.00	JB	0.423	MDL	19.7	PQL	pg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-536-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 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
1,2,3,4,6,7,8-HPCDD	0.595	JBQ	0.0179	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0869	JBQ	0.00850	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0433	JBQ	0.0122	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0567	JBQ	0.0164	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0644	JBQ	0.00765	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0604	JBQ	0.0173	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0535	JBQ	0.00627	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0718	JB	0.0171	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0397	JBQ	0.00744	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.109	JBQ	0.0213	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.143	JBQ	0.0116	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0435	JB	0.00701	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0605	JB	0.0118	MDL	5.10	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0385	JQ	0.0256	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0360	J	0.0231	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	7.52	JB	0.0164	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.245	JB	0.0168	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.970	JB	0.0258	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.748	JB	0.0342	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.490	JB	0.0201	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.34	JB	0.0355	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.326	JB	0.0171	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.22	JB	0.0328	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.654	JB	0.0200	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.533	JB	0.0480	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.341	JB	0.0214	MDL	5.11	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.404	JB	0.0186	MDL	5.11	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.229	JB	0.0200	MDL	5.11	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0978	J	0.0390	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0942	JQ	0.0439	MDL	1.02	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-538-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.58	JB	0.0103	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.226	JBQ	0.0151	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.136	JBQ	0.0227	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.130	JB	0.0140	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.710	JB	0.0234	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.122	JBQ	0.0112	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.686	JB	0.0227	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.220	JB	0.0135	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.380	JB	0.0166	MDL	5.15	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.132	JBQ	0.0104	MDL	5.15	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.114	JBQ	0.0164	MDL	5.15	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0385	JQ	0.0259	MDL	1.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0651	JQ	0.0390	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	4.33	JB	0.0216	MDL	10.3	PQL	ng/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix: AQ**

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.095	U	0.047	MDL	0.095	PQL	mg/L	UJ	L

Sample ID: EB2-082813 *Collected:* 8/28/2013 2:30:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.097	U	0.049	MDL	0.097	PQL	mg/L	UJ	L

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.5	J	2.1	MDL	5.2	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081B **Matrix: AQ**

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.017	U	0.0043	MDL	0.017	PQL	ug/L	UJ	L
ALDRIN	0.0085	U	0.0017	MDL	0.0085	PQL	ug/L	UJ	L
ALPHA-BHC	0.0085	U	0.0026	MDL	0.0085	PQL	ug/L	UJ	L
BETA-BHC	0.0085	U	0.0029	MDL	0.0085	PQL	ug/L	UJ	L
DELTA-BHC	0.0085	U	0.0029	MDL	0.0085	PQL	ug/L	UJ	L
ENDOSULFAN SULFATE	0.017	U	0.0050	MDL	0.017	PQL	ug/L	UJ	L
ENDRIN	0.017	U	0.0069	MDL	0.017	PQL	ug/L	UJ	E
ENDRIN ALDEHYDE	0.085	U	0.017	MDL	0.085	PQL	ug/L	UJ	L
gamma-BHC (Lindane)	0.0085	U	0.0017	MDL	0.0085	PQL	ug/L	UJ	L
HEPTACHLOR EPOXIDE	0.0085	U	0.0020	MDL	0.0085	PQL	ug/L	UJ	L

Method Category: SVOA

Method: 8270D SIM **Matrix: AQ**

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	0.19	J	0.051	MDL	1.0	PQL	ug/L	U	B

Sample ID: EB1-082813 *Collected:* 8/28/2013 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	0.37	J	0.051	MDL	1.0	PQL	ug/L	J	Z
Di-n-butylphthalate	0.19	J	0.051	MDL	1.0	PQL	ug/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8270D SIM **Matrix: AQ**

Sample ID: EB2-082813 *Collected:* 8/28/2013 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	0.12	J	0.053	MDL	1.1	PQL	ug/L	U	B
Diethylphthalate	0.36	J	0.053	MDL	1.1	PQL	ug/L	J	Z
Di-n-butylphthalate	0.18	J	0.053	MDL	1.1	PQL	ug/L	U	B

Method Category: SVOA

Method: 8270D SIM **Matrix: SO**

Sample ID: SL-536-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 11:00:00 *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	11	J	6.3	MDL	19	PQL	ug/Kg	J	Z

Sample ID: SL-536-SA5D-SB-3.5-4.5 *Collected:* 8/28/2013 12:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(E)PYRENE	6.3	J	3.6	MDL	18	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.74	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.77	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-537-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 10:20:00 *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	0.49	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(E)PYRENE	4.0	J	3.5	MDL	18	PQL	ug/Kg	J	Z

Sample ID: SL-538-SA5D-SB-0.0-0.5 *Collected:* 8/28/2013 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.43	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(E)PYRENE	9.1	J	3.5	MDL	18	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.4	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Laboratory Control Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH095

Method Blank Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2480B372111	9/9/2013 9:11:00 PM	1,2,3,4,6,7,8-HPCDD	0.888 pg/L	EB1-082813
		1,2,3,4,6,7,8-HPCDF	0.503 pg/L	EB2-082813
		1,2,3,4,7,8,9-HPCDF	0.549 pg/L	
		1,2,3,4,7,8-HxCDD	0.461 pg/L	
		1,2,3,4,7,8-HXCDF	0.471 pg/L	
		1,2,3,6,7,8-HXCDD	0.533 pg/L	
		1,2,3,6,7,8-HXCDF	0.575 pg/L	
		1,2,3,7,8,9-HXCDD	0.529 pg/L	
		1,2,3,7,8,9-HXCDF	0.668 pg/L	
		1,2,3,7,8-PECDD	0.622 pg/L	
		1,2,3,7,8-PECDF	0.765 pg/L	
		2,3,4,6,7,8-HXCDF	0.483 pg/L	
		2,3,4,7,8-PECDF	0.542 pg/L	
		OCDD	1.12 pg/L	
		OCDF	2.39 pg/L	

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
EB1-082813(RES)	1,2,3,4,6,7,8-HPCDD	0.608 pg/L	0.608U pg/L
EB1-082813(RES)	1,2,3,4,6,7,8-HPCDF	0.299 pg/L	0.299U pg/L
EB1-082813(RES)	1,2,3,4,7,8,9-HPCDF	0.554 pg/L	0.554U pg/L
EB1-082813(RES)	1,2,3,4,7,8-HXCDF	0.222 pg/L	0.222U pg/L
EB1-082813(RES)	1,2,3,6,7,8-HXCDF	0.467 pg/L	0.467U pg/L
EB1-082813(RES)	1,2,3,7,8,9-HXCDD	0.471 pg/L	0.471U pg/L
EB1-082813(RES)	1,2,3,7,8,9-HXCDF	0.245 pg/L	0.245U pg/L
EB1-082813(RES)	1,2,3,7,8-PECDF	0.501 pg/L	0.501U pg/L
EB1-082813(RES)	2,3,4,6,7,8-HXCDF	0.417 pg/L	0.417U pg/L
EB1-082813(RES)	OCDD	1.43 pg/L	1.43U pg/L
EB1-082813(RES)	OCDF	1.41 pg/L	1.41U pg/L
EB2-082813(RES)	1,2,3,4,6,7,8-HPCDD	0.721 pg/L	0.721U pg/L
EB2-082813(RES)	1,2,3,4,6,7,8-HPCDF	0.427 pg/L	0.427U pg/L
EB2-082813(RES)	1,2,3,4,7,8,9-HPCDF	0.404 pg/L	0.404U pg/L
EB2-082813(RES)	1,2,3,4,7,8-HXCDF	0.223 pg/L	0.223U pg/L
EB2-082813(RES)	1,2,3,7,8-PECDD	0.352 pg/L	0.352U pg/L
EB2-082813(RES)	1,2,3,7,8-PECDF	0.364 pg/L	0.364U pg/L
EB2-082813(RES)	2,3,4,6,7,8-HXCDF	0.302 pg/L	0.302U pg/L
EB2-082813(RES)	2,3,4,7,8-PECDF	0.323 pg/L	0.323U pg/L
EB2-082813(RES)	OCDD	1.48 pg/L	1.48U pg/L
EB2-082813(RES)	OCDF	1.00 pg/L	1.00U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2480B371919	9/6/2013 7:19:00 PM	1,2,3,4,6,7,8-HPCDD	0.122 ng/Kg	SL-536-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0567 ng/Kg	SL-537-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0816 ng/Kg	SL-538-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0423 ng/Kg	
		1,2,3,4,7,8-HXCDF	0.0557 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0502 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0251 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0844 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0604 ng/Kg	
		1,2,3,7,8-PECDD	0.0657 ng/Kg	
		1,2,3,7,8-PECDF	0.0612 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0455 ng/Kg	
		2,3,4,7,8-PECDF	0.0677 ng/Kg	
		OCDD	0.464 ng/Kg	
		OCDF	0.216 ng/Kg	

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-536-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.595 ng/Kg	0.595U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0869 ng/Kg	0.0869U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0433 ng/Kg	0.0433U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0567 ng/Kg	0.0567U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0644 ng/Kg	0.0644U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0604 ng/Kg	0.0604U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0535 ng/Kg	0.0535U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0718 ng/Kg	0.0718U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0397 ng/Kg	0.0397U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.109 ng/Kg	0.109U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.143 ng/Kg	0.143U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0435 ng/Kg	0.0435U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0605 ng/Kg	0.0605U ng/Kg
SL-536-SA5D-SB-0.0-0.5(RES)	OCDF	0.245 ng/Kg	0.245U ng/Kg
SL-537-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.229 ng/Kg	0.229U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.226 ng/Kg	0.226U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.136 ng/Kg	0.136U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.130 ng/Kg	0.130U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.122 ng/Kg	0.122U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.220 ng/Kg	0.220U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.132 ng/Kg	0.132U ng/Kg
SL-538-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.114 ng/Kg	0.114U ng/Kg

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24135AB221004	9/2/2013 10:04:00 AM	CALCIUM	0.0748 mg/L	EB1-082813 EB2-082813

Method Blank Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24237AB220427	9/4/2013 4:27:00 AM	CALCIUM TIN ZINC	9.35 mg/Kg 1.64 mg/Kg 0.416 mg/Kg	SL-536-SA5D-SB-0.0-0.5 SL-536-SA5D-SB-3.5-4.5 SL-537-SA5D-SB-0.0-0.5 SL-537-SA5D-SB-2.5-3.5 SL-538-SA5D-SB-0.0-0.5 SL-538-SA5D-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
SL-536-SA5D-SB-0.0-0.5(REA)	TIN	3.13 mg/Kg	3.13U mg/Kg
SL-536-SA5D-SB-3.5-4.5(REA)	TIN	4.70 mg/Kg	4.70U mg/Kg
SL-537-SA5D-SB-0.0-0.5(REA)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-537-SA5D-SB-2.5-3.5(REA)	TIN	3.41 mg/Kg	3.41U mg/Kg
SL-538-SA5D-SB-0.0-0.5(REA)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-538-SA5D-SB-3.0-4.0(REA)	TIN	3.22 mg/Kg	3.22U mg/Kg

Method: **8270D SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWJ24B260027	9/4/2013 12:27:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	0.061 ug/L 0.11 ug/L	EB1-082813 EB2-082813

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
EB1-082813(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.19 ug/L	1.0U ug/L
EB1-082813(RES)	Di-n-butylphthalate	0.19 ug/L	1.0U ug/L
EB2-082813(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.12 ug/L	1.1U ug/L
EB2-082813(RES)	Di-n-butylphthalate	0.18 ug/L	1.1U ug/L

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-082813(RES)	8/28/2013 2:00:00 PM	BARIUM MOLYBDENUM	0.00035 mg/L 0.008 mg/L	SL-536-SA5D-SB-0.0-0.5 SL-536-SA5D-SB-3.5-4.5 SL-537-SA5D-SB-0.0-0.5 SL-537-SA5D-SB-2.5-3.5 SL-538-SA5D-SB-0.0-0.5 SL-538-SA5D-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
SL-536-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.185 mg/Kg	0.185U mg/Kg
SL-536-SA5D-SB-3.5-4.5(REA)	MOLYBDENUM	0.487 mg/Kg	0.487U mg/Kg
SL-537-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.411 mg/Kg	0.411U mg/Kg
SL-537-SA5D-SB-2.5-3.5(REA)	MOLYBDENUM	0.242 mg/Kg	0.242U mg/Kg
SL-538-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.404 mg/Kg	0.404U mg/Kg
SL-538-SA5D-SB-3.0-4.0(REA)	MOLYBDENUM	2.07 mg/Kg	2.07U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PrepPH095 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-536-SA5D-SB-0.0-0.5 SL-536-SA5D-SB-3.5-4.5 SL-537-SA5D-SB-0.0-0.5 SL-537-SA5D-SB-2.5-3.5 SL-538-SA5D-SB-0.0-0.5 SL-538-SA5D-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
SL-536-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.185 mg/Kg	0.185U mg/Kg
SL-536-SA5D-SB-3.5-4.5(REA)	MOLYBDENUM	0.487 mg/Kg	0.487U mg/Kg
SL-537-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.411 mg/Kg	0.411U mg/Kg
SL-537-SA5D-SB-2.5-3.5(REA)	MOLYBDENUM	0.242 mg/Kg	0.242U mg/Kg
SL-538-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.404 mg/Kg	0.404U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **AQ**

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB2-082813	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	121 121	45.00-120.00 45.00-120.00	All Target Analytes	J (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32476AQ320211A (EB1 -082813 EB2 -082813)	EFH (C8-C11)	67	-	70.00-130.00	-	EFH (C8-C11)	J (all detects) UJ (all non-detects)

Method: 8082A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32479AY242234A **P32479AY242253A** (EB1 -082813 EB2 -082813)	AROCLOR 1260 Aroclor 5442	- -	134 98	69.00-128.00 35.00-84.00	- -	AROCLOR 1260, 1242, 1248, 1254, 1262, 1268 AROCLOR 5460, 5442, 5432	J(all detects)

Method: 8081B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32470AQ241913A **P32470AY241928A** (EB1 -082813)	4,4'-DDE	54	-	56.00-137.00	-	4,4'-DDE	J(all detects) UJ(all non-detects)
	ALDRIN	52	-	55.00-126.00	-	ALDRIN	
	ALPHA-BHC	61	-	63.00-132.00	-	ALPHA-BHC	
	BETA-BHC	55	62	63.00-132.00	-	BETA-BHC	
	DELTA-BHC	53	60	63.00-131.00	-	DELTA-BHC	
	ENDOSULFAN SULFATE	55	-	60.00-129.00	-	ENDOSULFAN SULFATE	
	ENDRIN	-	-	43.00-139.00	31 (30.00)	ENDRIN	
	ENDRIN ALDEHYDE	54	-	55.00-123.00	-	ENDRIN ALDEHYDE	
	gamma-BHC (Lindane)	59	-	68.00-128.00	-	gamma-BHC (Lindane)	
	HEPTACHLOR EPOXIDE	53	61	65.00-128.00	-	HEPTACHLOR EPOXIDE	

Reporting Limit Outliers

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-082813	1,2,3,4,6,7,8-HPCDD	JBQ	0.608	9.67	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.299	9.67	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.554	9.67	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.222	9.67	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JBQ	0.467	9.67	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.471	9.67	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JB	0.245	9.67	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.501	9.67	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.417	9.67	PQL	pg/L	
	OCDD	JBQ	1.43	19.3	PQL	pg/L	
	OCDF	JBQ	1.41	19.3	PQL	pg/L	
EB2-082813	1,2,3,4,6,7,8-HPCDD	JBQ	0.721	9.85	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.427	9.85	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.404	9.85	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.223	9.85	PQL	pg/L	
	1,2,3,7,8-PECDD	JB	0.352	9.85	PQL	pg/L	
	1,2,3,7,8-PECDF	JB	0.364	9.85	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JB	0.302	9.85	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.323	9.85	PQL	pg/L	
	OCDD	JBQ	1.48	19.7	PQL	pg/L	
	OCDF	JB	1.00	19.7	PQL	pg/L	

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-082813	BARIUM	J	0.00035	0.0100	PQL	mg/L	J (all detects)
	MOLYBDENUM	J	0.0080	0.0200	PQL	mg/L	
EB2-082813	MOLYBDENUM	J	0.0022	0.0200	PQL	mg/L	J (all detects)

Method: 8270D SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-082813	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.19	1.0	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.37	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.19	1.0	PQL	ug/L	
EB2-082813	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.12	1.1	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.36	1.1	PQL	ug/L	
	Di-n-butylphthalate	J	0.18	1.1	PQL	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-536-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.595	5.10	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0869	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0433	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0567	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0644	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0604	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0535	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0718	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0397	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.109	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.143	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0435	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0605	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0385	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0360	1.02	PQL	ng/Kg	
	OCDD	JB	7.52	10.2	PQL	ng/Kg	
	OCDF	JB	0.245	10.2	PQL	ng/Kg	
SL-537-SA5D-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.970	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.748	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.490	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.34	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.326	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.22	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.654	5.11	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.533	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.341	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.404	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.229	5.11	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0978	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0942	1.02	PQL	ng/Kg	
SL-538-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.58	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.226	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.136	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.130	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.710	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.122	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.686	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.220	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.380	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.132	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.114	5.15	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0385	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0651	1.03	PQL	ng/Kg	
	OCDF	JB	4.33	10.3	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-536-SA5D-SB-0.0-0.5	ANTIMONY	J	1.40	4.17	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.524	1.04	PQL	mg/Kg	
	BORON	J	4.70	10.4	PQL	mg/Kg	
	CADMIUM	J	0.319	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.185	2.08	PQL	mg/Kg	
	SODIUM	J	102	104	PQL	mg/Kg	
	TIN	J	3.13	10.4	PQL	mg/Kg	
SL-536-SA5D-SB-3.5-4.5	ANTIMONY	J	2.84	4.35	PQL	mg/Kg	J (all detects)
	BORON	J	8.78	10.9	PQL	mg/Kg	
	CADMIUM	J	0.601	1.09	PQL	mg/Kg	
	MOLYBDENUM	J	0.487	2.18	PQL	mg/Kg	
	TIN	J	4.70	10.9	PQL	mg/Kg	
	Zirconium	J	3.47	5.44	PQL	mg/Kg	
SL-537-SA5D-SB-0.0-0.5	ANTIMONY	J	0.981	4.19	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.689	1.05	PQL	mg/Kg	
	BORON	J	6.45	10.5	PQL	mg/Kg	
	CADMIUM	J	0.481	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.411	2.10	PQL	mg/Kg	
	TIN	J	2.94	10.5	PQL	mg/Kg	
	Zirconium	J	1.84	5.24	PQL	mg/Kg	
SL-537-SA5D-SB-2.5-3.5	ANTIMONY	J	1.22	4.18	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.532	1.04	PQL	mg/Kg	
	BORON	J	4.76	10.4	PQL	mg/Kg	
	CADMIUM	J	0.292	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.242	2.09	PQL	mg/Kg	
	TIN	J	3.41	10.4	PQL	mg/Kg	
	Zirconium	J	2.41	5.22	PQL	mg/Kg	
SL-538-SA5D-SB-0.0-0.5	ANTIMONY	J	1.01	4.05	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.647	1.01	PQL	mg/Kg	
	BORON	J	5.78	10.1	PQL	mg/Kg	
	CADMIUM	J	0.329	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.404	2.03	PQL	mg/Kg	
	SODIUM	J	86.6	101	PQL	mg/Kg	
	TIN	J	2.94	10.1	PQL	mg/Kg	
	Zirconium	J	1.74	5.07	PQL	mg/Kg	
SL-538-SA5D-SB-3.0-4.0	ANTIMONY	J	1.21	4.15	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.432	1.04	PQL	mg/Kg	
	BORON	J	4.28	10.4	PQL	mg/Kg	
	CADMIUM	J	0.307	1.04	PQL	mg/Kg	
	TIN	J	3.22	10.4	PQL	mg/Kg	
	Zirconium	J	1.79	5.18	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-536-SA5D-SB-0.0-0.5	SILVER	J	0.0836	0.208	PQL	mg/Kg	J (all detects)
	THALLIUM	J	0.189	0.208	PQL	mg/Kg	
SL-536-SA5D-SB-3.5-4.5	SELENIUM	J	0.252	0.435	PQL	mg/Kg	J (all detects)
	SILVER	J	0.144	0.218	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH095 **Laboratory: LL**

EDD Filename: PH095_v1. **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-537-SA5D-SB-0.0-0.5	SELENIUM	J	0.182	0.419	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0501	0.210	PQL	mg/Kg	
SL-537-SA5D-SB-2.5-3.5	SELENIUM	J	0.181	0.418	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0504	0.209	PQL	mg/Kg	
SL-538-SA5D-SB-0.0-0.5	SELENIUM	J	0.145	0.405	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0630	0.203	PQL	mg/Kg	

Method: 7471B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-536-SA5D-SB-0.0-0.5	MERCURY	J	0.0112	0.0172	PQL	mg/Kg	J (all detects)
SL-536-SA5D-SB-3.5-4.5	MERCURY	J	0.0140	0.0178	PQL	mg/Kg	J (all detects)
SL-537-SA5D-SB-0.0-0.5	MERCURY	J	0.0130	0.0166	PQL	mg/Kg	J (all detects)
SL-538-SA5D-SB-0.0-0.5	MERCURY	J	0.0124	0.0169	PQL	mg/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-537-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.5	5.2	PQL	mg/Kg	J (all detects)

Method: 8270D SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-536-SA5D-SB-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	11	19	PQL	ug/Kg	J (all detects)
SL-536-SA5D-SB-3.5-4.5	BENZO(E)PYRENE	J	6.3	18	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	1.2	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	0.74	1.8	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.8	PQL	ug/Kg	
	PYRENE	J	0.77	1.8	PQL	ug/Kg	
SL-537-SA5D-SB-0.0-0.5	ANTHRACENE	J	0.49	1.7	PQL	ug/Kg	J (all detects)
	BENZO(E)PYRENE	J	4.0	18	PQL	ug/Kg	
SL-538-SA5D-SB-0.0-0.5	ANTHRACENE	J	0.43	1.7	PQL	ug/Kg	J (all detects)
	BENZO(E)PYRENE	J	9.1	18	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	1.4	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.5	1.7	PQL	ug/Kg	

LDC #: 30673B4

SDG #: PH095

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/7/13

Page: 1 of 1

Reviewer: CL

2nd Reviewer: MG

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	–	Sampling dates: 8/28/13
II.	ICP/MS Tune	–	
III.	Calibration	–	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	–	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB=1,2 FB= FB-041113 (PH029)

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:

1	EB1-082813	11		21		31	
2	EB2-082813	12		22		32	
3	SL-536-SA5D-SB-0.0-0.5	13		23		33	
4	SL-536-SA5D-SB-3.5-4.5	14		24		34	
5	SL-537-SA5D-SB-0.0-0.5	15		25		35	
6	SL-537-SA5D-SB-2.5-3.5	16		26		36	
7	SL-538-SA5D-SB-0.0-0.5	17		27		37	
8	SL-538-SA5D-SB-3.0-4.0	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30673B4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: a
2nd Reviewer: MG

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: ____ Reason: B
Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Level	1	2									
Mo			3.3	16.5	8.0	2.2									

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 #: 30673B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: CL
2nd Reviewer: MG

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	FB-041113 (SDG: PH029)	Action Limit	3	4	5	6	7						
Cu	0.0036	1.8											
Mo	0.0036	1.8	0.185	0.487	0.411	0.242	0.404						

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	EB1-082813 (SDG: PH095)	Action Limit	3	4	5	6	7	8					
Ba	0.00035	0.175											
Mo	0.0080	~~3.2~~ 4.0	0.185	0.487	0.411	0.242	0.404	2.07 sm					

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: None

Analyte	Blank ID	Sample Identification											
	EB2-082813 (SDG: PH095)	Action Limit	No Qualifiers										
Mo	0.0022	1.1											

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".

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

CDM
555 17th Street, Suite 1100
Denver, CO 80202
ATTN: Mrs. Cherie Zakowski

December 11, 2013

SUBJECT: Santa Susana Field Laboratory, Subarea 5D Data Validation

Dear Mrs. Zakowski,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on October 29, 2013. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 30695:

SDG #	Fraction
PH098, PH099 PH100, PH101 PH102, PH103 PH104, PH105 PH106, PH107 PH108, PH109 PH110, PH111 PH112, PH113 PH114	Semivolatiles, Chlorinated Pesticides, Polychlorinated Biphenyls, Metals, Herbicides, Wet Chemistry, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Extractables, Dioxins/Dibenzofurans, Perchlorate

The data validation was performed under Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan for Santa Susana Field Laboratory, RCRA Facility Investigation, Surficial Media Operable Unit, March 2009, Revision 4
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- Polychlorinated Dioxins/Dibenzofurans Data Review, September 2005
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Shauna McKellar
Project Manager/Chemist

90/10 ADR/IV

LDC #30695 (CDM Federal Programs-Chantilly VA / Santa Susana Field Laboratory, Subarea 5D)

LDC	SDG#	DATE REC'D	(4) DATE DUE	SVOA (8270D -SIM)		Pest. (8081B)		PCBs (8082A)		Metals & Hg (SW846)		Herbs. (8151A)		CLO_4 (6850)		TPH-G (8015M)		TPH-E (8015M)		Dioxins (1613B)		Cr(VI) (7199)		F (300.0)															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	PH098	10/29/13	11/26/13	0	8	0	4	0	8	0	8	-	-	-	-	1	4	0	8	0	4	-	-	-	-														
B	PH099	10/29/13	11/26/13	0	12	0	10	0	12	0	12	-	-	-	-	1	5	0	12	0	10	-	-	-	-														
C	PH100	10/29/13	11/26/13	0	12	0	4	0	12	0	12	-	-	0	2	1	6	0	12	0	6	-	-	-	-														
D	PH101	10/29/13	11/26/13	1	9	1	3	1	9	1	9	1	3	1	0	2	5	1	9	1	4	1	0	1	0														
E	PH102	10/29/13	11/26/13	0	11	0	8	0	11	0	11	0	3	0	3	1	7	0	11	0	4	0	3	0	11														
F	PH103	10/29/13	11/26/13	0	5	0	2	0	5	0	5	-	-	0	4	1	3	0	5	0	2	-	-	0	4														
G	PH104	10/29/13	11/26/13	0	5	0	5	0	5	0	5	-	-	-	-	1	3	0	5	0	2	-	-	0	16														
H	PH105	10/29/13	11/26/13	0	4	0	4	0	4	0	4	0	4	-	-	1	3	0	4	0	1	-	-	0	21														
I	PH106	10/29/13	11/26/13	1	14	1	8	1	14	1	14	1	0	1	0	2	7	1	14	1	11	1	0	1	0														
J	PH107	10/29/13	11/26/13	1	8	0	5	1	8	1	8	1	3	1	8	1	5	1	8	1	3	1	3	1	13														
K	PH108	10/29/13	11/26/13	0	5	0	5	0	5	0	5	-	-	-	-	1	4	0	5	0	1	-	-	0	3														
L	PH109	10/29/13	11/26/13	0	14	-	-	0	14	0	14	-	-	-	-	1	11	0	14	0	4	-	-	-	-														
M	PH110	10/29/13	11/26/13	2	10	2	2	2	10	2	10	2	4	2	3	3	6	2	10	2	4	2	0	2	4														
N	PH111	10/29/13	11/26/13	0	4	0	4	0	1	0	1	0	3	0	5	1	1	0	4	0	5	0	3	-	-														
O	PH112	10/29/13	11/26/13	0	6	0	6	0	5	0	5	0	6	0	1	1	2	0	5	0	5	-	-	-	-														
P	PH113	10/29/13	11/26/13	0	7	-	-	0	7	0	7	-	-	-	-	1	2	0	7	0	5	-	-	-	-														
Q	PH114	10/29/13	11/26/13	1	7	1	2	1	6	1	6	1	0	1	0	2	3	1	6	1	3	-	-	1	0														
Total	T/SM			6	141	5	72	6	136	6	136	6	26	6	26	22	77	6	139	6	74	5	9	6	72	0	0	0	0	0	0	0	0	0	0	0	0	0	988

Shaded cells indicate Level IV validation (all other cells are ADR review). These sample counts do not include MS/MSD, and DUPs

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH098

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 9, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level IV data validation results for samples collected on August 29, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005), and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by Environmental Protection Agency (EPA) SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Automated Data Review outliers are presented in Enclosure I. Method specific Level IV DVRs are presented in Enclosure II.

All sample results were subjected to Level IV data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibrations, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards, interference check (ICSA and ICSAB) samples, matrix spike/matrix spike duplicates (MS/MSD), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), method blanks, trip blanks, equipment blanks, field blanks, and the raw data to confirm sample quantitation and identification.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of the initial and continuing calibrations, ICB/CCBs, interference check samples and internal standards (except dioxins) which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

All criteria for the initial calibration verifications and continuing calibration of each method were met with the exception of several pesticides and PCBs. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosures II.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for dioxins and metals. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosures I and II.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the exception of several metals. The associated sample results were not detected or were significantly greater than the concentrations found in the equipment blanks, therefore no data were qualified.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Duplicates Sample

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for the samples in this SDG, and therefore laboratory duplicate analyses were not performed for this SDG.

IX. 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.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH095) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or

were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Aug-2013	TB-082913	7180878	TB	5030B	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	3050B	6010C	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	3050B	6020A	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	3546	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	3546	8082A	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	3546	8270D SIM	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	METHOD	1613B	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5	7180879	N	METHOD	7471B	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5MSD	P180879M260443	MSD	3546	8270D SIM	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5MSD	P180879M320211A	MSD	3546	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5MS	P180879R260411	MS	3546	8270D SIM	IV
29-Aug-2013	SL-539-SA5D-SB-0.0-0.5MS	P180879R320150A	MS	3546	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	3050B	6010C	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	3050B	6020A	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	3546	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	3546	8082A	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	3546	8270D SIM	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	5035A	8015M	IV
29-Aug-2013	SL-539-SA5D-SB-3.0-4.0	7180880	N	METHOD	7471B	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3050B	6010C	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3050B	6020A	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3546	8015M	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3546	8081B	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3546	8082A	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	3546	8270D SIM	IV
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	METHOD	1613B	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
29-Aug-2013	SL-543-SA5D-SB-0.0-0.5	7180885	N	METHOD	7471B	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3050B	6010C	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3050B	6020A	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3546	8015M	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3546	8081B	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3546	8082A	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	3546	8270D SIM	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	5035A	8015M	IV
29-Aug-2013	SL-543-SA5D-SB-4.0-5.0	7180886	N	METHOD	7471B	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3050B	6010C	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3050B	6020A	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3546	8015M	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3546	8081B	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3546	8082A	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	3546	8270D SIM	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	METHOD	1613B	IV
29-Aug-2013	SL-542-SA5D-SB-0.0-0.5	7180883	N	METHOD	7471B	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3050B	6010C	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3050B	6020A	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3546	8015M	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3546	8081B	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3546	8082A	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	3546	8270D SIM	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	5035A	8015M	IV
29-Aug-2013	SL-542-SA5D-SB-4.0-5.0	7180884	N	METHOD	7471B	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	3050B	6010C	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
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	3050B	6020A	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	3546	8015M	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	3546	8082A	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	3546	8270D SIM	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	METHOD	1613B	IV
29-Aug-2013	SL-526-SA5D-SB-0.0-0.5	7180881	N	METHOD	7471B	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	3050B	6010C	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	3050B	6020A	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	3546	8015M	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	3546	8082A	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	3546	8270D SIM	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	5035A	8015M	IV
29-Aug-2013	SL-526-SA5D-SB-3.0-4.0	7180882	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-526-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 2:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.64	J	0.755	MDL	4.08	PQL	mg/Kg	J	Z
BERYLLIUM	0.417	J	0.0684	MDL	1.02	PQL	mg/Kg	J	Z
BORON	4.42	J	0.857	MDL	10.2	PQL	mg/Kg	J	Z
CADMIUM	0.370	J	0.0776	MDL	1.02	PQL	mg/Kg	J	Z
TIN	3.32	J	0.225	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	2.35	J	0.857	MDL	5.10	PQL	mg/Kg	J	Z
SODIUM	85.6	J	17.0	MDL	102	PQL	mg/Kg	J	Z

Sample ID: **SL-526-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.79	J	0.775	MDL	4.19	PQL	mg/Kg	J	Z
BERYLLIUM	0.778	J	0.0702	MDL	1.05	PQL	mg/Kg	J	Z
BORON	6.08	J	0.880	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.457	J	0.0796	MDL	1.05	PQL	mg/Kg	J	Z
TIN	3.53	J	0.230	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.01	J	0.880	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: **SL-539-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.851	J	0.733	MDL	3.96	PQL	mg/Kg	J	Z
BERYLLIUM	0.608	J	0.0663	MDL	0.990	PQL	mg/Kg	J	Z
BORON	5.11	J	0.832	MDL	9.90	PQL	mg/Kg	J	Z
CADMIUM	0.370	J	0.0753	MDL	0.990	PQL	mg/Kg	J	Z
MOLYBDENUM	0.369	J	0.168	MDL	1.98	PQL	mg/Kg	U	F, F
SODIUM	85.9	J	16.5	MDL	99.0	PQL	mg/Kg	J	Z
TIN	2.58	J	0.218	MDL	9.90	PQL	mg/Kg	U	B

Sample ID: **SL-539-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 9:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.03	J	0.757	MDL	4.09	PQL	mg/Kg	J	Z
BERYLLIUM	0.531	J	0.0685	MDL	1.02	PQL	mg/Kg	J	Z
BORON	3.79	J	0.859	MDL	10.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-539-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 9:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.347	J	0.0777	MDL	1.02	PQL	mg/Kg	J	Z
TIN	3.13	J	0.225	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	0.908	J	0.859	MDL	5.11	PQL	mg/Kg	J	Z

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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
ANTIMONY	1.86	J	0.797	MDL	4.31	PQL	mg/Kg	J	Z
BERYLLIUM	0.859	J	0.0721	MDL	1.08	PQL	mg/Kg	J	Z
BORON	8.67	J	0.904	MDL	10.8	PQL	mg/Kg	J	Z
CADMIUM	0.694	J	0.0818	MDL	1.08	PQL	mg/Kg	J	Z
MOLYBDENUM	0.306	J	0.183	MDL	2.15	PQL	mg/Kg	U	F, F
SODIUM	83.9	J	18.0	MDL	108	PQL	mg/Kg	J	Z
TIN	3.40	J	0.237	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.58	J	0.904	MDL	5.38	PQL	mg/Kg	J	Z

Sample ID: **SL-542-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 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
ANTIMONY	0.908	J	0.770	MDL	4.16	PQL	mg/Kg	J	Z
BERYLLIUM	0.424	J	0.0697	MDL	1.04	PQL	mg/Kg	J	Z
BORON	3.83	J	0.874	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.320	J	0.0790	MDL	1.04	PQL	mg/Kg	J	Z
SODIUM	83.0	J	17.4	MDL	104	PQL	mg/Kg	J	Z
TIN	3.35	J	0.229	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.65	J	0.874	MDL	5.20	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.42	J	0.777	MDL	4.20	PQL	mg/Kg	J	Z
BERYLLIUM	0.707	J	0.0704	MDL	1.05	PQL	mg/Kg	J	Z
BORON	8.66	J	0.882	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.643	J	0.0798	MDL	1.05	PQL	mg/Kg	J	Z
MOLYBDENUM	0.332	J	0.179	MDL	2.10	PQL	mg/Kg	U	F, F

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	79.0	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	3.17	J	0.231	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.21	J	0.882	MDL	5.25	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.70	J	0.813	MDL	4.40	PQL	mg/Kg	J	Z
BERYLLIUM	0.986	J	0.0736	MDL	1.10	PQL	mg/Kg	J	Z
BORON	8.30	J	0.923	MDL	11.0	PQL	mg/Kg	J	Z
CADMIUM	0.538	J	0.0835	MDL	1.10	PQL	mg/Kg	J	Z
MOLYBDENUM	0.549	J	0.187	MDL	2.20	PQL	mg/Kg	U	F, F
TIN	3.66	J	0.242	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	2.56	J	0.923	MDL	5.49	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-526-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 2:10:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.126	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: **SL-526-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0375	J	0.0272	MDL	0.210	PQL	mg/Kg	J	Z

Sample ID: **SL-539-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 9:10:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.163	J	0.0990	MDL	0.396	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-539-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0291	J	0.0257	MDL	0.198	PQL	mg/Kg	J	Z

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 1:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.200	J	0.108	MDL	0.431	PQL	mg/Kg	J	Z

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 1:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0506	J	0.0280	MDL	0.215	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.236	J	0.105	MDL	0.420	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0309	J	0.0273	MDL	0.210	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 12:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.111	J	0.110	MDL	0.440	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0701	J	0.0286	MDL	0.220	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-526-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0106	J	0.0104	MDL	0.0174	PQL	mg/Kg	J	Z

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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
MERCURY	0.0142	J	0.0106	MDL	0.0177	PQL	mg/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0109	J	0.0103	MDL	0.0171	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-526-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 2:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.119	JBQ	0.0214	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0542	JBQ	0.00969	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0626	JBQ	0.0146	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0391	JBQ	0.0180	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0425	JBQ	0.00959	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0394	JB	0.0188	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0328	JB	0.00773	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0565	JBQ	0.0175	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0570	JB	0.00990	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0542	JBQ	0.0281	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0512	JBQ	0.0136	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0326	JBQ	0.00814	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0471	JBQ	0.0141	MDL	5.14	PQL	ng/Kg	U	B
OCDD	0.714	JB	0.0198	MDL	10.3	PQL	ng/Kg	U	B
OCDF	0.122	JBQ	0.0247	MDL	10.3	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-539-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.790	JB	0.0182	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.137	JB	0.00855	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0430	JB	0.0125	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0189	JBQ	0.0169	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0408	JBQ	0.00927	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.443	JB	0.0176	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0544	JB	0.00783	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.630	JB	0.0157	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.448	JB	0.0101	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0783	JBQ	0.0263	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.199	JB	0.0120	MDL	5.12	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0377	JB	0.00886	MDL	5.12	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0367	JB	0.0118	MDL	5.12	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0290	JQ	0.0262	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	0.360	JB	0.0195	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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
1,2,3,4,6,7,8-HPCDD	3.39	JB	0.0313	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.410	JB	0.0174	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.101	JBQ	0.0296	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.109	JBQ	0.0249	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.107	JBQ	0.0160	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.517	JB	0.0263	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.102	JB	0.0135	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.603	JB	0.0243	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.777	JB	0.0172	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.147	JB	0.0343	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.313	JBQ	0.0165	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.101	JB	0.0147	MDL	5.38	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.172	JB	0.0171	MDL	5.38	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0465	JQ	0.0357	MDL	1.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.126	JQ	0.0426	MDL	1.08	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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
OCDF	1.04	JB	0.0284	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.02	JB	0.0234	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.415	JB	0.0119	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0858	JBQ	0.0171	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.118	JB	0.0227	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.144	JBQ	0.0128	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.734	JB	0.0239	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.173	JBQ	0.0112	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.865	JB	0.0218	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.39	JB	0.0144	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.313	JBQ	0.0320	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.509	JB	0.0167	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0927	JB	0.0124	MDL	5.18	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.249	JB	0.0167	MDL	5.18	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0633	JQ	0.0304	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.147	J	0.0347	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	1.03	JB	0.0221	MDL	10.4	PQL	ng/Kg	U	B

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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 (C15-C20)	2.5	J	2.2	MDL	5.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8081B **Matrix: SO**

Sample ID: SL-542-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 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
ENDRIN ALDEHYDE	1.8	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C

Sample ID: SL-542-SA5D-SB-4.0-5.0 *Collected:* 8/29/2013 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
ENDRIN ALDEHYDE	1.8	U	0.34	MDL	1.8	PQL	ug/Kg	UJ	C

Sample ID: SL-543-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDRIN ALDEHYDE	1.8	U	0.34	MDL	1.8	PQL	ug/Kg	UJ	C

Sample ID: SL-543-SA5D-SB-4.0-5.0 *Collected:* 8/29/2013 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDRIN ALDEHYDE	1.9	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C

Method Category: SVOA

Method: 8082A **Matrix: SO**

Sample ID: SL-526-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	18	U	3.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.3	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.2	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	34	U	10	MDL	34	PQL	ug/Kg	UJ	C

Sample ID: SL-526-SA5D-SB-3.0-4.0 *Collected:* 8/29/2013 2:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	18	U	3.5	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.3	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	35	U	11	MDL	35	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8082A** ***Matrix:*** **SO**

Sample ID: **SL-539-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	18	U	3.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.3	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.2	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	34	U	10	MDL	34	PQL	ug/Kg	UJ	C

Sample ID: **SL-539-SA5D-SB-3.0-4.0** ***Collected:*** **8/29/2013 9:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	18	U	3.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.3	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.3	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	34	U	10	MDL	34	PQL	ug/Kg	UJ	C

Sample ID: **SL-542-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 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 1016	18	U	3.6	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.5	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.4	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	36	U	11	MDL	36	PQL	ug/Kg	UJ	C

Sample ID: **SL-542-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 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
AROCLOR 1016	18	U	3.5	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.3	MDL	18	PQL	ug/Kg	UJ	C
Aroclor 5442	35	U	11	MDL	35	PQL	ug/Kg	UJ	C

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	18	U	3.5	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1221	18	U	5.4	MDL	18	PQL	ug/Kg	UJ	C
AROCLOR 1232	18	U	4.3	MDL	18	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8082A **Matrix: SO**

Sample ID: SL-543-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5442	35	U	11	MDL	35	PQL	ug/Kg	UJ	C

Sample ID: SL-543-SA5D-SB-4.0-5.0 *Collected:* 8/29/2013 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	19	U	3.7	MDL	19	PQL	ug/Kg	UJ	C
AROCLOR 1221	19	U	5.7	MDL	19	PQL	ug/Kg	UJ	C
AROCLOR 1232	19	U	4.6	MDL	19	PQL	ug/Kg	UJ	C
Aroclor 5442	37	U	11	MDL	37	PQL	ug/Kg	UJ	C

Method Category: SVOA

Method: 8270D SIM **Matrix: SO**

Sample ID: SL-539-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 9:10:00 *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	0.36	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-542-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 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
BENZO(B)FLUORANTHENE	1.0	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.2	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.4	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.98	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.2	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-543-SA5D-SB-0.0-0.5 *Collected:* 8/29/2013 12:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.6	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	6.3	J	6.3	MDL	19	PQL	ug/Kg	J	Z
NAPHTHALENE	1.1	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-543-SA5D-SB-0.0-0.5** ***Collected:*** **8/29/2013 12:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	1.5	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-543-SA5D-SB-4.0-5.0** ***Collected:*** **8/29/2013 12:30:00** ***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	17	J	6.6	MDL	20	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
C	Continuing Calibration Verification Percent Difference Lower Estimation
F	Equipment Blank Contamination
F	Field Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH098

Method Blank Outlier Report

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2480B371919	9/6/2013 7:19:00 PM	1,2,3,4,6,7,8-HPCDD	0.122 ng/Kg	SL-526-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0567 ng/Kg	SL-539-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0816 ng/Kg	SL-542-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0423 ng/Kg	SL-543-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0557 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0502 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0251 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0844 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0604 ng/Kg	
		1,2,3,7,8-PECDD	0.0657 ng/Kg	
		1,2,3,7,8-PECDF	0.0612 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0455 ng/Kg	
		2,3,4,7,8-PECDF	0.0677 ng/Kg	
		OCDD	0.464 ng/Kg	
		OCDF	0.216 ng/Kg	

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-526-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.119 ng/Kg	0.119U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0542 ng/Kg	0.0542U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0626 ng/Kg	0.0626U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0391 ng/Kg	0.0391U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0425 ng/Kg	0.0425U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0394 ng/Kg	0.0394U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0328 ng/Kg	0.0328U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0565 ng/Kg	0.0565U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0570 ng/Kg	0.0570U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0542 ng/Kg	0.0542U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0512 ng/Kg	0.0512U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0326 ng/Kg	0.0326U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0471 ng/Kg	0.0471U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	OCDD	0.714 ng/Kg	0.714U ng/Kg
SL-526-SA5D-SB-0.0-0.5(RES)	OCDF	0.122 ng/Kg	0.122U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.137 ng/Kg	0.137U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0430 ng/Kg	0.0430U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0189 ng/Kg	0.0189U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0408 ng/Kg	0.0408U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0544 ng/Kg	0.0544U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0783 ng/Kg	0.0783U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.199 ng/Kg	0.199U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0377 ng/Kg	0.0377U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0367 ng/Kg	0.0367U ng/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	OCDF	0.360 ng/Kg	0.360U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.101 ng/Kg	0.101U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.109 ng/Kg	0.109U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.107 ng/Kg	0.107U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.102 ng/Kg	0.102U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-542-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.147 ng/Kg	0.147U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.101 ng/Kg	0.101U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.172 ng/Kg	0.172U ng/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	OCDF	1.04 ng/Kg	1.04U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0858 ng/Kg	0.0858U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.118 ng/Kg	0.118U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.144 ng/Kg	0.144U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.313 ng/Kg	0.313U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0927 ng/Kg	0.0927U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.249 ng/Kg	0.249U ng/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	OCDF	1.03 ng/Kg	1.03U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24237AB220427	9/4/2013 4:27:00 AM	CALCIUM TIN ZINC	9.35 mg/Kg 1.64 mg/Kg 0.416 mg/Kg	SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0

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-526-SA5D-SB-0.0-0.5(RES)	TIN	3.32 mg/Kg	3.32U mg/Kg
SL-526-SA5D-SB-3.0-4.0(RES)	TIN	3.53 mg/Kg	3.53U mg/Kg
SL-539-SA5D-SB-0.0-0.5(RES)	TIN	2.58 mg/Kg	2.58U mg/Kg
SL-539-SA5D-SB-3.0-4.0(RES)	TIN	3.13 mg/Kg	3.13U mg/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	TIN	3.40 mg/Kg	3.40U mg/Kg
SL-542-SA5D-SB-4.0-5.0(RES)	TIN	3.35 mg/Kg	3.35U mg/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	TIN	3.17 mg/Kg	3.17U mg/Kg
SL-543-SA5D-SB-4.0-5.0(RES)	TIN	3.66 mg/Kg	3.66U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-082813(RES)	8/28/2013 2:00:00 PM	BARIUM MOLYBDENUM	0.00035 mg/L 0.008 mg/L	SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0

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-539-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.369 mg/Kg	0.369U mg/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.306 mg/Kg	0.306U mg/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.332 mg/Kg	0.332U mg/Kg
SL-543-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.549 mg/Kg	0.549U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PrepPH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0

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-539-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.369 mg/Kg	0.369U mg/Kg
SL-542-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.306 mg/Kg	0.306U mg/Kg
SL-543-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.332 mg/Kg	0.332U mg/Kg
SL-543-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.549 mg/Kg	0.549U mg/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-526-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.119	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0542	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0626	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0391	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0425	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0394	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0328	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0565	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0570	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0542	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0512	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0326	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0471	5.14	PQL	ng/Kg	
	OCDD	JB	0.714	10.3	PQL	ng/Kg	
	OCDF	JBQ	0.122	10.3	PQL	ng/Kg	
SL-539-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.790	5.12	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.137	5.12	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0430	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0189	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0408	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.443	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0544	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.630	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.448	5.12	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0783	5.12	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.199	5.12	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0377	5.12	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0367	5.12	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0290	1.02	PQL	ng/Kg	
	OCDF	JB	0.360	10.2	PQL	ng/Kg	
SL-542-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.39	5.38	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.410	5.38	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.101	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.109	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.107	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.517	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.102	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.603	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.777	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.147	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.313	5.38	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.101	5.38	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.172	5.38	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0465	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.126	1.08	PQL	ng/Kg	
	OCDF	JB	1.04	10.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-543-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.02	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.415	5.18	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0858	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.118	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.144	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.734	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.173	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.865	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.39	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.313	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.509	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0927	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.249	5.18	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0633	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.147	1.04	PQL	ng/Kg	
	OCDF	JB	1.03	10.4	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-526-SA5D-SB-0.0-0.5	ANTIMONY	J	1.64	4.08	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.417	1.02	PQL	mg/Kg	
	BORON	J	4.42	10.2	PQL	mg/Kg	
	CADMIUM	J	0.370	1.02	PQL	mg/Kg	
	SODIUM	J	85.6	102	PQL	mg/Kg	
	TIN	J	3.32	10.2	PQL	mg/Kg	
	Zirconium	J	2.35	5.10	PQL	mg/Kg	
SL-526-SA5D-SB-3.0-4.0	ANTIMONY	J	1.79	4.19	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.778	1.05	PQL	mg/Kg	
	BORON	J	6.08	10.5	PQL	mg/Kg	
	CADMIUM	J	0.457	1.05	PQL	mg/Kg	
	TIN	J	3.53	10.5	PQL	mg/Kg	
	Zirconium	J	3.01	5.24	PQL	mg/Kg	
SL-539-SA5D-SB-0.0-0.5	ANTIMONY	J	0.851	3.96	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.608	0.990	PQL	mg/Kg	
	BORON	J	5.11	9.90	PQL	mg/Kg	
	CADMIUM	J	0.370	0.990	PQL	mg/Kg	
	MOLYBDENUM	J	0.369	1.98	PQL	mg/Kg	
	SODIUM	J	85.9	99.0	PQL	mg/Kg	
	TIN	J	2.58	9.90	PQL	mg/Kg	
SL-539-SA5D-SB-3.0-4.0	ANTIMONY	J	1.03	4.09	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.531	1.02	PQL	mg/Kg	
	BORON	J	3.79	10.2	PQL	mg/Kg	
	CADMIUM	J	0.347	1.02	PQL	mg/Kg	
	TIN	J	3.13	10.2	PQL	mg/Kg	
	Zirconium	J	0.908	5.11	PQL	mg/Kg	
SL-542-SA5D-SB-0.0-0.5	ANTIMONY	J	1.86	4.31	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.859	1.08	PQL	mg/Kg	
	BORON	J	8.67	10.8	PQL	mg/Kg	
	CADMIUM	J	0.694	1.08	PQL	mg/Kg	
	MOLYBDENUM	J	0.306	2.15	PQL	mg/Kg	
	SODIUM	J	83.9	108	PQL	mg/Kg	
	TIN	J	3.40	10.8	PQL	mg/Kg	
	Zirconium	J	3.58	5.38	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-542-SA5D-SB-4.0-5.0	ANTIMONY	J	0.908	4.16	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.424	1.04	PQL	mg/Kg	
	BORON	J	3.83	10.4	PQL	mg/Kg	
	CADMIUM	J	0.320	1.04	PQL	mg/Kg	
	SODIUM	J	83.0	104	PQL	mg/Kg	
	TIN	J	3.35	10.4	PQL	mg/Kg	
	Zirconium	J	2.65	5.20	PQL	mg/Kg	
SL-543-SA5D-SB-0.0-0.5	ANTIMONY	J	1.42	4.20	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.707	1.05	PQL	mg/Kg	
	BORON	J	8.66	10.5	PQL	mg/Kg	
	CADMIUM	J	0.643	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.332	2.10	PQL	mg/Kg	
	SODIUM	J	79.0	105	PQL	mg/Kg	
	TIN	J	3.17	10.5	PQL	mg/Kg	
	Zirconium	J	3.21	5.25	PQL	mg/Kg	
SL-543-SA5D-SB-4.0-5.0	ANTIMONY	J	1.70	4.40	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.986	1.10	PQL	mg/Kg	
	BORON	J	8.30	11.0	PQL	mg/Kg	
	CADMIUM	J	0.538	1.10	PQL	mg/Kg	
	MOLYBDENUM	J	0.549	2.20	PQL	mg/Kg	
	TIN	J	3.66	11.0	PQL	mg/Kg	
	Zirconium	J	2.56	5.49	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-526-SA5D-SB-3.0-4.0	SELENIUM	J	0.126	0.419	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0375	0.210	PQL	mg/Kg	
SL-539-SA5D-SB-0.0-0.5	SELENIUM	J	0.163	0.396	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0291	0.198	PQL	mg/Kg	
SL-542-SA5D-SB-0.0-0.5	SELENIUM	J	0.200	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0506	0.215	PQL	mg/Kg	
SL-543-SA5D-SB-0.0-0.5	SELENIUM	J	0.236	0.420	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0309	0.210	PQL	mg/Kg	
SL-543-SA5D-SB-4.0-5.0	SELENIUM	J	0.111	0.440	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0701	0.220	PQL	mg/Kg	

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-526-SA5D-SB-3.0-4.0	MERCURY	J	0.0106	0.0174	PQL	mg/Kg	J (all detects)
SL-542-SA5D-SB-0.0-0.5	MERCURY	J	0.0142	0.0177	PQL	mg/Kg	J (all detects)
SL-543-SA5D-SB-0.0-0.5	MERCURY	J	0.0109	0.0171	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH098 **Laboratory: LL**

EDD Filename: PH098 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-542-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.5	5.4	PQL	mg/Kg	J (all detects)

Method: 8270D SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-539-SA5D-SB-0.0-0.5	CHRYSENE	J	0.36	1.7	PQL	ug/Kg	J (all detects)
SL-542-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.0	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.2	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.4	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.98	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.5	1.8	PQL	ug/Kg	
	PYRENE	J	1.2	1.8	PQL	ug/Kg	
SL-543-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.6	1.7	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	6.3	19	PQL	ug/Kg	
	NAPHTHALENE	J	1.1	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.5	1.7	PQL	ug/Kg	
	PYRENE	J	1.5	1.7	PQL	ug/Kg	
SL-543-SA5D-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	17	20	PQL	ug/Kg	J (all detects)

Enclosure II

EPA Level IV Data Validation Reports

LDC Report# 30695A2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Semivolatiles
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-539-SA5D-SB-0.0-0.5
SL-539-SA5D-SB-3.0-4.0
SL-526-SA5D-SB-0.0-0.5
SL-526-SA5D-SB-3.0-4.0
SL-542-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-4.0-5.0
SL-539-SA5D-SB-0.0-0.5MS
SL-539-SA5D-SB-0.0-0.5MSD

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 8270D 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.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

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.

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No semivolatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB1-082813	8/28/13	Di-n-butylphthalate Diethylphthalate Bis(2-ethylhexyl)phthalate	0.19 ug/L 0.37 ug/L 0.19 ug/L	All samples in SDG PH098

Sample FB-041113 (from SDG PH029) was identified as a field blank. No semivolatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-041113	4/11/13	Di-n-butylphthalate Diethylphthalate Bis(2-ethylhexyl)phthalate 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	0.17 ug/L 0.18 ug/L 0.082 ug/L 0.019 ug/L 0.024 ug/L 0.17 ug/L	All samples in SDG PH098

Sample concentrations were compared to concentrations detected in the field 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 field blanks.

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) 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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	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
Semivolatiles - Data Qualification Summary - SDG PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13

SDG #: PH098 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: BR

2nd Reviewer: A

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbons~~ SVOA (EPA SW 846 Method 8270~~C~~D-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: ~~9/5/13~~ 8/29/13
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
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	EB = EB1-082813 (SDG # PH095)
			FB = FB-041113 (SDG # PH029)

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-539-SA5D-SB-0.0-0.5	11		21		31	SBLKLG246
+ 2	SL-539-SA5D-SB-3.0-4.0	12		22		32	
+ 3	SL-526-SA5D-SB-0.0-0.5	13		23		33	
+ 4	SL-526-SA5D-SB-3.0-4.0	14		24		34	
+ 5	SL-542-SA5D-SB-0.0-0.5	15		25		35	
+ 6	SL-542-SA5D-SB-4.0-5.0	16		26		36	
+ 7	SL-543-SA5D-SB-0.0-0.5	17		27		37	
+ 8	SL-543-SA5D-SB-4.0-5.0	18		28		38	
9	#1 MS	19		29		39	
10	#1 MSD	20		30		40	

LDC #: 30695A2L

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

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%/~~15~~% 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) ≤ ~~20~~% 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 #: 30695A2L

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
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/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs 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 SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 30695A26

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: BR
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

PB = FB-041113 (SDG# PH029)

Blank units: µg/L **Associated sample units:** µg/kg
Sampling date: 4/11/13
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All (ND + 75%)

Code: F

Compound	Blank ID	Sample Identification								
	FB	5x/10x								
XX	0.17	1.7								
LL	0.18	1.8								
EEE	0.082	0.82								
TTT	0.019	0.095								
W	0.024	0.12								
S	0.17	0.85								

EB = EB1-082813 (SDG# PH095)

Blank units: µg/L **Associated sample units:** µg/kg
Sampling date: 8/28/13
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: All (ND + 75%)

Code: F

Compound	Blank ID	Sample Identification								
	EB	5x/10x								
XX	0.19	1.9								
LL	0.37	3.7								
EEE	0.19	1.9								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above 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 #: 30695A2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer BR
2nd Reviewer

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 (IS)	Reported RRF (1 std)	Recalculated RRF (1 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	HP10623	9/6/2013	N-Nitrosodimethylamine (IS1)	1.012	1.012	1.038	1.038	5	5
			Naphthalene (IS2)	1.058	1.058	1.047	1.047	1	1
			Fluorene (IS3)	1.416	1.416	1.341	1.341	3	3
			Anthracene (IS4)	1.193	1.193	1.156	1.156	4	4
			Chrysene (IS5)	1.309	1.309	1.259	1.259	3	3
			Benzo(a)pyrene (IS6)	1.353	1.353	1.252	1.252	5	5

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# 30695A2b

VALIDATION FINDINGS WORSHEET
Continuing Calibration Results Verification

Reviewer: BR
2nd Reviewer: A

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial RRF)	Reported (CC RRF)	Recalculated (CC RRF)	Reported %D	Recalculated %D
1	ci0121	09/08/13	N-Nitrosodimethylamine (IS1)	1.038	1.016	1.016	2	2
			Naphthalene (IS2)	1.047	1.071	1.071	2	2
			Fluorene (IS3)	1.341	1.328	1.328	1	1
			Anthracene (IS4)	1.156	1.158	1.158	0	0
			Chrysene (IS5)	1.259	1.229	1.229	2	2
			Benzo(a)pyrene (IS6)	1.252	1.239	1.239	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 #: 30695A6

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: BR
2nd reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

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~~ Fluoranthene-d10	33.333	~~24.6667~~ 24.6667	74	74	0
2-Fluorobiphenyl Benzo(a)pyrene-d12		~~24~~ 26.3333	79	79	0
~~Terphenyl-d14~~ 1-Methylnaphthalene-d10		26.9667	81	81	0
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 #: 30695A26

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

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 LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 246LCLCS

Compound	Spike Added (µg/kg)		Spike Concentration (µg/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	—	30.95	—	93	93	—	—	—	—
Pentachlorophenol										
Pyrene	33.33	—	32.24	—	97	97	—	—	—	—

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 #: 30695A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

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: 9/10

Compound	Spike Added (µg/kg)		Sample Concentration (µg/kg)	Spiked Sample Concentration (µg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	33	33	0	31.83	30.04	96	96	90	91	5	5.8
Pentachlorophenol											
Pyrene	33	33	0	31.09	29.65	94	94	89	90	5	4.7

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 #: 36695A21

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

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?

$$\text{Concentration} = \frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$$

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:

DDD = 0.4 µg/kg

Sample I.D. 1, DDD:

$$\text{Conc.} = \frac{(2284)(1)(1000)(\quad)(\quad)}{(170048)(1.259)(30.3)(0.97)(\quad)}$$

= ~~2.352400356 µg/kg~~ BR
0.363299334
≈ 0.4 µg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

LDC Report# 30695A3a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Chlorinated Pesticides
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-542-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-4.0-5.0

Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081B 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
9/10/13	MIXA3EU	RTX-CLPII	Endrin aldehyde	21	All samples in SDG PH098	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.

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.

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No chlorinated pesticide contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No chlorinated pesticide 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

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. 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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	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 PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	Endrin aldehyde	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
PH098	SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A3a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13

SDG #: PH098 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: BR

2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081~~A~~B)

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: 8/29/13
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	RSD ≤ 20%
IV.	Continuing calibration/ICV	SW	|CV| CCV ≤ 20%
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	Client spec.
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	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	

XVI.	Field blanks	ND	EB = EB1-082813 (SDG # PH095)
			FB = FB-041113 (SDG # PH029)

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-542-SA5D-SB-0.0-0.5	11		21		31	PBLK22248
2	SL-542-SA5D-SB-4.0-5.0	12		22		32	
3	SL-543-SA5D-SB-0.0-0.5	13		23		33	
4	SL-543-SA5D-SB-4.0-5.0	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	

Notes:

LDC #: 30695A3a

VALIDATION FINDINGS CHECKLIST

Reviewer: KR
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) ≤ 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? X %D or ___%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns ≤ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recovieries 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?			✓	

LDC #: 30695A3a

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
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?	~~✓~~ hr	✓	✓	
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. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 30695A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)
Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

Y N N/A Were Evaluation mix standards run before initial calibration and before samples?
Y N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard (≤15.0% for individual breakdowns)?
Y N N/A Was at least one standard run daily to verify the working curve?
Y N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of ≤20.0%?

Level IV/D Only

Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Column	Compound	%D (Limit ≤ 20.0)	RT (Limits)	Associated Samples	Code: C Qualifications
	9/10/13	CCV-MIXA3EU	RTX-CLPII	R	21	( )	All	J/UJ/A
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

A. alpha-BHC	E. Heptachlor	I. Dieldrin	M. 4,4'-DDD	Q. Endrin ketone	U. Toxaphene	Y. Aroclor-1242	CC. DB 608	GG._____
B. beta-BHC	F. Aldrin	J. 4,4'-DDE	N. Endosulfan sulfate	R. Endrin aldehyde	V. Aroclor-1016	Z. Aroclor-1248	DD. DB 1701	HH._____
C. delta-BHC	G. Heptachlor epoxide	K. Endrin	O. 4,4'-DDT	S. alpha-Chlordane	W. Aroclor-1221	AA. Aroclor-1254	EE. Hexachlobenzene	II. _____
D. gamma-BHC	H. Endosulfan I	L. Endosulfan II	P. Methoxychlor	T. gamma-Chlordane	X. Aroclor-1232	BB. Aroclor-1260	FF._____	JJ._____

LDC#: 30695A3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW 846 Method 8081B)

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)

Where

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	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/9/2013	Endosulfan I (RTX-CLP)	283000	283497	296000	295200	9	9
	H919A		Methoxychlor (RTX-CLP)	116000	115891	119000	119000	8	8
			Endosulfan I (RTX-CLPII)	93800	93809	95800	95800	6	6
			Methoxychlor (RTX-CLPII)	43800	43827	43900	43900	2	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#: 30695A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW 846 Method 8081)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Average CF/ Conc	Reported Conc/CF (CC)	Recalculated Conc/CF (CC)	Reported % D	Recalculated %D
1	MIXA3EU	9/10/2013	Endosulfan I (RTX-CLP)	10.000	9.76	9.77	2	2
	2P10252.0008	11:22	Methoxychlor (RTX-CLP)	100.000	100.97	100.97	1	1
			Endosulfan I (RTX-CLPII)	10.000	8.89	8.89	11	11
			Methoxychlor (RTX-CLPII)	100.000	99.49	99.51	1	0.5
2								

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 #: 30695A3a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
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	RTX-CLP	10	8.01870	80	80	0
Decachlorobiphenyl	↓	↓	9.4142	93	94	1
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 #: 30695A3a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

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: LCS22248

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	3.42	—	3.05	—	89	89	—	—	—	—
4,4'-DDT	7.15	—	6.74	—	95	95	—	—	—	—
Aroclor 1260										

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 #: 30695A3a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
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?

LCS 22248 KTX-CLP

Endosulfan I = 3.29 ug/kg

$$= \frac{(2915264)(10)}{(295200)(30)}$$

= 3.291851852 ug/kg

Example:

Sample I.D. All ND:

Conc. = _____

=

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note: _____

LDC Report# 30695A3b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Polychlorinated Biphenyls
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-539-SA5D-SB-0.0-0.5
SL-539-SA5D-SB-3.0-4.0
SL-526-SA5D-SB-0.0-0.5
SL-526-SA5D-SB-3.0-4.0
SL-542-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-4.0-5.0

Introduction

This data review covers 8 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082A 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 with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
9/5/13	AR163GG	ZBmultiR2	Aroclor-1016	22	All samples in SDG PH098	Aroclor-1016 Aroclor-1221 Aroclor-1232	J (all detects) UJ (all non-detects)	A
9/5/13	A4423CV	ZBmultiR2	Aroclor-5442	21	All samples in SDG PH098	Aroclor-5442	J (all detects) UJ (all non-detects)	A

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 EB1-082813 (from SDG PH095) was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

Sample FB-041113 (from SDG PH029) 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

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	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 PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-5442	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13
SDG #: PH098 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: KR
2nd Reviewer: C

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082A)

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: 8/29/13
II.	GC/ECD Instrument Performance Check	N	
III.	Initial calibration	A	RSD ≤ 20%
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20%
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	Client spec.
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	N	
XVI.	Field blanks	ND	EB = EB1-082813 (SDG # PH095) FB = FB-041113 (SDG # PH029)

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-539-SA5D-SB-0.0-0.5	11		21		31	PBLK10247
2	SL-539-SA5D-SB-3.0-4.0	12		22		32	
3	SL-526-SA5D-SB-0.0-0.5	13		23		33	
4	SL-526-SA5D-SB-3.0-4.0	14		24		34	
5	SL-542-SA5D-SB-0.0-0.5	15		25		35	
6	SL-542-SA5D-SB-4.0-5.0	16		26		36	
7	SL-543-SA5D-SB-0.0-0.5	17		27		37	
8	SL-543-SA5D-SB-4.0-5.0	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30695A2L

VALIDATION FINDINGS CHECKLIST

Reviewer: KR
2nd Reviewer: [illegible]

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) ≤ 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 ≤ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recovieries 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?			✓	

LDC #: 30695A3L

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
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?	✓			
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. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 36695A3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)
Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

Y N N/A Were Evaluation mix standards run before initial calibration and before samples?
Y N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard (≤15.0% for individual breakdowns)?
Y N N/A Was at least one standard run daily to verify the working curve?
Y N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of ≤20.0%?

Level IV/D Only

Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Column	Compound	%D (Limit ≤ 20.0)	RT (Limits)	Associated Samples	Qualifications (Code: C)
	9/5/13	CCV-AR1636	GG ZBmultiR2	V	22	( )	All	J/UJ/A
						( )		(Qual V, W, X)
	9/5/13	CCV-A4423	CV ↓	Aroclor	21	( )		J/UJ/A
				5442		( )		
						( )		(5442 only)
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

A. alpha-BHC	E. Heptachlor	I. Dieldrin	M. 4,4'-DDD	Q. Endrin ketone	U. Toxaphene	Y. Aroclor-1242	CC. DB 608	GG._____
B. beta-BHC	F. Aldrin	J. 4,4'-DDE	N. Endosulfan sulfate	R. Endrin aldehyde	V. Aroclor-1016	Z. Aroclor-1248	DD. DB 1701	HH._____
C. delta-BHC	G. Heptachlor epoxide	K. Endrin	O. 4,4'-DDT	S. alpha-Chlordane	W. Aroclor-1221	AA. Aroclor-1254	EE. Hexachlobenzene	II._____
D. gamma-BHC	H. Endosulfan I	L. Endosulfan II	P. Methoxychlor	T. gamma-Chlordane	X. Aroclor-1232	BB. Aroclor-1260	FF._____	JJ._____

LDC#: 30695A3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC PCBs (EPA SW 846 Method 8082A)

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (500 std)	Recalculated CF (500 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL 17342A	8/21/2013	PCB1260-1 (ZB-MultiR1)	23051	23051	25364	25364	10	10
			PCB1260-1 (ZB-MultiR2I)	82413	82413	85405	85405	4	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#: 30695A3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC PCBs (EPA SW 846 Method 8082)

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	Conc	Reported Conc (CCV)	Recalculated Conc (CCV)	Reported % D	Recalculated %D
1	AR163GG	9/5/2013	PCB1260 (ZB-MultiR1)	200	221.41	221.41	11	11
	6T20233B.005	10:15	PCB1260 (ZB-MultiR2I)	200	161.96	161.96	19	19

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 #: 30695A3B

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: BR
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	10.1	ZBMultiR1	9.345292	93	93	0
Decachlorobiphenyl	10.2	↓	9.590162	94	94	0
Decachlorobiphenyl					BR	

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 #: 30695A3L

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

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 = ! LCS - LCSD ! * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS ~~7R~~ 10247

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										
4,4'-DDT										
Aroclor 1260	167	—	181.4	—	109	109	—	—	—	—

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 #: 30695 A3b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: C

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?

ZBMulti - 1

LCS 10247

PCB - 1260 = 181.4 µg/kg

1260 - 1 = $\frac{(13172017)(10)}{(25364)(30)}$

= 173.1064652

1260-2 = 190.747684

1260-3 = 176.614795

1260-4 = 173.697494

1260-5 = 194.454201

1260-6 = ~~179.803675~~

Average = 181.404266

Example:

Sample I.D. A11 ND :

Conc. = _____

=

#	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:	August 29, 2013
LDC Report Date:	November 14, 2013
Matrix:	Soil
Parameters:	Metals
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-539-SA5D-SB-0.0-0.5
SL-539-SA5D-SB-3.0-4.0
SL-526-SA5D-SB-0.0-0.5
SL-526-SA5D-SB-3.0-4.0
SL-542-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-4.0-5.0

Introduction

This data review covers 8 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010C, 6020A, and 7471B for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, 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

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria 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)	Calcium Tin Zinc	9.349 mg/Kg 1.643 mg/Kg 0.416 mg/Kg	All samples in SDG PH098
ICB/CCB	Cadmium Nickel	0.38 ug/L 1.0 ug/L	SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0
ICB/CCB	Calcium	56.6 ug/L	SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0
ICB/CCB	Calcium	38.3 ug/L	SL-539-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0

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-539-SA5D-SB-0.0-0.5	Tin	2.58 mg/Kg	2.58U mg/Kg
SL-539-SA5D-SB-3.0-4.0	Tin	3.13 mg/Kg	3.13U mg/Kg
SL-526-SA5D-SB-0.0-0.5	Tin	3.32 mg/Kg	3.32U mg/Kg
SL-526-SA5D-SB-3.0-4.0	Tin	3.53 mg/Kg	3.53U mg/Kg
SL-542-SA5D-SB-0.0-0.5	Tin	3.40 mg/Kg	3.40U mg/Kg
SL-542-SA5D-SB-4.0-5.0	Tin	3.35 mg/Kg	3.35U mg/Kg
SL-543-SA5D-SB-0.0-0.5	Tin	3.17 mg/Kg	3.17U mg/Kg
SL-543-SA5D-SB-4.0-5.0	Tin	3.66 mg/Kg	3.66U mg/Kg

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB1-082813	8/28/13	Barium Molybdenum	0.00035 mg/L 0.0080 mg/L	All samples in SDG PH098

Sample FB-041113 (from SDG PH029) was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-041113	4/11/13	Copper Molybdenum	0.0036 mg/L 0.0036 mg/L	All samples in SDG PH098

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	Analyte	Reported Concentration	Modified Final Concentration
SL-539-SA5D-SB-0.0-0.5	Molybdenum	0.369 mg/Kg	0.369U mg/Kg
SL-542-SA5D-SB-0.0-0.5	Molybdenum	0.306 mg/Kg	0.306U mg/Kg
SL-543-SA5D-SB-0.0-0.5	Molybdenum	0.332 mg/Kg	0.332U mg/Kg
SL-543-SA5D-SB-4.0-5.0	Molybdenum	0.549 mg/Kg	0.549U mg/Kg

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore 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. 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 was not performed for this SDG.

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 PH098	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 PH098

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	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 PH098

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH098	SL-539-SA5D-SB-0.0-0.5	Tin	2.58U mg/Kg	A	B
PH098	SL-539-SA5D-SB-3.0-4.0	Tin	3.13U mg/Kg	A	B
PH098	SL-526-SA5D-SB-0.0-0.5	Tin	3.32U mg/Kg	A	B
PH098	SL-526-SA5D-SB-3.0-4.0	Tin	3.53U mg/Kg	A	B
PH098	SL-542-SA5D-SB-0.0-0.5	Tin	3.40U mg/Kg	A	B
PH098	SL-542-SA5D-SB-4.0-5.0	Tin	3.35U mg/Kg	A	B
PH098	SL-543-SA5D-SB-0.0-0.5	Tin	3.17U mg/Kg	A	B
PH098	SL-543-SA5D-SB-4.0-5.0	Tin	3.66U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG PH098

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH098	SL-539-SA5D-SB-0.0-0.5	Molybdenum	0.369U mg/Kg	A	F
PH098	SL-542-SA5D-SB-0.0-0.5	Molybdenum	0.306U mg/Kg	A	F
PH098	SL-543-SA5D-SB-0.0-0.5	Molybdenum	0.332U mg/Kg	A	F

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH098	SL-543-SA5D-SB-4.0-5.0	Molybdenum	0.549U mg/Kg	A	F

LDC #: 30695A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/11/13

SDG #: PH098 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: CL

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7471B)

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: 8/29/13
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	FB=FB011113 (PH029) EB=EB1-082813 (PH095)

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-539-SA5D-SB-0.0-0.5	11		21		31	
2	SL-539-SA5D-SB-3.0-4.0	12		22		32	
3	SL-526-SA5D-SB-0.0-0.5	13		23		33	
4	SL-526-SA5D-SB-3.0-4.0	14		24		34	
5	SL-542-SA5D-SB-0.0-0.5	15		25		35	
6	SL-542-SA5D-SB-4.0-5.0	16		26		36	
7	SL-543-SA5D-SB-0.0-0.5	17		27		37	
8	SL-543-SA5D-SB-4.0-5.0	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30695 A1

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 #: 30695A9

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
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 analysis 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 #: 30695A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-8		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 #: 30695A4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 1 of 1
Reviewer:
2nd Reviewer:

Reason: B

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	1	2	3	4	5	6	7	8			
Ca	9.349			46.75											
Sn	1.643			8.215	2.58	3.13	3.32	3.53	3.40	3.35	3.17	3.66			
Zn	0.416			2.08											

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 2-8

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	No Qualifiers										
Cd			0.38	0.19											
Ni			1.0	0.5											

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 2-5, 7, 8

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	No Qualifiers										
Ca			56.6	28.3											

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1, 6

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	No Qualifiers										
Ca			38.3	19.15											

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 #: 30695A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: a
2nd Reviewer: w

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	FB-041113 (SDG: PH029)	Action Limit	1	5	7	8							
Cu	0.0036	1.8											
Mo	0.0036	1.8	0.369	0.306	0.332	0.549							

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB1-082813 (SDG: PH095)	Action Limit	1	5	7	8							
Ba	0.00035	0.175											
Mo	0.0080	4	See FB	See FB	See FB	See FB							

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 #: 30695A9

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: QR
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:

$\%R = \frac{Found}{True} \times 100$ 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)	Li	589.14	600	98.2	98.2	Y
ICV	ICP/MS (Initial calibration)	Sr	52.48	50	105.0	105.0	
ICV	CVAA (Initial calibration)	Hg	2.60	2.5	104.0	104.0	
CCV4 (10:35)	ICP (Continuing calibration)	Mo	515.48	500	103.1	103.1	
CCV3 (10:05)	ICP/MS (Continuing calibration)	Tl	25.06	25	100.2	100.2	
CCV3 (10:23)	CVAA (Continuing calibration)	Hg	1.04	1	104.1	104.0	
	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 #: 3069SA9

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: 9R
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	V	516.2	500	103.2	103.2	Y
LCS	Laboratory control sample	Se	1079	1000	108	108	Y
N	Matrix spike		(SSR-SR)				
N	Duplicate						
N	ICP serial dilution						

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.

TOTCLC.4SW

LDC #: 30695A4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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 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 Cr 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:

1 = 100mL(0.20475 mg/L) / 0.971(1.04g) = 20.278 mg/kg

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Cr	20.3	20.3	Y
	2	Sr	15.0	15.0	
	3	Ni	21.6	21.6	
	4	Tl	0.32	0.32	
	5	P	320	320	
	6	Cu	6.0	6.0	
	7	As	0.031	0.031	
	8	Zn	74.8	74.8	

Note:

RECALC.4SW

LDC Report# 30695A7

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

TB-082913
SL-539-SA5D-SB-3.0-4.0
SL-526-SA5D-SB-3.0-4.0
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-4.0-5.0

Introduction

This data review covers 4 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-082913 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field 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

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) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	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 PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	TB-082913 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A7 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13

SDG #: PH098 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: BK

2nd Reviewer: C

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: 8/29/13
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 spec.
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	N	
XIII.	Field blanks	ND	TB = 1 EB = EB1-082813 (SDG# PH095) FB = FB-041113 (SDG# PH029)

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: Water + Soil

1	TB-082913 W	11		21		31	BLK5F
2	SL-539-SA5D-SB-3.0-4.0	12		22		32	BLK58
3	SL-526-SA5D-SB-3.0-4.0	13		23		33	
4	SL-542-SA5D-SB-4.0-5.0	14		24		34	
5	SL-543-SA5D-SB-4.0-5.0	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 #: 30695A7

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 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?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or __%R	✓			
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) 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?			✓	
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?	✓			

LDC #: 30695A7

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
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 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 #: 30695A7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C

average CF = sum of the CF/number of standards

%RSD = 100 * (S/X)

Where:

A = Area of compound

C = Concentration of compound

S = Standard deviation of calibration factors

X = Mean of calibration factors

#	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 11379F J&W DB-MTB	5/23/2013	GRO	61486	61486	61516	61516	3	3

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 #: 30695 ~~30074~~A7 for

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C

average CF = sum of the CF/number of standards

%RSD = 100 * (S/X)

Where:

A = Area of compound

C = Concentration of compound

S = Standard deviation of calibration factors

X = Mean of calibration factors

#	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 11002f J&W DB-VRX	1/12/2012	GRO	6717	6717	6269	6269	9.2	9.2

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 #: 30695A7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where: N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc/CF	Reported Conc/CF	Recalculated Conc/CF	Reported % D	Recalculated %D
1	16247B.0002	9/4/2013 5:05	GRO	220.00	215.73	215.73	2	2
2	20247B.0019	9/5/2013 18:03	GRO	550.00	564.19	564.21	3	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 #: 36695A7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: [illegible]

METHOD: X 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 Reported	Percent Recovery Recalculated	Percent Difference
Trifluorotoluene	DB-VRX	30	26.8163	89	89	0

Sample ID: 2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Trifluorotoluene	FID	850	619.5853	~~73~~ 73	73	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: 30695A7

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: X GC ___HPLC

The percent recoveries (%R) and relative percent differences (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 =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCSA9 / LCSD13

Compound		Spike Added (mg/kg)		Spike 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)	11	11	9.7	8.64	88	88	79	79	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 #: 30695A7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd Reviewer:

METHOD: X 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. A11 Compound Name GRO

Concentration = ND

LCSA9
GRO = 9.7 mg/kg

$= \frac{(26899030 - 3029454)(25)}{(61516)(1)(1000)}$
$= 9.7$ 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:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-539-SA5D-SB-0.0-0.5
SL-539-SA5D-SB-3.0-4.0
SL-526-SA5D-SB-0.0-0.5
SL-526-SA5D-SB-3.0-4.0
SL-542-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-4.0-5.0
SL-543-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-4.0-5.0
SL-539-SA5D-SB-0.0-0.5MS
SL-539-SA5D-SB-0.0-0.5MSD

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 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 extractables contaminants were found in the method blanks.

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

Sample FB-041113 (from SDG PH029) 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) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	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 PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-539-SA5D-SB-3.0-4.0 SL-526-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-3.0-4.0 SL-542-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-4.0-5.0 SL-543-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13
SDG #: PH098 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: BR
2nd Reviewer: A

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: 8/29/13
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	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB = EB1-082813 (SDG # PH098) FB = FB-041113 (SDG # PH029)

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: 5 of 1

1	SL-539-SA5D-SB-0.0-0.5	11		21		31	PBLK 22247
2	SL-539-SA5D-SB-3.0-4.0	12		22		32	
3	SL-526-SA5D-SB-0.0-0.5	13		23		33	
4	SL-526-SA5D-SB-3.0-4.0	14		24		34	
5	SL-542-SA5D-SB-0.0-0.5	15		25		35	
6	SL-542-SA5D-SB-4.0-5.0	16		26		36	
7	SL-543-SA5D-SB-0.0-0.5	17		27		37	
8	SL-543-SA5D-SB-4.0-5.0	18		28		38	
9	#1 MS	19		29		39	
10	#1 MSD	20		30		40	

Notes:

LDC #: 36695A8

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Method: X 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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 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?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? X %D or __%R	✓			
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) 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?			✓	
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?	✓			

LDC #: 30695A8

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
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 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 #: 30695A8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (144 std)	Recalculated CF (144 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL CP23-19879A ZB-5	8/19/2013	C8-C40	22576	22576	22983	22983	7	7

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 #: 30695A8

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc/CF	Reported Conc/CF	Recalculated Conc/CF	Reported % D	Recalculated %D
1	J249.0025	9/6/2013 23:39	C8-C40	288.01	277.76	277.76	4	4
2								
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 #: 30695A8

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer:

METHOD: X **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 Reported	Percent Recovery Recalculated	Percent Difference
Chlorobenzene	ZB-5	2.0	1.8342	92	92	0
Ortho-terphenyl	↓	2.0	1.9297	96	96	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 #: 36695A8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: BR
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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 9/10

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 ~~(C8-C11)~~ C30-C40 (8015)	5.01	5.0	D	5.81	5.94	116	116	119	119	2	2.2
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 #: 30695A8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: X GC ___HPLC

The percent recoveries (%R) and relative percent differences (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 =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS22247

Compound	Spike Added (mg/kg)		Spike 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 (C30-C40) (8015)	5.01	—	4.88	—	97	97	—	—	—	—
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 #: 30695788

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: X 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?

21

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. 5 Compound Name C30 - C40

Concentration = (13177678)(1000) / (22983)(30)(0.929)(1000)
= 20.57288533 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALCnew.wpd

LDC Report# 30695A21

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	August 29, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH098

Sample Identification

SL-539-SA5D-SB-0.0-0.5
SL-526-SA5D-SB-0.0-0.5
SL-542-SA5D-SB-0.0-0.5
SL-543-SA5D-SB-0.0-0.5

Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

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 the USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

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. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

PFK and static resolving power were within validation criteria.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

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 within QC limits.

The percent differences (%D) of the second source calibration standard were within QC limits.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
BLK248003	9/5/13	1,2,3,7,8-PeCDD	0.0657 ng/Kg	All samples in SDG PH098
		1,2,3,4,7,8-HxCDD	0.0423 ng/Kg	
		1,2,3,6,7,8-HxCDD	0.0502 ng/Kg	
		1,2,3,7,8,9-HxCDD	0.0844 ng/Kg	
		1,2,3,4,6,7,8-HpCDD	0.122 ng/Kg	
		OCDD	0.464 ng/Kg	
		1,2,3,7,8-PeCDF	0.0612 ng/Kg	
		2,3,4,7,8-PeCDF	0.0677 ng/Kg	
		1,2,3,4,7,8-HxCDF	0.0557 ng/Kg	
		1,2,3,6,7,8-HxCDF	0.0251 ng/Kg	
		2,3,4,6,7,8-HxCDF	0.0455 ng/Kg	
		1,2,3,7,8,9-HxCDF	0.0604 ng/Kg	
		1,2,3,4,6,7,8-HpCDF	0.0567 ng/Kg	
		1,2,3,4,7,8,9-HpCDF	0.0816 ng/Kg	
		OCDF	0.216 ng/Kg	

Sample concentrations were compared to concentrations detected in the method blanks. 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	Compound	Reported Concentration	Modified Final Concentration
SL-539-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD	0.0783 ng/Kg	0.0783U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0187 ng/Kg	0.0187U ng/Kg
	1,2,3,7,8-PeCDF	0.199 ng/Kg	0.199U ng/Kg
	2,3,4,7,8-PeCDF	0.0367 ng/Kg	0.0367U ng/Kg
	1,2,3,4,7,8-HxCDF	0.0408 ng/Kg	0.0408U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0544 ng/Kg	0.0544U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0377 ng/Kg	0.0377U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.137 ng/Kg	0.137U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0430 ng/Kg	0.0430U ng/Kg
	OCDF	0.360 ng/Kg	0.360U ng/Kg
SL-526-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD	0.0542 ng/Kg	0.0542U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0391 ng/Kg	0.0391U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0394 ng/Kg	0.0394U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0565 ng/Kg	0.0565U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.119 ng/Kg	0.119U ng/Kg
	OCDD	0.714 ng/Kg	0.714U ng/Kg
	1,2,3,7,8-PeCDF	0.0512 ng/Kg	0.0512U ng/Kg
	2,3,4,7,8-PeCDF	0.0471 ng/Kg	0.0471U ng/Kg
	1,2,3,4,7,8-HxCDF	0.0425 ng/Kg	0.0425U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0328 ng/Kg	0.0328U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0326 ng/Kg	0.0326U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0570 ng/Kg	0.0570U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.0542 ng/Kg	0.0542U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0626 ng/Kg	0.0626U ng/Kg
	OCDF	0.122 ng/Kg	0.122U ng/Kg
SL-542-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD	0.147 ng/Kg	0.147U ng/Kg
	1,2,3,4,7,8-HxCDD	0.109 ng/Kg	0.109U ng/Kg
	2,3,4,7,8-PeCDF	0.172 ng/Kg	0.172U ng/Kg
	1,2,3,4,7,8-HxCDF	0.107 ng/Kg	0.107U ng/Kg
	1,2,3,6,7,8-HxCDF	0.102 ng/Kg	0.102U ng/Kg
	2,3,4,6,7,8-HxCDF	0.101 ng/Kg	0.101U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.101 ng/Kg	0.101U ng/Kg
	OCDF	1.04 ng/Kg	1.04U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-543-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.313 ng/Kg 0.118 ng/Kg 0.249 ng/Kg 0.144 ng/Kg 0.0927 ng/Kg 0.0858 ng/Kg 1.03 ng/Kg	0.313U ng/Kg 0.118U ng/Kg 0.249U ng/Kg 0.144U ng/Kg 0.0927U ng/Kg 0.0858U ng/Kg 1.03U ng/Kg

Sample EB1-082813 (from SDG PH095) was identified as an equipment blank. No polychlorinated dioxin/dibenzofuran contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB1-082813	8/28/13	1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 1,2,3,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.471 pg/L 0.608 pg/L 1.43 pg/L 0.501 pg/L 0.222 pg/L 0.467 pg/L 0.245 pg/L 0.417 pg/L 0.299 pg/L 0.554 pg/L 1.41 pg/L	All samples in SDG PH098

Sample FB-041113 (from SDG PH029) was identified as a field blank. No perchlorate was found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-041113	4/11/13	1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF OCDF	0.125 pg/L 0.134 pg/L 0.402 pg/L 0.398 pg/L 0.316 pg/L 0.324 pg/L 0.221 pg/L 0.211 pg/L 0.149 pg/L 0.254 pg/L 0.840 pg/L	All samples in SDG PH098

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X for other contaminants) than the concentrations found in the associated field blanks.

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. Ongoing Precision Recovery (OPR)

Ongoing precision recovery samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
SL-542-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-0.0-0.5	2,3,7,8-TCDF	2nd column confirmation was not performed for this compound.	This compound must be confirmed on the 2nd column per the method.	None	P

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH098	All compounds reported below the RL.	J (all detects)	A

XII. System Performance

The system performance was acceptable.

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
Dioxins/Dibenzofurans - Data Qualification Summary - SDG PH098

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH098	SL-542-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-0.0-0.5	2,3,7,8-TCDF	None	P	Compound quantitation (column confirmation) (*XI)
PH098	SL-539-SA5D-SB-0.0-0.5 SL-526-SA5D-SB-0.0-0.5 SL-542-SA5D-SB-0.0-0.5 SL-543-SA5D-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG PH098

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
PH098	SL-539-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0783U ng/Kg 0.0187U ng/Kg 0.199U ng/Kg 0.0367U ng/Kg 0.0408U ng/Kg 0.0544U ng/Kg 0.0377U ng/Kg 0.137U ng/Kg 0.0430U ng/Kg 0.360U ng/Kg	A	B
PH098	SL-526-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0542U ng/Kg 0.0391U ng/Kg 0.0394U ng/Kg 0.0565U ng/Kg 0.119U ng/Kg 0.714U ng/Kg 0.0512U ng/Kg 0.0471U ng/Kg 0.0425U ng/Kg 0.0328U ng/Kg 0.0326U ng/Kg 0.0570U ng/Kg 0.0542U ng/Kg 0.0626U ng/Kg 0.122U ng/Kg	A	B
PH098	SL-542-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.147U ng/Kg 0.109U ng/Kg 0.172U ng/Kg 0.107U ng/Kg 0.102U ng/Kg 0.101U ng/Kg 0.101U ng/Kg 1.04U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
PH098	SL-543-SA5D-SB-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.313U ng/Kg 0.118U ng/Kg 0.249U ng/Kg 0.144U ng/Kg 0.0927U ng/Kg 0.0858U ng/Kg 1.03U ng/Kg	A	B

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG PH098

No Sample Data Qualified in this SDG

LDC #: 30695A21 **VALIDATION COMPLETENESS WORKSHEET** Date: 11-19-13
SDG #: PH098 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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: 8/29/13
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	≤20/35
IV.	Continuing Calibration	A	QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	N	Client
VII.	Laboratory control samples	A	OPR
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	
X.	Target compound identifications	A	
XI.	Compound quantitation/RL/~~LOQ/LODs~~	SW	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	SW	EB=EB1-082813(PH095) FB=FB-041113(PH029)

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-539-SA5D-SB-0.0-0.5	11		21		31	
2	SL-526-SA5D-SB-0.0-0.5	12		22		32	
3	SL-542-SA5D-SB-0.0-0.5	13		23		33	
4	SL-543-SA5D-SB-0.0-0.5	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	BLK248003	30		40	

Notes:

LDC #: 30695A21

VALIDATION FINDINGS CHECKLIST

Reviewer: GM
2nd Reviewer: A

Method: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard > 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?			✓	
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. 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.			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VII. 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?	✓			

LDC #: 30695A21

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the 25-150% criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks ≥ 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?			✓	
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?		✓		
Was the signal to noise ratio for each target compound ~~and labeled standard~~ ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?		✓		
Was an acceptable lock mass recorded and monitored?	✓			
XI. 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?	✓			
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: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:_____

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

Blank extraction date: 09/05/13 **Blank analysis date:** 09/06/13 **Associated samples:** All Qual U (B)
Conc. units: ~~pg/L~~ pg/g (ng/kg)

Compound	Blank ID	Sample Identification								
	BLK248003	5x	1	2	3	4				
B	0.0657	0.329	0.0783*	0.0542*	0.147	0.313*				
C	0.0423*	0.212	0.0187*	0.0391*	0.109*	0.118				
D	0.0502*	0.251		0.0394						
E	0.0844*	0.422		0.0565*						
F	0.122*	0.610		0.119*						
G	0.464*	2.32		0.714						
I	0.0612*	0.306	0.199	0.0512*						
J	0.0677*	0.339	0.0367	0.0471*	0.172	0.249				
K	0.0557	0.279	0.0408*	0.0425*	0.107*	0.144*				
L	0.0251*	0.126	0.0544	0.0328	0.102					
M	0.0455*	0.228	0.0377	0.0326*	0.101	0.0927				
N	0.0604*	0.302		0.0570						
O	0.0567*	0.284	0.137	0.0542*						
P	0.0816*	0.408	0.0430	0.0626*	0.101*	0.0858*				
Q	0.216	1.08	0.360	0.122*	1.04	1.03				

*EMPC

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins (EPA Method 1613B)

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 08/28/13
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: All >5x

Compound	Blank ID	Sample Identification								
	EB1-082813	5X								
E	0.471*	0.00236								
F	0.608*	0.00304								
G	1.43*	0.00715								
I	0.501*	0.00251								
K	0.222*	0.00111								
L	0.467*	0.00234								
N	0.245	0.00123								
M	0.417*	0.00209								
O	0.299*	0.00150								
P	0.554*	0.00277								
Q	1.41*	0.00705								

* EMPC

EB1-082813 (PH095)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the blank concentration were qualified as not detected, "U".

V:\Field Blanks\30695A21_EB1-082813.wpd

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins (EPA Method 1613B)

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 04/11/13
Field blank type: (circle one) Field Blank / Rinsate / Other: FB Associated Samples: All >5x

Compound	Blank ID	Sample Identification								
	FB-041113	5X								
C	0.125	0.00063								
E	0.134*	0.00067								
F	0.402*	0.00201								
I	0.398*	0.00199								
J	0.316*	0.00158								
K	0.324	0.00162								
L	0.221	0.00111								
N	0.211*	0.00106								
M	0.149	0.00075								
O	0.254*	0.00127								
Q	0.840*	0.00420								

* EMPC

FB-041113 (PH029)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the blank concentration were qualified as not detected, "U".

V:\Field Blanks\30695A21_FB-041113.wpd

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported RLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Dioxins/Dibenzofurans (EPA Method 1613B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and RLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Compund	Finding	Associated Samples	Qualifications
		H	No 2,3,7,8-TCDF confirmation analysis	3, 4	None/P

Comments: See sample calculation verification worksheet for recalculations

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9th
2nd Reviewer: e

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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 Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	08/21/2013	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.049	1.049	1.022	1.022	6.08	6.08
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.127	1.1275	1.126	1.126	6.68	6.68
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.963	0.963	0.998	0.9975	3.50	3.52
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	1.053	1.085	1.085	2.15	2.15
			OCDF (^{13}C-OCDF)	0.993	0.993	1.015	1.014	3.31	3.32
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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 #: 30695A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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)	Spiked Conc (ng/mL)	Reported Conc (ng/mL)	Recalculated Conc (ng/mL)	Reported %R	Recalculated %R
1	CS3CC02	9-6-13 16:29	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10	10.37	10.37	104	104
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10	10.85	10.86	109	109
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50	53.19	53.19	106	106
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50	52.05	52.05	104	104
			OCDF (^{13}C-OCDF)	100	102.69	102.68	103	103
2	CS3CC02	9-9-13 10:31	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10	10.38	10.38	104	104
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10	10.91	10.91	109	109
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50	53.89	53.89	108	108
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50	52.86	52.85	106	106
			OCDF (^{13}C-OCDF)	100	95.65	95.64	96	96
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10				
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10				
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50				
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50				
			OCDF (^{13}C-OCDF)	100				

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Dioxins/Dibenzofurans (EPA Method 1613B)

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 = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: OPR 248003

Compound	Spike Added (Pg/g)		Spiked Sample Concentration (Pg/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20	NA	19.8	NA	99	99				
1,2,3,7,8-PeCDD	100		99.3		99	99				
1,2,3,4,7,8-HxCDD	100		99.7		100	100				
1,2,3,4,7,8,9-HpCDF	100		96.4		96	96				
OCDF	200		191		96	96				

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 #: 30695A21

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
RRF	=	Relative Response Factor (average) from the initial calibration
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 2, G:

Conc. = $\frac{(2967+2474)(4000)(1)}{(1543548+1389156)(1.070)(10.02)(0.97)}$

= 0.714 pg/g

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH099

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 6, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on August 30, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks, and field duplicate samples. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of the ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for metals. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH099	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as extractables and dioxins. All RPDs were within QC limits with the exception of several SVOCs, metals, TPH as extractables and dioxins. In this duplicate pair, the associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH095) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Aug-2013	TB-083013	7182115	TB	5030B	8015M	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3050B	6010C	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3050B	6020A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3546	8015M	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3546	8081B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3546	8082A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	3546	8270D SIM	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	METHOD	1613B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5	7182118	N	METHOD	7471B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3050B	6010C	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3050B	6020A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3546	8015M	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3546	8081B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3546	8082A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	3546	8270D SIM	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	METHOD	1613B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MS	7182119	MS	METHOD	7471B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3050B	6010C	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3050B	6020A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3546	8015M	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3546	8081B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3546	8082A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	3546	8270D SIM	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	METHOD	1613B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5MSD	7182120	MSD	METHOD	7471B	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5DUP	7182121	DUP	3050B	6010C	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
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5DUP	7182121	DUP	3050B	6020A	III
30-Aug-2013	SL-535-SA5D-SB-0.0-0.5DUP	7182121	DUP	METHOD	7471B	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3050B	6010C	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3050B	6020A	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3546	8015M	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3546	8081B	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3546	8082A	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	3546	8270D SIM	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	METHOD	1613B	III
30-Aug-2013	SL-835-SA5D-SB-0.0-0.5	7182122	FD	METHOD	7471B	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3050B	6010C	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3050B	6020A	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3546	8015M	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3546	8081B	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3546	8082A	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	3546	8270D SIM	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	5035A	8015M	III
30-Aug-2013	SL-535-SA5D-SB-2.0-3.0	7182123	N	METHOD	7471B	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	3050B	6010C	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	3050B	6020A	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	3546	8015M	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	3546	8082A	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	3546	8270D SIM	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	METHOD	1613B	III
30-Aug-2013	SL-534-SA5D-SB-0.0-0.5	7182116	N	METHOD	7471B	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	3050B	6010C	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
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	3050B	6020A	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	3546	8015M	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	3546	8082A	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	3546	8270D SIM	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	5035A	8015M	III
30-Aug-2013	SL-534-SA5D-SB-6.5-7.5	7182117	N	METHOD	7471B	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3050B	6010C	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3050B	6020A	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3546	8015M	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3546	8081B	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3546	8082A	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	3546	8270D SIM	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	METHOD	1613B	III
30-Aug-2013	SL-533-SA5D-SB-0.0-0.5	7182124	N	METHOD	7471B	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3050B	6010C	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3050B	6020A	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3546	8015M	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3546	8081B	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3546	8082A	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	3546	8270D SIM	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	5035A	8015M	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	METHOD	1613B	III
30-Aug-2013	SL-533-SA5D-SB-2.5-3.5	7182125	N	METHOD	7471B	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3050B	6010C	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3050B	6020A	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3546	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
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3546	8081B	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3546	8082A	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	3546	8270D SIM	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	METHOD	1613B	III
30-Aug-2013	SL-532-SA5D-SB-0.0-0.5	7182129	N	METHOD	7471B	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3050B	6010C	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3050B	6020A	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3546	8015M	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3546	8081B	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3546	8082A	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	3546	8270D SIM	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	5035A	8015M	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	METHOD	1613B	III
30-Aug-2013	SL-532-SA5D-SB-2.5-3.5	7182130	N	METHOD	7471B	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3050B	6010C	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3050B	6020A	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3546	8015M	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3546	8081B	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3546	8082A	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	3546	8270D SIM	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	METHOD	1613B	III
30-Aug-2013	SL-531-SA5D-SB-0.0-0.5	7182128	N	METHOD	7471B	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3050B	6010C	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3050B	6020A	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3546	8015M	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3546	8081B	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
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3546	8082A	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	3546	8270D SIM	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	METHOD	1613B	III
30-Aug-2013	SL-530-SA5D-SB-0.0-0.5	7182126	N	METHOD	7471B	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3050B	6010C	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3050B	6020A	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3546	8015M	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3546	8081B	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3546	8082A	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	3546	8270D SIM	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	5035A	8015M	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	METHOD	1613B	III
30-Aug-2013	SL-530-SA5D-SB-2.5-3.5	7182127	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-530-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.68	J	0.745	MDL	4.03	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.542	J	0.0675	MDL	1.01	PQL	mg/Kg	J	Z
BORON	5.27	J	0.846	MDL	10.1	PQL	mg/Kg	U	B
CADMIUM	0.430	J	0.0765	MDL	1.01	PQL	mg/Kg	J	Z
POTASSIUM	3680		8.40	MDL	101	PQL	mg/Kg	J	Q
TIN	3.39	J	0.222	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	1.27	J	0.846	MDL	5.04	PQL	mg/Kg	J	Z
MOLYBDENUM	0.336	J	0.171	MDL	2.01	PQL	mg/Kg	U	F, F

Sample ID: **SL-530-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.61	J	0.755	MDL	4.08	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.571	J	0.0684	MDL	1.02	PQL	mg/Kg	J	Z
BORON	4.56	J	0.857	MDL	10.2	PQL	mg/Kg	U	B
CADMIUM	0.305	J	0.0775	MDL	1.02	PQL	mg/Kg	J	Z
MOLYBDENUM	2.04	U	0.173	MDL	2.04	PQL	mg/Kg	U	F
POTASSIUM	2360		8.51	MDL	102	PQL	mg/Kg	J	Q
TIN	3.59	J	0.224	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	1.35	J	0.857	MDL	5.10	PQL	mg/Kg	J	Z

Sample ID: **SL-531-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.36	J	0.755	MDL	4.08	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.568	J	0.0684	MDL	1.02	PQL	mg/Kg	J	Z
BORON	4.78	J	0.857	MDL	10.2	PQL	mg/Kg	U	B
CADMIUM	0.339	J	0.0775	MDL	1.02	PQL	mg/Kg	J	Z
MOLYBDENUM	0.244	J	0.173	MDL	2.04	PQL	mg/Kg	U	F, F
POTASSIUM	2940		8.51	MDL	102	PQL	mg/Kg	J	Q
TIN	3.52	J	0.224	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	1.27	J	0.857	MDL	5.10	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-532-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.22	J	0.744	MDL	4.02	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.606	J	0.0673	MDL	1.01	PQL	mg/Kg	J	Z
BORON	6.52	J	0.844	MDL	10.1	PQL	mg/Kg	J	Z
CADMIUM	0.653	J	0.0764	MDL	1.01	PQL	mg/Kg	J	Z
MOLYBDENUM	0.704	J	0.171	MDL	2.01	PQL	mg/Kg	U	F, F
POTASSIUM	3630		8.38	MDL	101	PQL	mg/Kg	J	Q
SODIUM	92.5	J	16.8	MDL	101	PQL	mg/Kg	J	Z
TIN	3.51	J	0.221	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	1.96	J	0.844	MDL	5.03	PQL	mg/Kg	J	Z

Sample ID: **SL-532-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.26	J	0.760	MDL	4.11	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.376	J	0.0688	MDL	1.03	PQL	mg/Kg	J	Z
BORON	4.20	J	0.862	MDL	10.3	PQL	mg/Kg	U	B
CADMIUM	0.327	J	0.0780	MDL	1.03	PQL	mg/Kg	J	Z
MOLYBDENUM	0.193	J	0.175	MDL	2.05	PQL	mg/Kg	U	F, F
POTASSIUM	2350		8.56	MDL	103	PQL	mg/Kg	J	Q
TIN	3.35	J	0.226	MDL	10.3	PQL	mg/Kg	U	B

Sample ID: **SL-533-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
ANTIMONY	1.51	J	0.745	MDL	4.03	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.652	J	0.0674	MDL	1.01	PQL	mg/Kg	J	Z
BORON	6.78	J	0.846	MDL	10.1	PQL	mg/Kg	J	Z
CADMIUM	0.754	J	0.0765	MDL	1.01	PQL	mg/Kg	J	Z
MOLYBDENUM	0.628	J	0.171	MDL	2.01	PQL	mg/Kg	U	F, F
POTASSIUM	4110		8.39	MDL	101	PQL	mg/Kg	J	Q
TIN	3.43	J	0.221	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	1.80	J	0.846	MDL	5.03	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-533-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.50	J	0.785	MDL	4.24	PQL	mg/Kg	J	Z, Q
BORON	6.60	J	0.891	MDL	10.6	PQL	mg/Kg	J	Z
CADMIUM	0.702	J	0.0806	MDL	1.06	PQL	mg/Kg	J	Z
MOLYBDENUM	0.277	J	0.180	MDL	2.12	PQL	mg/Kg	U	F, F
POTASSIUM	4450		8.85	MDL	106	PQL	mg/Kg	J	Q
TIN	5.08	J	0.233	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	1.15	J	0.891	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
ANTIMONY	1.73	J	0.753	MDL	4.07	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.658	J	0.0681	MDL	1.02	PQL	mg/Kg	J	Z
BORON	6.26	J	0.854	MDL	10.2	PQL	mg/Kg	J	Z
CADMIUM	0.473	J	0.0773	MDL	1.02	PQL	mg/Kg	J	Z
MOLYBDENUM	0.607	J	0.173	MDL	2.03	PQL	mg/Kg	U	F, F
POTASSIUM	3560		8.48	MDL	102	PQL	mg/Kg	J	Q
TIN	3.49	J	0.224	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	2.28	J	0.854	MDL	5.09	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-6.5-7.5** ***Collected:*** **8/30/2013 9:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.69	J	0.779	MDL	4.21	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.354	J	0.0706	MDL	1.05	PQL	mg/Kg	J	Z
BORON	4.43	J	0.885	MDL	10.5	PQL	mg/Kg	U	B
CADMIUM	0.313	J	0.0801	MDL	1.05	PQL	mg/Kg	J	Z
MOLYBDENUM	0.408	J	0.179	MDL	2.11	PQL	mg/Kg	U	F, F
POTASSIUM	2150		8.78	MDL	105	PQL	mg/Kg	J	Q
TIN	3.50	J	0.232	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	1.86	J	0.885	MDL	5.27	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-535-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.02	J	0.753	MDL	4.07	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.804	J	0.0682	MDL	1.02	PQL	mg/Kg	J	Z
BORON	7.59	J	0.855	MDL	10.2	PQL	mg/Kg	J	Z
CADMIUM	0.485	J	0.0774	MDL	1.02	PQL	mg/Kg	J	Z
MOLYBDENUM	0.596	J	0.173	MDL	2.04	PQL	mg/Kg	U	F, F
POTASSIUM	2860		8.49	MDL	102	PQL	mg/Kg	J	Q
SODIUM	160		17.0	MDL	102	PQL	mg/Kg	J	FD
TIN	4.23	J	0.224	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	2.11	J	0.855	MDL	5.09	PQL	mg/Kg	J	Z, FD

Sample ID: **SL-535-SA5D-SB-2.0-3.0** ***Collected:*** **8/30/2013 8:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.32	J	0.758	MDL	4.10	PQL	mg/Kg	J	Z, Q
TIN	4.08	J	0.225	MDL	10.2	PQL	mg/Kg	U	B

Sample ID: **SL-535-SA5D-SB-2.0-3.0** ***Collected:*** **8/30/2013 8:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.706	J	0.0686	MDL	1.02	PQL	mg/Kg	J	Z
BORON	4.81	J	0.861	MDL	10.2	PQL	mg/Kg	U	B
MOLYBDENUM	2.05	U	0.174	MDL	2.05	PQL	mg/Kg	U	F
POTASSIUM	3100		8.54	MDL	102	PQL	mg/Kg	J	Q
Zirconium	1.62	J	0.861	MDL	5.12	PQL	mg/Kg	J	Z

Sample ID: **SL-835-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
ANTIMONY	1.78	J	0.743	MDL	4.01	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.711	J	0.0672	MDL	1.00	PQL	mg/Kg	J	Z
BORON	7.00	J	0.843	MDL	10.0	PQL	mg/Kg	J	Z
CADMIUM	0.513	J	0.0763	MDL	1.00	PQL	mg/Kg	J	Z
MOLYBDENUM	0.420	J	0.171	MDL	2.01	PQL	mg/Kg	U	F, F
POTASSIUM	3970		8.37	MDL	100	PQL	mg/Kg	J	Q
SODIUM	90.8	J	16.8	MDL	100	PQL	mg/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-835-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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
TIN	3.62	J	0.221	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	5.02	U	0.843	MDL	5.02	PQL	mg/Kg	UJ	FD

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-530-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 1:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.109	J	0.101	MDL	0.403	PQL	mg/Kg	J	Z

Sample ID: SL-530-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 1:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0272	J	0.0262	MDL	0.201	PQL	mg/Kg	J	Z

Sample ID: SL-530-SA5D-SB-2.5-3.5 *Collected:* 8/30/2013 1:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0620	J	0.0265	MDL	0.204	PQL	mg/Kg	J	Z

Sample ID: SL-531-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 12:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0269	J	0.0265	MDL	0.204	PQL	mg/Kg	J	Z

Sample ID: SL-532-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 12:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.190	J	0.101	MDL	0.402	PQL	mg/Kg	J	Z

Sample ID: SL-532-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 12:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0406	J	0.0261	MDL	0.201	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-533-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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	0.165	J	0.101	MDL	0.403	PQL	mg/Kg	J	Z

Sample ID: **SL-533-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
SILVER	0.0525	J	0.0262	MDL	0.201	PQL	mg/Kg	J	Z

Sample ID: **SL-533-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 10:30:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.227	J	0.106	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: **SL-533-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.160	J	0.0276	MDL	0.212	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 9:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.174	J	0.102	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
SILVER	0.0598	J	0.0264	MDL	0.203	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-6.5-7.5** ***Collected:*** **8/30/2013 9:20:00** ***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	0.105	MDL	0.421	PQL	mg/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-6.5-7.5** ***Collected:*** **8/30/2013 9:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.179	J	0.0316	MDL	0.211	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-535-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 8:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.193	J	0.102	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: SL-535-SA5D-SB-2.0-3.0 *Collected:* 8/30/2013 8:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.164	J	0.102	MDL	0.410	PQL	mg/Kg	J	Z

Sample ID: SL-535-SA5D-SB-2.0-3.0 *Collected:* 8/30/2013 8:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0508	J	0.0266	MDL	0.205	PQL	mg/Kg	J	Z

Sample ID: SL-835-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 8:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.219	J	0.100	MDL	0.401	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-534-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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	0.0128	J	0.0103	MDL	0.0171	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-530-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.18	J	0.0138	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.238	JB	0.0235	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.565	JQ	0.0454	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.226	JB	0.0270	MDL	5.08	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-530-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDD	1.50	J	0.0475	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.243	JB	0.0237	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.42	JB	0.0453	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.315	JBQ	0.0288	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.423	JQ	0.0557	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.457	JBQ	0.0304	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.263	J	0.0257	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.316	JBQ	0.0318	MDL	5.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.160	JQ	0.0711	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	5.73	JB	0.0402	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: **SL-530-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.145	JBQ	0.0277	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0634	JQ	0.0113	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0809	JBQ	0.0208	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.110	JQ	0.0274	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.199	JB	0.0184	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.128	JQ	0.0288	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.184	JBQ	0.0152	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.132	JB	0.0280	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.124	JB	0.0219	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.350	J	0.0436	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.314	JBQ	0.0246	MDL	5.08	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.120	JQ	0.0170	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.266	JB	0.0249	MDL	5.08	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0969	JQ	0.0699	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	0.517	JB	0.0183	MDL	10.2	PQL	ng/Kg	U	B
OCDF	0.134	JBQ	0.0356	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: **SL-531-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.765	JB	0.0431	MDL	5.19	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-531-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.0874	J	0.0153	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0795	JB	0.0214	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.122	JQ	0.0379	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.143	JB	0.0233	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.175	JQ	0.0403	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.149	JBQ	0.0209	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.174	JBQ	0.0375	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.111	JBQ	0.0245	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.370	JQ	0.0621	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.430	JBQ	0.0322	MDL	5.19	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.145	JQ	0.0213	MDL	5.19	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.305	JBQ	0.0302	MDL	5.19	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.137	JQ	0.106	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0843	JQ	0.0680	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	9.70	JB	0.0291	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.255	JBQ	0.0405	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: **SL-532-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.25	JB	0.0294	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.81	J	0.0410	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.717	JB	0.0332	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.773	JB	0.0308	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	4.32	JB	0.0403	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.626	JB	0.0348	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.37	JQ	0.0637	MDL	4.99	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.916	JB	0.0410	MDL	4.99	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.11	J	0.0323	MDL	4.99	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.23	JB	0.0400	MDL	4.99	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.135	JQ	0.0644	MDL	0.997	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.549	J	0.103	MDL	0.997	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-532-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.229	JB	0.0316	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0468	JQ	0.0150	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0465	JB	0.0257	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0733	JBQ	0.0159	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0336	JQ	0.0243	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0313	JBQ	0.0134	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0540	JBQ	0.0232	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0354	JBQ	0.0174	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0995	JQ	0.0382	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0718	JB	0.0229	MDL	5.23	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0647	J	0.0148	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0594	JBQ	0.0225	MDL	5.23	PQL	ng/Kg	U	B
OCDD	1.34	JB	0.0235	MDL	10.5	PQL	ng/Kg	J	Z
OCDF	0.176	JB	0.0359	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: **SL-533-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
1,2,3,4,7,8,9-HPCDF	0.809	JB	0.0363	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.26	J	0.0570	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.418	JB	0.0430	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	4.75	J	0.0598	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.553	JB	0.0380	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	3.94	JB	0.0557	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.723	JB	0.0484	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.13	J	0.0792	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.549	JBQ	0.0505	MDL	4.90	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.755	J	0.0394	MDL	4.90	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.582	JBQ	0.0466	MDL	4.90	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.225	JQ	0.114	MDL	0.981	PQL	ng/Kg	J	Z

Sample ID: **SL-533-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.156	JB	0.0367	MDL	5.41	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-533-SA5D-SB-2.5-3.5** ***Collected:*** **8/30/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.0531	JQ	0.0199	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0604	JBQ	0.0384	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0454	JQ	0.0301	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0650	JB	0.0201	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0475	J	0.0322	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0513	JBQ	0.0163	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.160	JBQ	0.0298	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0792	JB	0.0210	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0627	JQ	0.0565	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0976	JBQ	0.0317	MDL	5.41	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0583	J	0.0168	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0758	JBQ	0.0318	MDL	5.41	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0803	JQ	0.0669	MDL	1.08	PQL	ng/Kg	J	Z
OCDD	1.09	JB	0.0261	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.239	JBQ	0.0492	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: **SL-534-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
1,2,3,4,6,7,8-HPCDF	1.65	J	0.0137	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.133	JB	0.0230	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.145	J	0.0445	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0932	JB	0.0275	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.889	J	0.0467	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0981	JBQ	0.0225	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	1.11	JB	0.0448	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.438	JB	0.0280	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.326	JQ	0.0483	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.206	JBQ	0.0262	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.121	JQ	0.0252	MDL	5.14	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0672	JQ	0.0624	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	5.14	JB	0.0416	MDL	10.3	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-535-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.132	JBQ	0.0403	MDL	4.97	PQL	ng/Kg	UJ	B, FD
1,2,3,4,6,7,8-HPCDF	0.0152	JQ	0.0123	MDL	4.97	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.0721	JBQ	0.0226	MDL	4.97	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0481	JQ	0.0332	MDL	4.97	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.0645	JB	0.0279	MDL	4.97	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0385	J	0.0348	MDL	4.97	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.0349	JBQ	0.0231	MDL	4.97	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.0744	JBQ	0.0342	MDL	4.97	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDF	0.0339	JBQ	0.0295	MDL	4.97	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	4.97	U	0.0792	MDL	4.97	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.0547	JBQ	0.0353	MDL	4.97	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	4.97	U	0.0262	MDL	4.97	PQL	ng/Kg	UJ	FD
2,3,4,7,8-PECDF	4.97	U	0.0369	MDL	4.97	PQL	ng/Kg	UJ	FD
2,3,7,8-TCDD	0.994	U	0.129	MDL	0.994	PQL	ng/Kg	UJ	FD
OCDD	1.32	JBQ	0.0370	MDL	9.94	PQL	ng/Kg	J	Z, FD
OCDF	0.0918	JBQ	0.0551	MDL	9.94	PQL	ng/Kg	UJ	B, FD

Sample ID: **SL-835-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
1,2,3,4,6,7,8-HPCDD	6.88	B	0.0350	MDL	4.94	PQL	ng/Kg	J	FD
1,2,3,4,6,7,8-HPCDF	0.465	J	0.0117	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.0821	JB	0.0185	MDL	4.94	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.169	J	0.0388	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.0873	JBQ	0.0234	MDL	4.94	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.597	JQ	0.0389	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.118	JBQ	0.0211	MDL	4.94	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.996	JB	0.0366	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.502	JB	0.0240	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	0.332	JQ	0.0523	MDL	4.94	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.218	JBQ	0.0265	MDL	4.94	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.103	J	0.0205	MDL	4.94	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	0.101	JBQ	0.0245	MDL	4.94	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.114	J	0.0786	MDL	0.989	PQL	ng/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-835-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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
OCDD	111	B	0.0290	MDL	9.89	PQL	ng/Kg	J	FD
OCDF	1.33	JB	0.0349	MDL	9.89	PQL	ng/Kg	J	Z, FD

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-535-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 8:10:00 *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)	5.2	U	2.1	MDL	5.2	PQL	mg/Kg	UJ	FD
EFH (C30-C40)	10	U	4.2	MDL	10	PQL	mg/Kg	UJ	FD

Sample ID: SL-835-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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
EFH (C21-C30)	4.7	J	2.0	MDL	5.1	PQL	mg/Kg	J	Z, FD
EFH (C30-C40)	9.0	J	4.1	MDL	10	PQL	mg/Kg	J	Z, FD

Method Category: SVOA

Method: 8081B **Matrix: SO**

Sample ID: SL-530-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.43	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-532-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 12:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.54	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z
DIELDRIN	0.69	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.26	J	0.17	MDL	0.84	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 8081B **Matrix: SO**

Sample ID: SL-533-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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
4,4'-DDT	0.86	J	0.36	MDL	1.7	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8082A **Matrix: SO**

Sample ID: SL-533-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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 1254	6.6	J	4.5	MDL	17	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8270D SIM **Matrix: SO**

Sample ID: SL-530-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 1:15:00 *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	0.54	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(E)PYRENE	7.3	J	3.4	MDL	17	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.4	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-532-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 12:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.93	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	0.46	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(E)PYRENE	3.7	J	3.4	MDL	17	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.7	J	6.1	MDL	18	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.3	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-533-SA5D-SB-0.0-0.5 *Collected:* 8/30/2013 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
2-METHYLNAPHTHALENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-533-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
BENZO(A)PYRENE	1.5	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.99	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.2	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.7	J	6.2	MDL	18	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.85	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.6	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-534-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
2-METHYLNAPHTHALENE	0.80	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	0.59	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.3	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-535-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD

Sample ID: **SL-535-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 8:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD
CHRYSENE	1.7	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	FD
FLUORANTHENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD
NAPHTHALENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD
PHENANTHRENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD
PYRENE	1.7	U	0.68	MDL	1.7	PQL	ug/Kg	UJ	FD

Sample ID: **SL-835-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 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
1-METHYLNAPHTHALENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-835-SA5D-SB-0.0-0.5** ***Collected:*** **8/30/2013 8:20:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
2-METHYLNAPHTHALENE	1.9		0.68	MDL	1.7	PQL	ug/Kg	J	FD
CHRYSENE	0.63	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	0.85	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, FD
NAPHTHALENE	1.3	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	0.74	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, FD
PYRENE	0.81	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Laboratory Duplicate Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH099

Method Blank Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2530B372159	9/12/2013 9:59:00 PM	1,2,3,4,6,7,8-HPCDD	0.0813 ng/Kg	SL-530-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0735 ng/Kg	SL-530-SA5D-SB-2.5-3.5
		1,2,3,4,7,8-HXCDF	0.0547 ng/Kg	SL-531-SA5D-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0479 ng/Kg	SL-532-SA5D-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0431 ng/Kg	SL-532-SA5D-SB-2.5-3.5
		1,2,3,7,8,9-HXCDF	0.0751 ng/Kg	SL-533-SA5D-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0725 ng/Kg	SL-533-SA5D-SB-2.5-3.5
		2,3,4,7,8-PECDF	0.0532 ng/Kg	SL-534-SA5D-SB-0.0-0.5
		OCDD	0.222 ng/Kg	SL-535-SA5D-SB-0.0-0.5
		OCDF	0.141 ng/Kg	SL-835-SA5D-SB-0.0-0.5

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-530-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.238 ng/Kg	0.238U ng/Kg
SL-530-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.226 ng/Kg	0.226U ng/Kg
SL-530-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.315 ng/Kg	0.315U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.145 ng/Kg	0.145U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0809 ng/Kg	0.0809U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.199 ng/Kg	0.199U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.184 ng/Kg	0.184U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.132 ng/Kg	0.132U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.124 ng/Kg	0.124U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.314 ng/Kg	0.314U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.266 ng/Kg	0.266U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	OCDD	0.517 ng/Kg	0.517U ng/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	OCDF	0.134 ng/Kg	0.134U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0795 ng/Kg	0.0795U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.143 ng/Kg	0.143U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.174 ng/Kg	0.174U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.111 ng/Kg	0.111U ng/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	OCDF	0.255 ng/Kg	0.255U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.229 ng/Kg	0.229U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0465 ng/Kg	0.0465U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0733 ng/Kg	0.0733U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0313 ng/Kg	0.0313U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0540 ng/Kg	0.0540U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.0354 ng/Kg	0.0354U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0718 ng/Kg	0.0718U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0594 ng/Kg	0.0594U ng/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	OCDF	0.176 ng/Kg	0.176U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.156 ng/Kg	0.156U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0604 ng/Kg	0.0604U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0650 ng/Kg	0.0650U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0513 ng/Kg	0.0513U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-533-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.160 ng/Kg	0.160U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.0792 ng/Kg	0.0792U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0976 ng/Kg	0.0976U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0758 ng/Kg	0.0758U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	OCDD	1.09 ng/Kg	1.09U ng/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	OCDF	0.239 ng/Kg	0.239U ng/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.133 ng/Kg	0.133U ng/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0932 ng/Kg	0.0932U ng/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0981 ng/Kg	0.0981U ng/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.206 ng/Kg	0.206U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.132 ng/Kg	0.132U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0721 ng/Kg	0.0721U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0645 ng/Kg	0.0645U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0349 ng/Kg	0.0349U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0744 ng/Kg	0.0744U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0339 ng/Kg	0.0339U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0547 ng/Kg	0.0547U ng/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	OCDF	0.0918 ng/Kg	0.0918U ng/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0821 ng/Kg	0.0821U ng/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0873 ng/Kg	0.0873U ng/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.118 ng/Kg	0.118U ng/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.218 ng/Kg	0.218U ng/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.101 ng/Kg	0.101U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24637CB221508	9/4/2013 3:08:00 PM	ALUMINUM BORON CALCIUM TIN	7.58 mg/Kg 1.08 mg/Kg 14.9 mg/Kg 1.96 mg/Kg	SL-530-SA5D-SB-0.0-0.5 SL-530-SA5D-SB-2.5-3.5 SL-531-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-2.5-3.5 SL-533-SA5D-SB-0.0-0.5 SL-533-SA5D-SB-2.5-3.5 SL-534-SA5D-SB-0.0-0.5 SL-534-SA5D-SB-6.5-7.5 SL-535-SA5D-SB-0.0-0.5 SL-535-SA5D-SB-2.0-3.0 SL-835-SA5D-SB-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-530-SA5D-SB-0.0-0.5(RES)	BORON	5.27 mg/Kg	5.27U mg/Kg
SL-530-SA5D-SB-0.0-0.5(RES)	TIN	3.39 mg/Kg	3.39U mg/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	BORON	4.56 mg/Kg	4.56U mg/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	TIN	3.59 mg/Kg	3.59U mg/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	BORON	4.78 mg/Kg	4.78U mg/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	TIN	3.52 mg/Kg	3.52U mg/Kg
SL-532-SA5D-SB-0.0-0.5(RES)	TIN	3.51 mg/Kg	3.51U mg/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	BORON	4.20 mg/Kg	4.20U mg/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	TIN	3.35 mg/Kg	3.35U mg/Kg
SL-533-SA5D-SB-0.0-0.5(RES)	TIN	3.43 mg/Kg	3.43U mg/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	TIN	5.08 mg/Kg	5.08U mg/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	TIN	3.49 mg/Kg	3.49U mg/Kg
SL-534-SA5D-SB-6.5-7.5(RES)	BORON	4.43 mg/Kg	4.43U mg/Kg
SL-534-SA5D-SB-6.5-7.5(RES)	TIN	3.50 mg/Kg	3.50U mg/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	TIN	4.23 mg/Kg	4.23U mg/Kg
SL-535-SA5D-SB-2.0-3.0(REA)	TIN	4.08 mg/Kg	4.08U mg/Kg
SL-535-SA5D-SB-2.0-3.0(RES)	BORON	4.81 mg/Kg	4.81U mg/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	TIN	3.62 mg/Kg	3.62U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-082813(RES)	8/28/2013 2:00:00 PM	BARIUM MOLYBDENUM	0.00035 mg/L 0.008 mg/L	SL-530-SA5D-SB-0.0-0.5 SL-530-SA5D-SB-2.5-3.5 SL-531-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-2.5-3.5 SL-533-SA5D-SB-0.0-0.5 SL-533-SA5D-SB-2.5-3.5 SL-534-SA5D-SB-0.0-0.5 SL-534-SA5D-SB-6.5-7.5 SL-535-SA5D-SB-0.0-0.5 SL-535-SA5D-SB-2.0-3.0 SL-835-SA5D-SB-0.0-0.5

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-530-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.336 mg/Kg	0.336U mg/Kg
SL-530-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	2.04 mg/Kg	2.04U mg/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.244 mg/Kg	0.244U mg/Kg
SL-532-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.704 mg/Kg	0.704U mg/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.193 mg/Kg	0.193U mg/Kg
SL-533-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.628 mg/Kg	0.628U mg/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.277 mg/Kg	0.277U mg/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.607 mg/Kg	0.607U mg/Kg
SL-534-SA5D-SB-6.5-7.5(RES)	MOLYBDENUM	0.408 mg/Kg	0.408U mg/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.596 mg/Kg	0.596U mg/Kg
SL-535-SA5D-SB-2.0-3.0(RES)	MOLYBDENUM	2.05 mg/Kg	2.05U mg/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.420 mg/Kg	0.420U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PrepPH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-530-SA5D-SB-0.0-0.5 SL-530-SA5D-SB-2.5-3.5 SL-531-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-2.5-3.5 SL-533-SA5D-SB-0.0-0.5 SL-533-SA5D-SB-2.5-3.5 SL-534-SA5D-SB-0.0-0.5 SL-534-SA5D-SB-6.5-7.5 SL-535-SA5D-SB-0.0-0.5 SL-535-SA5D-SB-2.0-3.0 SL-835-SA5D-SB-0.0-0.5

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-530-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.336 mg/Kg	0.336U mg/Kg
SL-531-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.244 mg/Kg	0.244U mg/Kg
SL-532-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.704 mg/Kg	0.704U mg/Kg
SL-532-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.193 mg/Kg	0.193U mg/Kg
SL-533-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.628 mg/Kg	0.628U mg/Kg
SL-533-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.277 mg/Kg	0.277U mg/Kg
SL-534-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.607 mg/Kg	0.607U mg/Kg
SL-534-SA5D-SB-6.5-7.5(RES)	MOLYBDENUM	0.408 mg/Kg	0.408U mg/Kg
SL-535-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.596 mg/Kg	0.596U mg/Kg
SL-835-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.420 mg/Kg	0.420U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-532-SA5D-SB-2.5-3.5	Benzo(a)pyrene-d12	34	59.00-125.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-535-SA5D-SB-0.0-0.5MS (TOT) **SL-535-SA5D-SB-0.0-0.5MSD (TOT)** (SL-530-SA5D-SB-0.0-0.5 SL -530-SA5D-SB-2.5-3.5 SL -531-SA5D-SB-0.0-0.5 SL -532-SA5D-SB-0.0-0.5 SL -532-SA5D-SB-2.5-3.5 SL -533-SA5D-SB-0.0-0.5 SL -533-SA5D-SB-2.5-3.5 SL -534-SA5D-SB-0.0-0.5 SL -534-SA5D-SB-6.5-7.5 SL -535-SA5D-SB-0.0-0.5 SL -535-SA5D-SB-2.0-3.0 SL -835-SA5D-SB-0.0-0.5)	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM TITANIUM	1928 179 1217 214 156 449	1251 154 - 170 151 474	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 IRON MAGNESIUM POTASSIUM TITANIUM	J (all detects) Al, Ca, Fe, Mg, Ti, No Qual, >4x
SL-535-SA5D-SB-0.0-0.5MS (TOT) **SL-535-SA5D-SB-0.0-0.5MSD (TOT)** (SL-530-SA5D-SB-0.0-0.5 SL -530-SA5D-SB-2.5-3.5 SL -531-SA5D-SB-0.0-0.5 SL -532-SA5D-SB-0.0-0.5 SL -532-SA5D-SB-2.5-3.5 SL -533-SA5D-SB-0.0-0.5 SL -533-SA5D-SB-2.5-3.5 SL -534-SA5D-SB-0.0-0.5 SL -534-SA5D-SB-6.5-7.5 SL -535-SA5D-SB-0.0-0.5 SL -535-SA5D-SB-2.0-3.0 SL -835-SA5D-SB-0.0-0.5)	ANTIMONY MANGANESE	73 61	71 -	75.00-125.00 75.00-125.00	- -	ANTIMONY MANGANESE	J(all detects) UJ(all non-detects) Mn, No Qual, >4x

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-535-SA5D-SB-0.0-0.5DUP (TOT) (SL-530-SA5D-SB-0.0-0.5 SL-530-SA5D-SB-2.5-3.5 SL-531-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-2.5-3.5 SL-533-SA5D-SB-0.0-0.5 SL-533-SA5D-SB-2.5-3.5 SL-534-SA5D-SB-0.0-0.5 SL-534-SA5D-SB-6.5-7.5 SL-535-SA5D-SB-0.0-0.5 SL-535-SA5D-SB-2.0-3.0 SL-835-SA5D-SB-0.0-0.5)	BORON MOLYBDENUM Zirconium	26 57 64	20.00 20.00 20.00	No Qual, OK by Difference

Method: 6020A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-535-SA5D-SB-0.0-0.5DUP (TOT) (SL-530-SA5D-SB-0.0-0.5 SL-530-SA5D-SB-2.5-3.5 SL-531-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-0.0-0.5 SL-532-SA5D-SB-2.5-3.5 SL-533-SA5D-SB-0.0-0.5 SL-533-SA5D-SB-2.5-3.5 SL-534-SA5D-SB-0.0-0.5 SL-534-SA5D-SB-6.5-7.5 SL-535-SA5D-SB-0.0-0.5 SL-535-SA5D-SB-2.0-3.0 SL-835-SA5D-SB-0.0-0.5)	SELENIUM	22	20.00	No Qual, OK by Difference

Field Duplicate RPD Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%) SL-535-SA5D-SB-0.0-0.5	Concentration (%) SL-835-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
MOISTURE	3.7	2.3	47		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg) SL-535-SA5D-SB-0.0-0.5	Concentration (ng/Kg) SL-835-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
1,2,3,4,7,8,9-HPCDF	0.0721	0.0821	13	50.00	No Qualifiers Applied
1,2,3,4,7,8-HXCDF	0.0645	0.0873	30	50.00	
1,2,3,4,6,7,8-HPCDD	0.132	6.88	192	50.00	J(all detects) UJ(all non-detects)
1,2,3,4,6,7,8-HPCDF	0.0152	0.465	187	50.00	
1,2,3,4,7,8-HxCDD	0.0481	0.169	111	50.00	
1,2,3,6,7,8-HXCDD	0.0385	0.597	176	50.00	
1,2,3,6,7,8-HXCDF	0.0349	0.118	109	50.00	
1,2,3,7,8,9-HXCDD	0.0744	0.996	172	50.00	
1,2,3,7,8,9-HXCDF	0.0339	0.502	175	50.00	
1,2,3,7,8-PECDD	4.97 U	0.332	200	50.00	
1,2,3,7,8-PECDF	0.0547	0.218	120	50.00	
2,3,4,6,7,8-HXCDF	4.97 U	0.103	200	50.00	
2,3,4,7,8-PECDF	4.97 U	0.101	200	50.00	
2,3,7,8-TCDD	0.994 U	0.114	200	50.00	
OCDD	1.32	111	195	50.00	
OCDF	0.0918	1.33	174	50.00	

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg) SL-535-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-835-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	16900	19000	12	50.00	No Qualifiers Applied
ANTIMONY	2.02	1.78	13	50.00	
ARSENIC	8.27	5.91	33	50.00	
BARIUM	124	116	7	50.00	
BERYLLIUM	0.804	0.711	12	50.00	
BORON	7.59	7.00	8	50.00	
CADMIUM	0.485	0.513	6	50.00	
CALCIUM	3560	2860	22	50.00	
CHROMIUM	25.5	25.3	1	50.00	
COBALT	8.97	7.13	23	50.00	
COPPER	14.3	13.4	6	50.00	
IRON	31600	25000	23	50.00	
LEAD	9.60	7.49	25	50.00	
LITHIUM	39.6	24.3	48	50.00	
MAGNESIUM	5960	4690	24	50.00	
MANGANESE	418	381	9	50.00	
MOLYBDENUM	0.596	0.420	35	50.00	
NICKEL	16.2	15.4	5	50.00	
PHOSPHORUS	534	415	25	50.00	
POTASSIUM	2860	3970	33	50.00	
TIN	4.23	3.62	16	50.00	
TITANIUM	1620	1370	17	50.00	
VANADIUM	49.7	46.0	8	50.00	
ZINC	77.4	61.6	23	50.00	
SODIUM	160	90.8	55	50.00	J(all detects) UJ(all non-detects)
Zirconium	2.11	5.02 U	200	50.00	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-535-SA5D-SB-0.0-0.5 (TOT)	SL-835-SA5D-SB-0.0-0.5 (TOT)			
SELENIUM	0.193	0.219	13	50.00	No Qualifiers Applied
STRONTIUM	21.7	22.2	2	50.00	
THALLIUM	0.318	0.282	12	50.00	

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-535-SA5D-SB-0.0-0.5	SL-835-SA5D-SB-0.0-0.5			
EFH (C21-C30)	5.2 U	4.7	200	50.00	J(all detects)
EFH (C30-C40)	10 U	9.0	200	50.00	UJ(all non-detects)

Method: 8270D SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-535-SA5D-SB-0.0-0.5	SL-835-SA5D-SB-0.0-0.5			
1-METHYLNAPHTHALENE	1.7 U	1.1	200	50.00	J(all detects) UJ(all non-detects)
2-METHYLNAPHTHALENE	1.7 U	1.9	200	50.00	
CHRYSENE	1.7 U	0.63	200	50.00	
FLUORANTHENE	1.7 U	0.85	200	50.00	
NAPHTHALENE	1.7 U	1.3	200	50.00	
PHENANTHRENE	1.7 U	0.74	200	50.00	
PYRENE	1.7 U	0.81	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-535-SA5D-SB-0.0-0.5	SL-835-SA5D-SB-0.0-0.5			
PH	6.34	6.44	2	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	2.18	5.08	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.238	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.565	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.226	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	1.50	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.243	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.42	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.315	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.423	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.457	5.08	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.263	5.08	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.316	5.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.160	1.02	PQL	ng/Kg	
	OCDF	JB	5.73	10.2	PQL	ng/Kg	
SL-530-SA5D-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.145	5.08	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	0.0634	5.08	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0809	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.110	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.199	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.128	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.184	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.132	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.124	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.350	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.314	5.08	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.120	5.08	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.266	5.08	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0969	1.02	PQL	ng/Kg	
	OCDD	JB	0.517	10.2	PQL	ng/Kg	
	OCDF	JBQ	0.134	10.2	PQL	ng/Kg	
SL-531-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.765	5.19	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	0.0874	5.19	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0795	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.122	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.143	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.175	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.149	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.174	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.111	5.19	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.370	5.19	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.430	5.19	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.145	5.19	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.305	5.19	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.137	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0843	1.04	PQL	ng/Kg	
	OCDD	JB	9.70	10.4	PQL	ng/Kg	
	OCDF	JBQ	0.255	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-532-SA5D-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.25	4.99	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	1.81	4.99	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.717	4.99	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.773	4.99	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	4.32	4.99	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.626	4.99	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	1.37	4.99	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.916	4.99	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	1.11	4.99	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.23	4.99	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.135	0.997	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.549	0.997	PQL	ng/Kg	
SL-532-SA5D-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	0.229	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	0.0468	5.23	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0465	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0733	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0336	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0313	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0540	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0354	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0995	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0718	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.0647	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0594	5.23	PQL	ng/Kg	
	OCDD	JB	1.34	10.5	PQL	ng/Kg	
	OCDF	JB	0.176	10.5	PQL	ng/Kg	
SL-533-SA5D-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.809	4.90	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	1.26	4.90	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.418	4.90	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	4.75	4.90	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.553	4.90	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	3.94	4.90	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.723	4.90	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	1.13	4.90	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.549	4.90	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.755	4.90	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.582	4.90	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.225	0.981	PQL	ng/Kg	
SL-533-SA5D-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	0.156	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	0.0531	5.41	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0604	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0454	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0650	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.0475	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0513	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.160	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0792	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0627	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0976	5.41	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.0583	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0758	5.41	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0803	1.08	PQL	ng/Kg	
	OCDD	JB	1.09	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.239	10.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-534-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	1.65	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.133	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.145	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0932	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.889	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0981	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.11	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.438	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.326	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.206	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.121	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0672	1.03	PQL	ng/Kg	
	OCDF	JB	5.14	10.3	PQL	ng/Kg	
SL-535-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.132	4.97	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	0.0152	4.97	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0721	4.97	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0481	4.97	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0645	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.0385	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0349	4.97	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0744	4.97	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0339	4.97	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0547	4.97	PQL	ng/Kg	
	OCDD	JBQ	1.32	9.94	PQL	ng/Kg	
	OCDF	JBQ	0.0918	9.94	PQL	ng/Kg	
SL-835-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	0.465	4.94	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.0821	4.94	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.169	4.94	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0873	4.94	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.597	4.94	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.118	4.94	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.996	4.94	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.502	4.94	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.332	4.94	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.218	4.94	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.103	4.94	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.101	4.94	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.114	0.989	PQL	ng/Kg	
	OCDF	JB	1.33	9.89	PQL	ng/Kg	

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-0.0-0.5	ANTIMONY	J	1.68	4.03	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.542	1.01	PQL	mg/Kg	
	BORON	J	5.27	10.1	PQL	mg/Kg	
	CADMIUM	J	0.430	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.336	2.01	PQL	mg/Kg	
	TIN	J	3.39	10.1	PQL	mg/Kg	
	Zirconium	J	1.27	5.04	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-2.5-3.5	ANTIMONY	J	1.61	4.08	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.571	1.02	PQL	mg/Kg	
	BORON	J	4.56	10.2	PQL	mg/Kg	
	CADMIUM	J	0.305	1.02	PQL	mg/Kg	
	TIN	J	3.59	10.2	PQL	mg/Kg	
	Zirconium	J	1.35	5.10	PQL	mg/Kg	
SL-531-SA5D-SB-0.0-0.5	ANTIMONY	J	1.36	4.08	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.568	1.02	PQL	mg/Kg	
	BORON	J	4.78	10.2	PQL	mg/Kg	
	CADMIUM	J	0.339	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.244	2.04	PQL	mg/Kg	
	TIN	J	3.52	10.2	PQL	mg/Kg	
	Zirconium	J	1.27	5.10	PQL	mg/Kg	
SL-532-SA5D-SB-0.0-0.5	ANTIMONY	J	1.22	4.02	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.606	1.01	PQL	mg/Kg	
	BORON	J	6.52	10.1	PQL	mg/Kg	
	CADMIUM	J	0.653	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.704	2.01	PQL	mg/Kg	
	SODIUM	J	92.5	101	PQL	mg/Kg	
	TIN	J	3.51	10.1	PQL	mg/Kg	
	Zirconium	J	1.96	5.03	PQL	mg/Kg	
SL-532-SA5D-SB-2.5-3.5	ANTIMONY	J	1.26	4.11	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.376	1.03	PQL	mg/Kg	
	BORON	J	4.20	10.3	PQL	mg/Kg	
	CADMIUM	J	0.327	1.03	PQL	mg/Kg	
	MOLYBDENUM	J	0.193	2.05	PQL	mg/Kg	
	TIN	J	3.35	10.3	PQL	mg/Kg	
SL-533-SA5D-SB-0.0-0.5	ANTIMONY	J	1.51	4.03	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.652	1.01	PQL	mg/Kg	
	BORON	J	6.78	10.1	PQL	mg/Kg	
	CADMIUM	J	0.754	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.628	2.01	PQL	mg/Kg	
	TIN	J	3.43	10.1	PQL	mg/Kg	
	Zirconium	J	1.80	5.03	PQL	mg/Kg	
SL-533-SA5D-SB-2.5-3.5	ANTIMONY	J	3.50	4.24	PQL	mg/Kg	J (all detects)
	BORON	J	6.60	10.6	PQL	mg/Kg	
	CADMIUM	J	0.702	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.277	2.12	PQL	mg/Kg	
	TIN	J	5.08	10.6	PQL	mg/Kg	
	Zirconium	J	1.15	5.31	PQL	mg/Kg	
SL-534-SA5D-SB-0.0-0.5	ANTIMONY	J	1.73	4.07	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.658	1.02	PQL	mg/Kg	
	BORON	J	6.26	10.2	PQL	mg/Kg	
	CADMIUM	J	0.473	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.607	2.03	PQL	mg/Kg	
	TIN	J	3.49	10.2	PQL	mg/Kg	
	Zirconium	J	2.28	5.09	PQL	mg/Kg	
SL-534-SA5D-SB-6.5-7.5	ANTIMONY	J	1.69	4.21	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.354	1.05	PQL	mg/Kg	
	BORON	J	4.43	10.5	PQL	mg/Kg	
	CADMIUM	J	0.313	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.408	2.11	PQL	mg/Kg	
	TIN	J	3.50	10.5	PQL	mg/Kg	
	Zirconium	J	1.86	5.27	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-535-SA5D-SB-0.0-0.5	ANTIMONY	J	2.02	4.07	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.804	1.02	PQL	mg/Kg	
	BORON	J	7.59	10.2	PQL	mg/Kg	
	CADMIUM	J	0.485	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.596	2.04	PQL	mg/Kg	
	TIN	J	4.23	10.2	PQL	mg/Kg	
	Zirconium	J	2.11	5.09	PQL	mg/Kg	
SL-535-SA5D-SB-2.0-3.0	ANTIMONY	J	1.32	4.10	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.706	1.02	PQL	mg/Kg	
	BORON	J	4.81	10.2	PQL	mg/Kg	
	TIN	J	4.08	10.2	PQL	mg/Kg	
	Zirconium	J	1.62	5.12	PQL	mg/Kg	
SL-835-SA5D-SB-0.0-0.5	ANTIMONY	J	1.78	4.01	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.711	1.00	PQL	mg/Kg	
	BORON	J	7.00	10.0	PQL	mg/Kg	
	CADMIUM	J	0.513	1.00	PQL	mg/Kg	
	MOLYBDENUM	J	0.420	2.01	PQL	mg/Kg	
	SODIUM	J	90.8	100	PQL	mg/Kg	
	TIN	J	3.62	10.0	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-0.0-0.5	SELENIUM	J	0.109	0.403	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0272	0.201	PQL	mg/Kg	
SL-530-SA5D-SB-2.5-3.5	SILVER	J	0.0620	0.204	PQL	mg/Kg	J (all detects)
SL-531-SA5D-SB-0.0-0.5	SILVER	J	0.0269	0.204	PQL	mg/Kg	J (all detects)
SL-532-SA5D-SB-0.0-0.5	SELENIUM	J	0.190	0.402	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0406	0.201	PQL	mg/Kg	
SL-533-SA5D-SB-0.0-0.5	SELENIUM	J	0.165	0.403	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0525	0.201	PQL	mg/Kg	
SL-533-SA5D-SB-2.5-3.5	SELENIUM	J	0.227	0.424	PQL	mg/Kg	J (all detects)
	SILVER	J	0.160	0.212	PQL	mg/Kg	
SL-534-SA5D-SB-0.0-0.5	SELENIUM	J	0.174	0.407	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0598	0.203	PQL	mg/Kg	
SL-534-SA5D-SB-6.5-7.5	SELENIUM	J	0.120	0.421	PQL	mg/Kg	J (all detects)
	THALLIUM	J	0.179	0.211	PQL	mg/Kg	
SL-535-SA5D-SB-0.0-0.5	SELENIUM	J	0.193	0.407	PQL	mg/Kg	J (all detects)
SL-535-SA5D-SB-2.0-3.0	SELENIUM	J	0.164	0.410	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0508	0.205	PQL	mg/Kg	
SL-835-SA5D-SB-0.0-0.5	SELENIUM	J	0.219	0.401	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 7471B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-534-SA5D-SB-0.0-0.5	MERCURY	J	0.0128	0.0171	PQL	mg/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-835-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	4.7	5.1	PQL	mg/Kg	J (all detects)
	EFH (C30-C40)	J	9.0	10	PQL	mg/Kg	

Method: 8081B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-0.0-0.5	4,4'-DDT	J	0.43	1.7	PQL	ug/Kg	J (all detects)
SL-532-SA5D-SB-0.0-0.5	4,4'-DDD	J	0.54	1.7	PQL	ug/Kg	J (all detects)
	DIELDRIN	J	0.69	1.7	PQL	ug/Kg	
	HEPTACHLOR EPOXIDE	J	0.26	0.84	PQL	ug/Kg	
SL-533-SA5D-SB-0.0-0.5	4,4'-DDT	J	0.86	1.7	PQL	ug/Kg	J (all detects)

Method: 8082A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-533-SA5D-SB-0.0-0.5	AROCLOR 1254	J	6.6	17	PQL	ug/Kg	J (all detects)

Method: 8270D SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-530-SA5D-SB-0.0-0.5	ANTHRACENE	J	0.54	1.7	PQL	ug/Kg	J (all detects)
	BENZO(E)PYRENE	J	7.3	17	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	1.4	1.7	PQL	ug/Kg	
SL-532-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.93	1.7	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	0.46	1.7	PQL	ug/Kg	
	BENZO(E)PYRENE	J	3.7	17	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.7	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.6	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	1.7	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH099 **Laboratory: LL**

EDD Filename: PH099 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-533-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.1	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.5	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.99	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.2	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.7	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.85	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.6	1.7	PQL	ug/Kg	
SL-534-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.80	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.59	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	1.7	PQL	ug/Kg	
SL-835-SA5D-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.63	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	0.85	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.74	1.7	PQL	ug/Kg	
	PYRENE	J	0.81	1.7	PQL	ug/Kg	

LDC #: 30695B4

SDG #: PH099

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: CR

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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: 8/30/13
II.	ICP/MS Tune	A	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	D.P
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(3,4)
XV	Field Blanks	SW	FB= FB-041113 (PH029) EB1= EB1-082813 (PH0915)

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-534-SA5D-SB-0.0-0.5	11	SL-532-SA5D-SB-0.0-0.5	21		31	
2	SL-534-SA5D-SB-6.5-7.5	12	SL-532-SA5D-SB-2.5-3.5	22		32	
3	SL-535-SA5D-SB-0.0-0.5	13	SL-535-SA5D-SB-0.0-0.5MS	23		33	
4	SL-835-SA5D-SB-0.0-0.5	14	SL-535-SA5D-SB-0.0-0.5MSD	24		34	
5	SL-535-SA5D-SB-2.0-3.0	15	SL-535-SA5D-SB-0.0-0.5DUP	25		35	
6	SL-533-SA5D-SB-0.0-0.5	16		26		36	
7	SL-533-SA5D-SB-2.5-3.5	17		27		37	
8	SL-530-SA5D-SB-0.0-0.5	18		28		38	
9	SL-530-SA5D-SB-2.5-3.5	19		29		39	
10	SL-531-SA5D-SB-0.0-0.5	20		30		40	

Notes:

LDC #: 30695B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	2	3	4	6	7	8	10	11	12		
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.61	0.41	0.60	0.42	0.63	0.28	0.34	0.24	0.70	0.19		

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification													
	EB1-082813 (SDG: PH095)	Action Limit	1	2	3	4	6	7	8	10	11	12	5	9	0
Ba	0.00035	0.175													
Mo	0.0080	4	See FB	See FB	See FB	See FB	See FB	See FB	See FB	See FB	See FB	See FB	2.04	2.05	

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH099
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7182118BKG Matrix Spike Lab Sample ID: 7182119MS Matrix Spike Duplicate Lab Sample ID: 7182120MSD
Batch Id(s): P24637C, P24638A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		16321.5029		20102.2490		18774.6186		196.0784	196.0784	MG/KG	1928		1251		7			20	P
Antimony		1.9422	B	37.5520		36.6049		49.0196	49.0196	MG/KG	73	N	71	N	3		75 - 125	20	P
Arsenic		7.9686		21.7951		21.8578		14.7059	14.7059	MG/KG	94		94		0		75 - 125	20	P
Barium		119.7892		322.9451		314.1049		196.0784	196.0784	MG/KG	104		99		3		75 - 125	20	P
Beryllium		0.7745	B	5.6873		5.5961		4.9020	4.9020	MG/KG	100		98		2		75 - 125	20	P
Boron		7.3098	B	195.7853		195.2039		196.0784	196.0784	MG/KG	96		96		0		75 - 125	20	P
Cadmium		0.4667	B	5.1304		5.1088		4.9020	4.9020	MG/KG	95		95		0		75 - 125	20	P
Calcium		3429.8490		4130.2265		4034.4088		392.1569	392.1569	MG/KG	179		154		2			20	P
Chromium		24.5275		44.8784		44.1020		19.6078	19.6078	MG/KG	104		100		2		75 - 125	20	P
Cobalt		8.6392		55.0696		54.6382		49.0196	49.0196	MG/KG	95		94		1		75 - 125	20	P
Copper		13.8020		38.3039		38.3588		24.5098	24.5098	MG/KG	100		100		0		75 - 125	20	P
Iron		30452.8569		31646.2392		30551.9490		98.0392	98.0392	MG/KG	1217		101		4			20	P
Lead		9.2480		22.5873		22.7078		14.7059	14.7059	MG/KG	91		92		1		75 - 125	20	P
Lithium		38.1431		138.6755		135.6755		98.0392	98.0392	MG/KG	103		99		2		75 - 125	20	P
Magnesium		5737.9569		6158.0735		6071.3392		196.0784	196.0784	MG/KG	214		170		1			20	P
Manganese		402.8069		432.7480		439.7804		49.0196	49.0196	MG/KG	61		75		2			20	P
Mercury		0.0099	U	0.1894		0.1916		0.1596	0.1635	MG/KG	119		117		1		65 - 135	20	CV
Molybdenum		0.5735	B	191.0961		189.0010		196.0784	196.0784	MG/KG	97		96		1		75 - 125	20	P
Nickel		15.5971		62.5559		62.2108		49.0196	49.0196	MG/KG	96		95		1		75 - 125	20	P
Phosphorus		514.3931		614.3500		624.3373		98.0392	98.0392	MG/KG	102		112		2			20	P
Potassium		2758.4647		4292.4353		4242.3333		980.3922	980.3922	MG/KG	156	N	151	N	1		75 - 125	20	P
Selenium	78	0.1857	B	2.1361		2.1076		1.9608	1.9608	MG/KG	99		98		1		75 - 125	20	MS
Silver	107	0.0255	U	9.8767		9.7692		9.8039	9.8039	MG/KG	101		100		1		75 - 125	20	MS
Sodium		154.1755		1136.4069		1109.6745		980.3922	980.3922	MG/KG	100		97		2		75 - 125	20	P
Strontium	88	20.9216		28.4706		28.9216		7.8431	7.8431	MG/KG	96		102		2		75 - 125	20	MS
Thallium	203	0.3065		0.6749		0.7082		0.3922	0.3922	MG/KG	94		102		5		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

74X

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH099
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7182118BKG Matrix Spike Lab Sample ID: 7182119MS Matrix Spike Duplicate Lab Sample ID: 7182120MSD
Batch Id(s): P24637C, P24638A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Tin		4.0765	B	364.1461		360.5343		392.1569	392.1569	MG/KG	92		91		1		75 - 125	20	P
Titanium		1556.2206		1996.7549		2020.4559		98.0392	98.0392	MG/KG	449		474		1			20	P
Vanadium		47.8186		97.0441		95.7706		49.0196	49.0196	MG/KG	100		98		1		75 - 125	20	P
Zinc		74.5716		121.9824		122.0255		49.0196	49.0196	MG/KG	97		97		0		75 - 125	20	P
Zirconium		2.0284	B	101.2961		99.8853		98.0392	98.0392	MG/KG	101		100		1		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH099
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7182118BKG
Duplicate Lab Sample ID: 7182121DUP
Batch ID(s): P24637C, P24638A
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			16321.5029		16121.3676		1		P
Antimony			1.9422	B	2.0971	B	8		P
Arsenic		3.9	7.9686		7.6725		4		P
Barium			119.7892		115.0578		4		P
Beryllium			0.7745	B	0.7392	B	5		P
Boron			7.3098	B	5.6559	B	26	*	P
Cadmium			0.4667	B	0.4275	B	9		P
Calcium			3429.8490		3426.0520		0		P
Chromium			24.5275		23.0471		6		P
Cobalt			8.6392		8.3716		3		P
Copper			13.8020		13.4010		3		P
Iron			30452.8569		29111.2216		5		P
Lead		2.9	9.2480		8.6824		6		P
Lithium			38.1431		37.8392		1		P
Magnesium			5737.9569		5671.9471		1		P
Manganese			402.8069		386.6324		4		P
Mercury			0.0099	U	0.0098	U			CV
Molybdenum			0.5735	B	0.3196	B	57		P
Nickel			15.5971		15.3500		2		P
Phosphorus			514.3931		521.3069		1		P
Potassium			2758.4647		2768.7676		0		P
Selenium	78		0.1857	B	0.2312	B	22		MS
Silver	107		0.0255	U	0.0255	U			MS
Sodium		98.0	154.1755		151.1431		2		P
Strontium	88		20.9216		20.6667		1		MS
Thallium	203	0.2	0.3065		0.2986		3		MS
Tin			4.0765	B	4.1098	B	1		P
Titanium			1556.2206		1533.3549		1		P
Vanadium			47.8186		45.8373		4		P
Zinc			74.5716		73.2265		2		P
Zirconium			2.0284	B	3.9402	B	64		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH100

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 9, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 3, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, and 7471B
Perchlorate by EPA SW 846 Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks and field blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of the ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. 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 exception of one sample for PCBs. No data were qualified due to high %Rs since the associated results were non-detected.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of two MS/MSD pairs for SVOCs, metals and TPH as extractables. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of one LCS/LCSD pair for SVOCs. No data were qualified due to high %Rs since the associated results were non-detected.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH100	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH101) was collected and analyzed for SVOCs, pesticides, PCBs, metals, perchlorate, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, perchlorate, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Sep-2013	TB-090313	7184683	TB	5030B	8015M	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	3050B	6010C	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	3050B	6020A	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	3546	8015M	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	3546	8082A	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	3546	8270D SIM	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	METHOD	1613B	III
03-Sep-2013	SL-527-SA5D-SB-0.0-0.5	7184686	N	METHOD	7471B	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	3050B	6010C	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	3050B	6020A	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	3546	8015M	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	3546	8082A	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	3546	8270D SIM	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	5035A	8015M	III
03-Sep-2013	SL-527-SA5D-SB-4.0-5.0	7184687	N	METHOD	7471B	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3050B	6010C	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3050B	6020A	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3546	8015M	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3546	8081B	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3546	8082A	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	3546	8270D SIM	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	METHOD	1613B	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5	7184684	N	METHOD	7471B	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MSD	P184684M242155A	MSD	3546	8082A	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MSD	P184684M260833	MSD	3546	8270D SIM	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MSD	P184684M322159A	MSD	3546	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
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MS	P184684R242137A	MS	3546	8082A	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MS	P184684R260800	MS	3546	8270D SIM	III
03-Sep-2013	SL-525-SA5D-SB-0.0-0.5MS	P184684R322137A	MS	3546	8015M	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3050B	6010C	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3050B	6020A	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3546	8015M	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3546	8081B	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3546	8082A	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	3546	8270D SIM	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	5035A	8015M	III
03-Sep-2013	SL-525-SA5D-SB-2.5-3.5	7184685	N	METHOD	7471B	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	3050B	6010C	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	3050B	6020A	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	3546	8015M	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	3546	8082A	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	3546	8270D SIM	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	METHOD	1613B	III
03-Sep-2013	SL-528-SA5D-SB-0.0-0.5	7184688	N	METHOD	7471B	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	3050B	6010C	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	3050B	6020A	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	3546	8015M	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	3546	8082A	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	3546	8270D SIM	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	5035A	8015M	III
03-Sep-2013	SL-528-SA5D-SB-2.5-3.5	7184689	N	METHOD	7471B	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3050B	6010C	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
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3050B	6020A	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3546	8015M	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3546	8081B	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3546	8082A	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	3546	8270D SIM	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	METHOD	1613B	III
03-Sep-2013	SL-540-SA5D-SB-0.0-0.5	7184690	N	METHOD	7471B	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3050B	6010C	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3050B	6020A	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3546	8015M	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3546	8081B	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3546	8082A	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	3546	8270D SIM	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	5035A	8015M	III
03-Sep-2013	SL-540-SA5D-SB-5.0-6.0	7184691	N	METHOD	7471B	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	3050B	6010C	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	3050B	6020A	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	3546	8015M	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	3546	8082A	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	3546	8270D SIM	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	METHOD	1613B	III
03-Sep-2013	SL-545-SA5D-SB-0.0-0.5	7184694	N	METHOD	7471B	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	3050B	6010C	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	3050B	6020A	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	3546	8015M	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	3546	8082A	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
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	3546	8270D SIM	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	5035A	8015M	III
03-Sep-2013	SL-545-SA5D-SB-6.0-7.0	7184695	N	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	3050B	6010C	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	3546	8015M	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	3546	8082A	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	3546	8270D SIM	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	METHOD	1613B	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	METHOD	6850	III
03-Sep-2013	SL-541-SA5D-SB-0.0-0.5	7184692	N	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	3050B	6010C	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	3546	8015M	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	3546	8082A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	3546	8270D SIM	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	5035A	8015M	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	METHOD	6850	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5	7184693	N	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5DUP	P184693D220504	DUP	3050B	6010C	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5DUP	P184693D220904	DUP	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5DUP	P184693D222320A	DUP	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5DUP	P184693D222320B	DUP	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MSD	P184693M220513	MSD	3050B	6010C	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MSD	P184693M220908	MSD	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MSD	P184693M222325A	MSD	3050B	6020A	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
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MSD	P184693M222325B	MSD	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MS	P184693R220508	MS	3050B	6010C	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MS	P184693R220906	MS	METHOD	7471B	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MS	P184693R222323A	MS	3050B	6020A	III
03-Sep-2013	SL-541-SA5D-SB-2.5-3.5MS	P184693R222323B	MS	3050B	6020A	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-525-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.86	J	0.772	MDL	4.18	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.743	J	0.0699	MDL	1.04	PQL	mg/Kg	J	Z
BORON	8.04	J	0.877	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.547	J	0.0793	MDL	1.04	PQL	mg/Kg	J	Z
POTASSIUM	3760		8.71	MDL	104	PQL	mg/Kg	J	Q
SODIUM	95.0	J	17.4	MDL	104	PQL	mg/Kg	J	Z
TIN	3.37	J	0.230	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.73	J	0.877	MDL	5.22	PQL	mg/Kg	J	Z
MOLYBDENUM	0.467	J	0.177	MDL	2.09	PQL	mg/Kg	U	F

Sample ID: **SL-525-SA5D-SB-2.5-3.5** ***Collected:*** **9/3/2013 9:25:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.34	J	0.776	MDL	4.20	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.380	J	0.0703	MDL	1.05	PQL	mg/Kg	J	Z
BORON	4.74	J	0.881	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.344	J	0.0797	MDL	1.05	PQL	mg/Kg	J	Z
MOLYBDENUM	0.258	J	0.178	MDL	2.10	PQL	mg/Kg	U	F
POTASSIUM	2130		8.75	MDL	105	PQL	mg/Kg	J	Q
TIN	3.27	J	0.231	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	2.08	J	0.881	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: **SL-527-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.23	J	0.750	MDL	4.05	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.580	J	0.0679	MDL	1.01	PQL	mg/Kg	J	Z
BORON	7.47	J	0.851	MDL	10.1	PQL	mg/Kg	J	Z
CADMIUM	0.583	J	0.0770	MDL	1.01	PQL	mg/Kg	J	Z
MOLYBDENUM	0.391	J	0.172	MDL	2.03	PQL	mg/Kg	U	F
POTASSIUM	4130		8.45	MDL	101	PQL	mg/Kg	J	Q
SODIUM	63.4	J	16.9	MDL	101	PQL	mg/Kg	J	Z
TIN	2.89	J	0.223	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	2.19	J	0.851	MDL	5.07	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-527-SA5D-SB-4.0-5.0** ***Collected:*** **9/3/2013 8:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.74	J	0.806	MDL	4.36	PQL	mg/Kg	J	Z, Q
BORON	9.66	J	0.915	MDL	10.9	PQL	mg/Kg	J	Z
CADMIUM	0.640	J	0.0828	MDL	1.09	PQL	mg/Kg	J	Z
POTASSIUM	3040		9.08	MDL	109	PQL	mg/Kg	J	Q
TIN	4.69	J	0.240	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.26	J	0.915	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.49	J	0.735	MDL	3.97	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.707	J	0.0665	MDL	0.993	PQL	mg/Kg	J	Z
BORON	8.15	J	0.834	MDL	9.93	PQL	mg/Kg	J	Z
CADMIUM	0.549	J	0.0754	MDL	0.993	PQL	mg/Kg	J	Z
MOLYBDENUM	0.408	J	0.169	MDL	1.99	PQL	mg/Kg	U	F
POTASSIUM	3900		8.28	MDL	99.3	PQL	mg/Kg	J	Q
SODIUM	91.0	J	16.6	MDL	99.3	PQL	mg/Kg	J	Z
TIN	3.29	J	0.218	MDL	9.93	PQL	mg/Kg	U	B
Zirconium	2.95	J	0.834	MDL	4.96	PQL	mg/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-2.5-3.5** ***Collected:*** **9/3/2013 10:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.98	J	0.794	MDL	4.29	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.659	J	0.0719	MDL	1.07	PQL	mg/Kg	J	Z
BORON	6.50	J	0.901	MDL	10.7	PQL	mg/Kg	J	Z
CADMIUM	0.473	J	0.0815	MDL	1.07	PQL	mg/Kg	J	Z
POTASSIUM	2280		8.95	MDL	107	PQL	mg/Kg	J	Q
TIN	3.59	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.03	J	0.901	MDL	5.36	PQL	mg/Kg	J	Z

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.76	J	0.793	MDL	4.29	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.929	J	0.0718	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.759	J	0.0814	MDL	1.07	PQL	mg/Kg	J	Z
MOLYBDENUM	1.05	J	0.182	MDL	2.14	PQL	mg/Kg	U	F
POTASSIUM	5650		8.94	MDL	107	PQL	mg/Kg	J	Q
SODIUM	93.1	J	17.9	MDL	107	PQL	mg/Kg	J	Z
TIN	3.91	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	3.88	J	0.900	MDL	5.36	PQL	mg/Kg	J	Z

Sample ID: **SL-540-SA5D-SB-5.0-6.0** ***Collected:*** **9/3/2013 12:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.15	J	0.794	MDL	4.29	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.733	J	0.0719	MDL	1.07	PQL	mg/Kg	J	Z
BORON	7.45	J	0.901	MDL	10.7	PQL	mg/Kg	J	Z
CADMIUM	0.592	J	0.0815	MDL	1.07	PQL	mg/Kg	J	Z
POTASSIUM	3250		8.95	MDL	107	PQL	mg/Kg	J	Q
TIN	3.80	J	0.236	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: **SL-541-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 1:35:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.79	J	0.777	MDL	4.20	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.750	J	0.0703	MDL	1.05	PQL	mg/Kg	J	Z
BORON	7.68	J	0.882	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.607	J	0.0798	MDL	1.05	PQL	mg/Kg	J	Z
MOLYBDENUM	0.311	J	0.178	MDL	2.10	PQL	mg/Kg	U	F
POTASSIUM	4210		8.76	MDL	105	PQL	mg/Kg	J	Q
SODIUM	78.1	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	3.42	J	0.231	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	2.83	J	0.882	MDL	5.25	PQL	mg/Kg	J	Z

Sample ID: **SL-541-SA5D-SB-2.5-3.5** ***Collected:*** **9/3/2013 1:45:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.93	J	0.766	MDL	4.14	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-541-SA5D-SB-2.5-3.5** ***Collected:*** **9/3/2013 1:45:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.523	J	0.0694	MDL	1.04	PQL	mg/Kg	J	Z
BORON	6.34	J	0.870	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.423	J	0.0787	MDL	1.04	PQL	mg/Kg	J	Z
MOLYBDENUM	0.421	J	0.176	MDL	2.07	PQL	mg/Kg	U	F
POTASSIUM	2160		8.63	MDL	104	PQL	mg/Kg	J	Q
TIN	3.81	J	0.228	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	3.10	J	0.870	MDL	5.18	PQL	mg/Kg	J	Z

Sample ID: **SL-545-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.43	J	0.785	MDL	4.24	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.889	J	0.0711	MDL	1.06	PQL	mg/Kg	J	Z
CADMIUM	0.787	J	0.0807	MDL	1.06	PQL	mg/Kg	J	Z
MOLYBDENUM	0.216	J	0.180	MDL	2.12	PQL	mg/Kg	U	F
POTASSIUM	6300		8.85	MDL	106	PQL	mg/Kg	J	Q
SODIUM	83.2	J	17.7	MDL	106	PQL	mg/Kg	J	Z
TIN	3.37	J	0.233	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	3.36	J	0.891	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: **SL-545-SA5D-SB-6.0-7.0** ***Collected:*** **9/3/2013 1:00:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.26	J	0.763	MDL	4.12	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.445	J	0.0691	MDL	1.03	PQL	mg/Kg	J	Z
BORON	5.37	J	0.866	MDL	10.3	PQL	mg/Kg	J	Z
CADMIUM	0.485	J	0.0783	MDL	1.03	PQL	mg/Kg	J	Z
POTASSIUM	2050		8.60	MDL	103	PQL	mg/Kg	J	Q
TIN	3.23	J	0.227	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	2.58	J	0.866	MDL	5.15	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-525-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:15:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.189	J	0.104	MDL	0.418	PQL	mg/Kg	J	Z

Sample ID: **SL-525-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0277	J	0.0271	MDL	0.209	PQL	mg/Kg	J	Z

Sample ID: **SL-527-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0461	J	0.0263	MDL	0.203	PQL	mg/Kg	J	Z

Sample ID: **SL-527-SA5D-SB-4.0-5.0** ***Collected:*** **9/3/2013 8:35:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.258	J	0.109	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: **SL-527-SA5D-SB-4.0-5.0** ***Collected:*** **9/3/2013 8:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.199	J	0.0283	MDL	0.218	PQL	mg/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:55:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.130	J	0.0993	MDL	0.397	PQL	mg/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0473	J	0.0258	MDL	0.199	PQL	mg/Kg	J	Z

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.241	J	0.107	MDL	0.429	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-540-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 12:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0478	J	0.0279	MDL	0.214	PQL	mg/Kg	J	Z

Sample ID: SL-540-SA5D-SB-5.0-6.0 *Collected:* 9/3/2013 12:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0363	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z

Sample ID: SL-541-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 1:35:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.150	J	0.105	MDL	0.420	PQL	mg/Kg	J	Z

Sample ID: SL-541-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 1:35:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0278	J	0.0273	MDL	0.210	PQL	mg/Kg	J	Z

Sample ID: SL-545-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 12:50:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.222	J	0.106	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: SL-545-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 12:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0409	J	0.0276	MDL	0.212	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-527-SA5D-SB-4.0-5.0 *Collected:* 9/3/2013 8:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0155	J	0.0108	MDL	0.0181	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-528-SA5D-SB-2.5-3.5 *Collected:* 9/3/2013 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0119	J	0.0106	MDL	0.0176	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-525-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:15:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.74	JB	0.0215	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.249	JBQ	0.0257	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.201	JBQ	0.0541	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.199	JBQ	0.0304	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	1.27	J	0.0556	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.271	JB	0.0287	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.42	JB	0.0524	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.827	JBQ	0.0316	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.212	JQ	0.0497	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.578	JB	0.0361	MDL	4.98	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.260	JB	0.0279	MDL	4.98	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.543	JB	0.0341	MDL	4.98	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.153	JQ	0.0796	MDL	0.996	PQL	ng/Kg	J	Z
OCDF	4.47	JB	0.0467	MDL	9.96	PQL	ng/Kg	J	Z

Sample ID: SL-527-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 8:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.32	JB	0.0212	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.323	JB	0.0331	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.366	JBQ	0.0604	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.280	JBQ	0.0314	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	1.55	J	0.0620	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.288	JB	0.0274	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.21	JBQ	0.0603	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.529	JBQ	0.0316	MDL	5.00	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-527-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDD	0.454	JQ	0.0600	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.433	JB	0.0361	MDL	5.00	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.331	JB	0.0266	MDL	5.00	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.283	JQ	0.0908	MDL	0.999	PQL	ng/Kg	J	Z
OCDF	9.29	JB	0.0479	MDL	9.99	PQL	ng/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.61	JB	0.0219	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.294	JBQ	0.0332	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.452	JB	0.0640	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.300	JB	0.0396	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	2.18	J	0.0668	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.300	JB	0.0345	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.15	JB	0.0630	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.679	JBQ	0.0412	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.351	J	0.0717	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.466	JBQ	0.0496	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.349	JBQ	0.0378	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.204	J	0.119	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	8.74	JB	0.0434	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.76	JB	0.0418	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.308	JBQ	0.0160	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0742	JBQ	0.0237	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0604	JBQ	0.0432	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0907	JB	0.0203	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.445	J	0.0465	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0726	JBQ	0.0179	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.629	JBQ	0.0431	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.16	JB	0.0211	MDL	5.36	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDD	0.0960	JQ	0.0583	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.270	JBQ	0.0268	MDL	5.36	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0930	JBQ	0.0183	MDL	5.36	PQL	ng/Kg	U	B
OCDF	1.13	JB	0.0311	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-541-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 1:35:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.924	JB	0.0340	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.0771	JBQ	0.0131	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0551	JBQ	0.0183	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0218	JBQ	0.0163	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.556	JQ	0.0419	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0549	JB	0.0143	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.782	JB	0.0390	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.933	JB	0.0165	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.186	JQ	0.0557	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.238	JB	0.0275	MDL	5.23	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0398	JBQ	0.0151	MDL	5.23	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0782	JBQ	0.0252	MDL	5.23	PQL	ng/Kg	U	B
OCDF	0.289	JBQ	0.0314	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: **SL-545-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.589	JBQ	0.0356	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.138	JBQ	0.0123	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0380	JB	0.0174	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0802	JBQ	0.0186	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.458	JQ	0.0406	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0247	JBQ	0.0165	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.689	JBQ	0.0385	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.14	JB	0.0186	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0851	JQ	0.0524	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.235	JBQ	0.0238	MDL	5.35	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-545-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 12:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.0607	JB	0.0156	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0410	JBQ	0.0234	MDL	5.35	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0886	JQ	0.0528	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	6.06	JB	0.0293	MDL	10.7	PQL	ng/Kg	J	Z
OCDF	0.321	JB	0.0333	MDL	10.7	PQL	ng/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-525-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:15:00 AM *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)	6.1		2.1	MDL	5.2	PQL	mg/Kg	J	Q
EFH (C30-C40)	21		4.2	MDL	10	PQL	mg/Kg	J	Q, Q

Sample ID: SL-527-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 8:20:00 AM *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)	4.7	J	2.0	MDL	5.1	PQL	mg/Kg	J	Z

Sample ID: SL-528-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:55:00 AM *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)	4.9	J	2.0	MDL	5.1	PQL	mg/Kg	J	Z

Sample ID: SL-541-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 1:35:00 PM *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)	3.5	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z
EFH (C30-C40)	8.0	J	4.2	MDL	11	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 8081B **Matrix: SO**

Sample ID: SL-540-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.55	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8082A **Matrix: SO**

Sample ID: SL-528-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:55:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	6.3	J	4.5	MDL	17	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8270D SIM **Matrix: SO**

Sample ID: SL-525-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:15:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	15	J	3.5	MDL	17	PQL	ug/Kg	J	Z

Sample ID: SL-527-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 8:20:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.85	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	0.80	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.71	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.91	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.73	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.2	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-528-SA5D-SB-0.0-0.5 *Collected:* 9/3/2013 9:55:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-528-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 9:55:00 AM** ***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	0.95	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.5	J	6.1	MDL	18	PQL	ug/Kg	U	F
INDENO(1,2,3-CD)PYRENE	0.71	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-528-SA5D-SB-2.5-3.5** ***Collected:*** **9/3/2013 10:05:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.91	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	0.69	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-540-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.99	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
ANTHRACENE	0.37	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.1	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.78	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.88	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-541-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 1:35:00 PM** ***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	0.95	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	0.81	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-545-SA5D-SB-0.0-0.5** ***Collected:*** **9/3/2013 12:50:00** ***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	1.7	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.1	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	0.88	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-545-SA5D-SB-6.0-7.0** ***Collected:*** **9/3/2013 1:00:00 PM** ***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	0.85	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PrepPH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH100

Method Blank Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2540B372247	9/13/2013 10:47:00 PM	1,2,3,4,6,7,8-HPCDD	0.0675 ng/Kg	SL-525-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0376 ng/Kg	SL-527-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0826 ng/Kg	SL-528-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0390 ng/Kg	SL-540-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0639 ng/Kg	SL-541-SA5D-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0330 ng/Kg	SL-545-SA5D-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0470 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0649 ng/Kg	
		1,2,3,7,8-PECDF	0.0692 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0615 ng/Kg	
		2,3,4,7,8-PECDF	0.0786 ng/Kg	
		OCDD	0.281 ng/Kg	
		OCDF	0.227 ng/Kg	

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-525-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.249 ng/Kg	0.249U ng/Kg
SL-525-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.199 ng/Kg	0.199U ng/Kg
SL-525-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.260 ng/Kg	0.260U ng/Kg
SL-527-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.323 ng/Kg	0.323U ng/Kg
SL-527-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.280 ng/Kg	0.280U ng/Kg
SL-528-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.294 ng/Kg	0.294U ng/Kg
SL-528-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.300 ng/Kg	0.300U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0742 ng/Kg	0.0742U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0604 ng/Kg	0.0604U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0907 ng/Kg	0.0907U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0726 ng/Kg	0.0726U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.270 ng/Kg	0.270U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0930 ng/Kg	0.0930U ng/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	OCDF	1.13 ng/Kg	1.13U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0771 ng/Kg	0.0771U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0551 ng/Kg	0.0551U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0218 ng/Kg	0.0218U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0549 ng/Kg	0.0549U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.238 ng/Kg	0.238U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0398 ng/Kg	0.0398U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0782 ng/Kg	0.0782U ng/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	OCDF	0.289 ng/Kg	0.289U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.138 ng/Kg	0.138U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0380 ng/Kg	0.0380U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0802 ng/Kg	0.0802U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0247 ng/Kg	0.0247U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.235 ng/Kg	0.235U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0607 ng/Kg	0.0607U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0410 ng/Kg	0.0410U ng/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	OCDF	0.321 ng/Kg	0.321U ng/Kg

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24737AB220448	9/6/2013 4:48:00 AM	CALCIUM TIN ZINC	10.2 mg/Kg 1.69 mg/Kg 0.230 mg/Kg	SL-525-SA5D-SB-0.0-0.5 SL-525-SA5D-SB-2.5-3.5 SL-527-SA5D-SB-0.0-0.5 SL-527-SA5D-SB-4.0-5.0 SL-528-SA5D-SB-0.0-0.5 SL-528-SA5D-SB-2.5-3.5 SL-540-SA5D-SB-0.0-0.5 SL-540-SA5D-SB-5.0-6.0 SL-541-SA5D-SB-0.0-0.5 SL-541-SA5D-SB-2.5-3.5 SL-545-SA5D-SB-0.0-0.5 SL-545-SA5D-SB-6.0-7.0

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-525-SA5D-SB-0.0-0.5(RES)	TIN	3.37 mg/Kg	3.37U mg/Kg
SL-525-SA5D-SB-2.5-3.5(RES)	TIN	3.27 mg/Kg	3.27U mg/Kg
SL-527-SA5D-SB-0.0-0.5(RES)	TIN	2.89 mg/Kg	2.89U mg/Kg
SL-527-SA5D-SB-4.0-5.0(RES)	TIN	4.69 mg/Kg	4.69U mg/Kg
SL-528-SA5D-SB-0.0-0.5(RES)	TIN	3.29 mg/Kg	3.29U mg/Kg
SL-528-SA5D-SB-2.5-3.5(RES)	TIN	3.59 mg/Kg	3.59U mg/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	TIN	3.91 mg/Kg	3.91U mg/Kg
SL-540-SA5D-SB-5.0-6.0(RES)	TIN	3.80 mg/Kg	3.80U mg/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	TIN	3.42 mg/Kg	3.42U mg/Kg
SL-541-SA5D-SB-2.5-3.5(RES)	TIN	3.81 mg/Kg	3.81U mg/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	TIN	3.37 mg/Kg	3.37U mg/Kg
SL-545-SA5D-SB-6.0-7.0(RES)	TIN	3.23 mg/Kg	3.23U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-090413(RES)	9/4/2013 3:00:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	1.6 ug/L	SL-525-SA5D-SB-0.0-0.5
		Diethylphthalate	0.3 ug/L	SL-525-SA5D-SB-2.5-3.5
		Di-n-butylphthalate	0.11 ug/L	SL-527-SA5D-SB-0.0-0.5
		NAPHTHALENE	0.032 ug/L	SL-527-SA5D-SB-4.0-5.0
				SL-528-SA5D-SB-0.0-0.5
				SL-528-SA5D-SB-2.5-3.5
				SL-540-SA5D-SB-0.0-0.5
				SL-540-SA5D-SB-5.0-6.0
				SL-541-SA5D-SB-0.0-0.5
				SL-541-SA5D-SB-2.5-3.5
				SL-545-SA5D-SB-0.0-0.5
				SL-545-SA5D-SB-6.0-7.0

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-528-SA5D-SB-0.0-0.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	8.5 ug/Kg	18U ug/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-525-SA5D-SB-0.0-0.5 SL-525-SA5D-SB-2.5-3.5 SL-527-SA5D-SB-0.0-0.5 SL-527-SA5D-SB-4.0-5.0 SL-528-SA5D-SB-0.0-0.5 SL-528-SA5D-SB-2.5-3.5 SL-540-SA5D-SB-0.0-0.5 SL-540-SA5D-SB-5.0-6.0 SL-541-SA5D-SB-0.0-0.5 SL-541-SA5D-SB-2.5-3.5 SL-545-SA5D-SB-0.0-0.5 SL-545-SA5D-SB-6.0-7.0

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-525-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.467 mg/Kg	0.467U mg/Kg
SL-525-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.258 mg/Kg	0.258U mg/Kg
SL-527-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.391 mg/Kg	0.391U mg/Kg
SL-528-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.408 mg/Kg	0.408U mg/Kg
SL-540-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	1.05 mg/Kg	1.05U mg/Kg
SL-541-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.311 mg/Kg	0.311U mg/Kg
SL-541-SA5D-SB-2.5-3.5(RES)	MOLYBDENUM	0.421 mg/Kg	0.421U mg/Kg
SL-545-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.216 mg/Kg	0.216U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **SO**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-545-SA5D-SB-6.0-7.0	TETRACHLORO-M-XYLENE	124	45.00-120.00	All Target Analytes	J (all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-525-SA5D-SB-0.0-0.5MS	EFH (C15-C20)	130	132	49.00-123.00	-	EFH (C15-C20)	
SL-525-SA5D-SB-0.0-0.5MSD	EFH (C21-C30)	137	181	49.00-123.00	-	EFH (C21-C30)	J (all detects)
(SL-525-SA5D-SB-0.0-0.5)	EFH (C30-C40)	127	326	49.00-123.00	32 (20.00)	EFH (C30-C40)	

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-541-SA5D-SB-2.5-3.5MS (TOT)	ALUMINUM	1024	1065	75.00-125.00	-	ALUMINUM	
	CALCIUM	175	146	75.00-125.00	-	CALCIUM	
SL-541-SA5D-SB-2.5-3.5MSD (TOT)	IRON	681	365	75.00-125.00	-	IRON	
	POTASSIUM	136	-	75.00-125.00	-	POTASSIUM	J(all detects)
(SL-525-SA5D-SB-0.0-0.5	TITANIUM	310	163	75.00-125.00	-	TITANIUM	
SL-525-SA5D-SB-2.5-3.5							
SL-527-SA5D-SB-0.0-0.5							
SL-527-SA5D-SB-4.0-5.0							Al, Ca, Fe, Ti,
SL-528-SA5D-SB-0.0-0.5							No Qual, >4x
SL-528-SA5D-SB-2.5-3.5							
SL-540-SA5D-SB-0.0-0.5							
SL-540-SA5D-SB-5.0-6.0							
SL-541-SA5D-SB-0.0-0.5							
SL-541-SA5D-SB-2.5-3.5							
SL-545-SA5D-SB-0.0-0.5							
SL-545-SA5D-SB-6.0-7.0)							
SL-541-SA5D-SB-2.5-3.5MSD (TOT)	MANGANESE	-	25	75.00-125.00	-	MANGANESE	
(SL-525-SA5D-SB-0.0-0.5							
SL-525-SA5D-SB-2.5-3.5							
SL-527-SA5D-SB-0.0-0.5							
SL-527-SA5D-SB-4.0-5.0							
SL-528-SA5D-SB-0.0-0.5							No Qual, >4x
SL-528-SA5D-SB-2.5-3.5							
SL-540-SA5D-SB-0.0-0.5							
SL-540-SA5D-SB-5.0-6.0							
SL-541-SA5D-SB-0.0-0.5							
SL-541-SA5D-SB-2.5-3.5							
SL-545-SA5D-SB-0.0-0.5							
SL-545-SA5D-SB-6.0-7.0)							
SL-541-SA5D-SB-2.5-3.5MS (TOT)	ANTIMONY	56	47	75.00-125.00	-	ANTIMONY	
SL-541-SA5D-SB-2.5-3.5MSD (TOT)							
(SL-525-SA5D-SB-0.0-0.5							
SL-525-SA5D-SB-2.5-3.5							
SL-527-SA5D-SB-0.0-0.5							
SL-527-SA5D-SB-4.0-5.0							J(all detects)
SL-528-SA5D-SB-0.0-0.5							UJ(all non-detects)
SL-528-SA5D-SB-2.5-3.5							
SL-540-SA5D-SB-0.0-0.5							
SL-540-SA5D-SB-5.0-6.0							
SL-541-SA5D-SB-0.0-0.5							
SL-541-SA5D-SB-2.5-3.5							
SL-545-SA5D-SB-0.0-0.5							
SL-545-SA5D-SB-6.0-7.0)							

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-525-SA5D-SB-0.0-0.5MS	BENZO(B)FLUORANTHENE	-	149	26.00-142.00	-	BENZO(B)FLUORANTHENE	No Qual, Diluted Out
SL-525-SA5D-SB-0.0-0.5MSD	BENZO(E)PYRENE	-	173	70.00-130.00	49 (30.00)	BENZO(E)PYRENE	
(SL-525-SA5D-SB-0.0-0.5)	N-NITROSODIMETHYLAMINE	171	172	48.00-113.00	-	N-NITROSODIMETHYLAMINE	
SL-525-SA5D-SB-0.0-0.5MS	BIS(2-ETHYLHEXYL)PHTHALAT	0	0	39.00-167.00	-	BIS(2-ETHYLHEXYL)PHTHALA	No Qual, Diluted Out
SL-525-SA5D-SB-0.0-0.5MSD	Butylbenzylphthalate	0	0	59.00-153.00	-	Butylbenzylphthalate	
(SL-525-SA5D-SB-0.0-0.5)	Diethylphthalate	0	0	76.00-127.00	-	Diethylphthalate	
	Dimethylphthalate	0	0	62.00-136.00	-	Dimethylphthalate	
	Di-n-butylphthalate	0	0	62.00-154.00	-	Di-n-butylphthalate	
	Di-n-octylphthalate	0	0	52.00-162.00	-	Di-n-octylphthalate	

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-541-SA5D-SB-2.5-3.5DUP (TOT)	MOLYBDENUM	74	20.00	
	Zirconium	27	20.00	
(SL-525-SA5D-SB-0.0-0.5				
SL -525-SA5D-SB-2.5-3.5				
SL -527-SA5D-SB-0.0-0.5				
SL -527-SA5D-SB-4.0-5.0				
SL -528-SA5D-SB-0.0-0.5				No Qual, OK by Difference
SL -528-SA5D-SB-2.5-3.5				
SL -540-SA5D-SB-0.0-0.5				
SL -540-SA5D-SB-5.0-6.0				
SL -541-SA5D-SB-0.0-0.5				
SL -541-SA5D-SB-2.5-3.5				
SL -545-SA5D-SB-0.0-0.5				
SL -545-SA5D-SB-6.0-7.0)				

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P9LGLCSQ260050 (SL-525-SA5D-SB-0.0-0.5 SL-525-SA5D-SB-2.5-3.5 SL-527-SA5D-SB-0.0-0.5 SL-527-SA5D-SB-4.0-5.0 SL-528-SA5D-SB-0.0-0.5 SL-528-SA5D-SB-2.5-3.5 SL-540-SA5D-SB-0.0-0.5 SL-540-SA5D-SB-5.0-6.0 SL-541-SA5D-SB-0.0-0.5 SL-541-SA5D-SB-2.5-3.5 SL-545-SA5D-SB-0.0-0.5 SL-545-SA5D-SB-6.0-7.0)	N-NITROSODIMETHYLAMINE	187	-	71.00-124.00	-	N-NITROSODIMETHYLAMINE	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.74	4.98	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.249	4.98	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.201	4.98	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.199	4.98	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	1.27	4.98	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.271	4.98	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.42	4.98	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.827	4.98	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.212	4.98	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.578	4.98	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.260	4.98	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.543	4.98	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.153	0.996	PQL	ng/Kg	
	OCDF	JB	4.47	9.96	PQL	ng/Kg	
SL-527-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.32	5.00	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.323	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.366	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.280	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	1.55	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.288	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	1.21	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.529	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.454	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.433	5.00	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.331	5.00	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.283	0.999	PQL	ng/Kg	
	OCDF	JB	9.29	9.99	PQL	ng/Kg	
SL-528-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.61	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.294	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.452	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.300	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	2.18	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.300	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.15	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.679	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.351	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.466	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.349	5.09	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.204	1.02	PQL	ng/Kg	
	OCDF	JB	8.74	10.2	PQL	ng/Kg	
SL-540-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.76	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.308	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0742	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0604	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0907	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.445	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0726	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.629	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.16	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0960	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.270	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0930	5.36	PQL	ng/Kg	
	OCDF	JB	1.13	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-541-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.924	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0771	5.23	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0551	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0218	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.556	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0549	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.782	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.933	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.186	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.238	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0398	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0782	5.23	PQL	ng/Kg	
	OCDF	JBQ	0.289	10.5	PQL	ng/Kg	
SL-545-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.589	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.138	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0380	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0802	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.458	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0247	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.689	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.14	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0851	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.235	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0607	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0410	5.35	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0886	1.07	PQL	ng/Kg	
	OCDD	JB	6.06	10.7	PQL	ng/Kg	
	OCDF	JB	0.321	10.7	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5D-SB-0.0-0.5	ANTIMONY	J	1.86	4.18	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.743	1.04	PQL	mg/Kg	
	BORON	J	8.04	10.4	PQL	mg/Kg	
	CADMIUM	J	0.547	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.467	2.09	PQL	mg/Kg	
	SODIUM	J	95.0	104	PQL	mg/Kg	
	TIN	J	3.37	10.4	PQL	mg/Kg	
	Zirconium	J	2.73	5.22	PQL	mg/Kg	
SL-525-SA5D-SB-2.5-3.5	ANTIMONY	J	1.34	4.20	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.380	1.05	PQL	mg/Kg	
	BORON	J	4.74	10.5	PQL	mg/Kg	
	CADMIUM	J	0.344	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.258	2.10	PQL	mg/Kg	
	TIN	J	3.27	10.5	PQL	mg/Kg	
	Zirconium	J	2.08	5.24	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-527-SA5D-SB-0.0-0.5	ANTIMONY	J	1.23	4.05	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.580	1.01	PQL	mg/Kg	
	BORON	J	7.47	10.1	PQL	mg/Kg	
	CADMIUM	J	0.583	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.391	2.03	PQL	mg/Kg	
	SODIUM	J	63.4	101	PQL	mg/Kg	
	TIN	J	2.89	10.1	PQL	mg/Kg	
	Zirconium	J	2.19	5.07	PQL	mg/Kg	
SL-527-SA5D-SB-4.0-5.0	ANTIMONY	J	2.74	4.36	PQL	mg/Kg	J (all detects)
	BORON	J	9.66	10.9	PQL	mg/Kg	
	CADMIUM	J	0.640	1.09	PQL	mg/Kg	
	TIN	J	4.69	10.9	PQL	mg/Kg	
	Zirconium	J	3.26	5.45	PQL	mg/Kg	
SL-528-SA5D-SB-0.0-0.5	ANTIMONY	J	1.49	3.97	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.707	0.993	PQL	mg/Kg	
	BORON	J	8.15	9.93	PQL	mg/Kg	
	CADMIUM	J	0.549	0.993	PQL	mg/Kg	
	MOLYBDENUM	J	0.408	1.99	PQL	mg/Kg	
	SODIUM	J	91.0	99.3	PQL	mg/Kg	
	TIN	J	3.29	9.93	PQL	mg/Kg	
	Zirconium	J	2.95	4.96	PQL	mg/Kg	
SL-528-SA5D-SB-2.5-3.5	ANTIMONY	J	1.98	4.29	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.659	1.07	PQL	mg/Kg	
	BORON	J	6.50	10.7	PQL	mg/Kg	
	CADMIUM	J	0.473	1.07	PQL	mg/Kg	
	TIN	J	3.59	10.7	PQL	mg/Kg	
	Zirconium	J	2.03	5.36	PQL	mg/Kg	
SL-540-SA5D-SB-0.0-0.5	ANTIMONY	J	1.76	4.29	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.929	1.07	PQL	mg/Kg	
	CADMIUM	J	0.759	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	1.05	2.14	PQL	mg/Kg	
	SODIUM	J	93.1	107	PQL	mg/Kg	
	TIN	J	3.91	10.7	PQL	mg/Kg	
	Zirconium	J	3.88	5.36	PQL	mg/Kg	
SL-540-SA5D-SB-5.0-6.0	ANTIMONY	J	2.15	4.29	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.733	1.07	PQL	mg/Kg	
	BORON	J	7.45	10.7	PQL	mg/Kg	
	CADMIUM	J	0.592	1.07	PQL	mg/Kg	
	TIN	J	3.80	10.7	PQL	mg/Kg	
SL-541-SA5D-SB-0.0-0.5	ANTIMONY	J	1.79	4.20	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.750	1.05	PQL	mg/Kg	
	BORON	J	7.68	10.5	PQL	mg/Kg	
	CADMIUM	J	0.607	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.311	2.10	PQL	mg/Kg	
	SODIUM	J	78.1	105	PQL	mg/Kg	
	TIN	J	3.42	10.5	PQL	mg/Kg	
	Zirconium	J	2.83	5.25	PQL	mg/Kg	
SL-541-SA5D-SB-2.5-3.5	ANTIMONY	J	1.93	4.14	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.523	1.04	PQL	mg/Kg	
	BORON	J	6.34	10.4	PQL	mg/Kg	
	CADMIUM	J	0.423	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.421	2.07	PQL	mg/Kg	
	TIN	J	3.81	10.4	PQL	mg/Kg	
	Zirconium	J	3.10	5.18	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-545-SA5D-SB-0.0-0.5	ANTIMONY	J	2.43	4.24	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.889	1.06	PQL	mg/Kg	
	CADMIUM	J	0.787	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.216	2.12	PQL	mg/Kg	
	SODIUM	J	83.2	106	PQL	mg/Kg	
	TIN	J	3.37	10.6	PQL	mg/Kg	
	Zirconium	J	3.36	5.31	PQL	mg/Kg	
SL-545-SA5D-SB-6.0-7.0	ANTIMONY	J	1.26	4.12	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.445	1.03	PQL	mg/Kg	
	BORON	J	5.37	10.3	PQL	mg/Kg	
	CADMIUM	J	0.485	1.03	PQL	mg/Kg	
	TIN	J	3.23	10.3	PQL	mg/Kg	
	Zirconium	J	2.58	5.15	PQL	mg/Kg	

Method: 6020A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5D-SB-0.0-0.5	SELENIUM	J	0.189	0.418	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0277	0.209	PQL	mg/Kg	
SL-527-SA5D-SB-0.0-0.5	SILVER	J	0.0461	0.203	PQL	mg/Kg	J (all detects)
SL-527-SA5D-SB-4.0-5.0	SELENIUM	J	0.258	0.436	PQL	mg/Kg	J (all detects)
	SILVER	J	0.199	0.218	PQL	mg/Kg	
SL-528-SA5D-SB-0.0-0.5	SELENIUM	J	0.130	0.397	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0473	0.199	PQL	mg/Kg	
SL-540-SA5D-SB-0.0-0.5	SELENIUM	J	0.241	0.429	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0478	0.214	PQL	mg/Kg	
SL-540-SA5D-SB-5.0-6.0	SILVER	J	0.0363	0.215	PQL	mg/Kg	J (all detects)
SL-541-SA5D-SB-0.0-0.5	SELENIUM	J	0.150	0.420	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0278	0.210	PQL	mg/Kg	
SL-545-SA5D-SB-0.0-0.5	SELENIUM	J	0.222	0.424	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0409	0.212	PQL	mg/Kg	

Method: 7471B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-527-SA5D-SB-4.0-5.0	MERCURY	J	0.0155	0.0181	PQL	mg/Kg	J (all detects)
SL-528-SA5D-SB-2.5-3.5	MERCURY	J	0.0119	0.0176	PQL	mg/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-527-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	4.7	5.1	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-528-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	4.9	5.1	PQL	mg/Kg	J (all detects)
SL-541-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	3.5	5.3	PQL	mg/Kg	J (all detects)
	EFH (C30-C40)	J	8.0	11	PQL	mg/Kg	

Method: 8081B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-540-SA5D-SB-0.0-0.5	4,4'-DDE	J	0.55	1.8	PQL	ug/Kg	J (all detects)

Method: 8082A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-528-SA5D-SB-0.0-0.5	AROCLOR 1254	J	6.3	17	PQL	ug/Kg	J (all detects)

Method: 8270D SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5D-SB-0.0-0.5	CHRYSENE	J	15	17	PQL	ug/Kg	J (all detects)
SL-527-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.85	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	0.80	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	0.71	1.7	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.6	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.91	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.73	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.2	1.7	PQL	ug/Kg	
SL-528-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	1.2	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.95	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.2	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.5	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.71	1.7	PQL	ug/Kg	
SL-528-SA5D-SB-2.5-3.5	BENZO(B)FLUORANTHENE	J	0.91	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.69	1.8	PQL	ug/Kg	
SL-540-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.99	1.8	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	0.37	1.8	PQL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.1	1.8	PQL	ug/Kg	
	BENZO(A)PYRENE	J	0.78	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.88	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.5	1.8	PQL	ug/Kg	
SL-541-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	0.95	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.81	1.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH100 **Laboratory: LL**

EDD Filename: PH100 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-545-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.7	1.8	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.0	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.88	1.8	PQL	ug/Kg	
SL-545-SA5D-SB-6.0-7.0	CHRYSENE	J	0.85	1.7	PQL	ug/Kg	J (all detects)

LDC #: 30695C4

SDG #: PH100

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/3/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	DP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB= EB-090413 (PH101) FB= FB-091113 (PH029)

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-525-SA5D-SB-0.0-0.5	11	SL-545-SA5D-SB-0.0-0.5	21		31	
2	SL-525-SA5D-SB-2.5-3.5	12	SL-545-SA5D-SB-6.0-7.0	22		32	
3	SL-527-SA5D-SB-0.0-0.5	13		23		33	
4	SL-527-SA5D-SB-4.0-5.0	14		24		34	
5	SL-528-SA5D-SB-0.0-0.5	15		25		35	
6	SL-528-SA5D-SB-2.5-3.5	16		26		36	
7	SL-540-SA5D-SB-0.0-0.5	17		27		37	
8	SL-540-SA5D-SB-5.0-6.0	18		28		38	
9	SL-541-SA5D-SB-0.0-0.5	19		29		39	
10	SL-541-SA5D-SB-2.5-3.5	20		30		40	

Notes:

LDC #: 30695C4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	2	3	5	7	9	10	11				
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.47	0.26	0.39	0.41	1.1	0.31	0.42	0.22				

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	EB-090413 (SDG: PH101)	Action Limit	No Qualifiers										
Ba	0.00040	0.2											
Ca	0.0346	17.3											
Mn	0.0011	0.55											

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".

eurofins | Lancaster Laboratories

74X

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH100
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7184693BKG Matrix Spike Lab Sample ID: 7184693MS Matrix Spike Duplicate Lab Sample ID: 7184693MSD
Batch Id(s): P24737A, P24738A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		13970.0260		15998.4950		16038.5961		198.0198	194.1748	MG/KG	1024		1065		0			20	P
Antimony		1.8600	B	29.4812		24.8583		49.5050	48.5437	MG/KG	56	N	47	N	17		75 - 125	20	P
Arsenic		5.6740		20.8337		20.8184		14.8515	14.5631	MG/KG	102		104		0		75 - 125	20	P
Barium		88.3590		291.1198		290.8117		198.0198	194.1748	MG/KG	102		104		0		75 - 125	20	P
Beryllium		0.5050	B	5.6010		5.5262		4.9505	4.8544	MG/KG	103		103		1		75 - 125	20	P
Boron		6.1200	B	204.0436		199.4621		198.0198	194.1748	MG/KG	100		100		2		75 - 125	20	P
Cadmium		0.4090	B	5.2901		5.2214		4.9505	4.8544	MG/KG	99		99		1		75 - 125	20	P
Calcium		3478.8870		4172.8673		4045.7573		396.0396	388.3495	MG/KG	175		146		3			20	P
Chromium		26.8630		47.7515		48.1311		19.8020	19.4175	MG/KG	105		110		1		75 - 125	20	P
Cobalt		6.4940		55.1644		54.3680		49.5050	48.5437	MG/KG	98		99		1		75 - 125	20	P
Copper		10.0970		36.0257		35.7515		24.7525	24.2718	MG/KG	105		106		1		75 - 125	20	P
Iron		22164.2370		22838.1931		22518.3660		99.0099	97.0874	MG/KG	681		365		1			20	P
Lead		4.4490		18.9119		18.7447		14.8515	14.5631	MG/KG	97		98		1		75 - 125	20	P
Lithium		31.6910		134.3020		130.9136		99.0099	97.0874	MG/KG	104		102		3		75 - 125	20	P
Magnesium		6548.8350		6785.5297		6767.8359		198.0198	194.1748	MG/KG	120		113		0			20	P
Manganese		317.6920		360.2970		329.8097		49.5050	48.5437	MG/KG	86		25		9			20	P
Mercury		0.0096	U	0.1827		0.1821		0.1627	0.1625	MG/KG	112		112		0		65 - 135	20	CV
Molybdenum		0.4070	B	196.7436		191.7612		198.0198	194.1748	MG/KG	99		99		3		75 - 125	20	P
Nickel		24.0650		72.8069		72.2165		49.5050	48.5437	MG/KG	98		99		1		75 - 125	20	P
Phosphorus		505.0590		609.9604		605.3699		99.0099	97.0874	MG/KG	106		103		1			20	P
Potassium		2089.1660		3438.4693		3184.4835		990.0990	970.8738	MG/KG	136	N	113		8		75 - 125	20	P
Selenium	78	0.1000	U	2.0317		2.1126		1.9802	1.9417	MG/KG	103		109		4		75 - 125	20	MS
Silver	107	0.0260	U	9.7267		9.7126		9.9010	9.7087	MG/KG	98		100		0		75 - 125	20	MS
Sodium		105.9650		1118.3317		1089.0699		990.0990	970.8738	MG/KG	102		101		3		75 - 125	20	P
Strontium	88	19.1480		25.9406		26.3301		7.9208	7.7670	MG/KG	86		92		1		75 - 125	20	MS
Thallium	203	0.2440		0.6214		0.6328		0.3960	0.3883	MG/KG	95		100		2		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH100
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7184693BKG Matrix Spike Lab Sample ID: 7184693MS Matrix Spike Duplicate Lab Sample ID: 7184693MSD
Batch Id(s): P24737A, P24738A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Tin		3.6810	B	369.4515		363.5320		396.0396	388.3495	MG/KG	92		93		2		75 - 125	20	P
Titanium		1338.6750		1646.0267		1496.8757		99.0099	97.0874	MG/KG	310		163		9			20	P
Vanadium		46.2520		97.2347		95.7214		49.5050	48.5437	MG/KG	103		102		2		75 - 125	20	P
Zinc		57.4510		107.8248		106.1505		49.5050	48.5437	MG/KG	102		100		2		75 - 125	20	P
Zirconium		2.9900	B	106.2178		104.2553		99.0099	97.0874	MG/KG	104		104		2		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH100
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7184693BKG
Duplicate Lab Sample ID: 7184693DUP
Batch ID(s): P24737A, P24738A
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			13970.0260		13693.5653		2		P
Antimony			1.8600	B	1.6594	B	11		P
Arsenic		4.0	5.6740		5.4990		3		P
Barium			88.3590		86.5406		2		P
Beryllium			0.5050	B	0.4931	B	2		P
Boron			6.1200	B	5.7545	B	6		P
Cadmium			0.4090	B	0.3683	B	10		P
Calcium			3478.8870		3428.2624		1		P
Chromium			26.8630		27.4653		2		P
Cobalt			6.4940		6.5980		2		P
Copper			10.0970		10.1762		1		P
Iron			22164.2370		22101.2495		0		P
Lead		3.0	4.4490		4.2327		5		P
Lithium			31.6910		31.4277		1		P
Magnesium			6548.8350		6570.5208		0		P
Manganese			317.6920		320.3238		1		P
Mercury			0.0096	U	0.0099	U			CV
Molybdenum			0.4070	B	0.1871	B	74		P
Nickel			24.0650		23.5119		2		P
Phosphorus			505.0590		488.1941		3		P
Potassium			2089.1660		2040.7941		2		P
Selenium	78		0.1000	U	0.0990	U			MS
Silver	107		0.0260	U	0.0257	U			MS
Sodium		100.0	105.9650		105.5287		0		P
Strontium	88		19.1480		18.5188		3		MS
Thallium	203	0.2	0.2440		0.2420		1		MS
Tin			3.6810	B	3.4485	B	7		P
Titanium			1338.6750		1265.4713		6		P
Vanadium			46.2520		45.6079		1		P
Zinc			57.4510		56.9743		1		P
Zirconium			2.9900	B	3.9109	B	27		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by tolerance

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH101

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 9, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 4, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, 7470A and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA SW 846 Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Hexavalent Chromium by EPA Method 7199
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. 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 exception of one sample for SVOCs and seven samples for PCBs. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for SVOCs, metals and TPH as extractables. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of three LCS/LCSD pairs for pesticides, TPH as extractables and hexavalent chromium. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH101	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, TPH as gasoline and TPH as extractables. All RPDs were within QC limits with the exception of several SVOCs, pesticides and metals. In this duplicate pair, the associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were not detected or were significantly greater than the concentrations found in the equipment blanks, therefore no data were qualified.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination

as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-Sep-2013	TB-090413	7186219	TB	5030B	8015M	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3050B	6010C	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3050B	6020A	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3546	8015M	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3546	8081B	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3546	8082A	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3546	8270D SIM	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	3550B	8151A	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	METHOD	1613B	III
04-Sep-2013	SL-524-SA5D-SB-0.0-0.5	7186220	N	METHOD	7471B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3050B	6010C	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3050B	6020A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3546	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3546	8081B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3546	8082A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3546	8270D SIM	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	3550B	8151A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	5035A	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5	7186221	N	METHOD	7471B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3050B	6010C	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3050B	6020A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3546	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3546	8081B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3546	8082A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3546	8270D SIM	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	3550B	8151A	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
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	5035A	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MS	7186222	MS	METHOD	7471B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3050B	6010C	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3050B	6020A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3546	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3546	8081B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3546	8082A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3546	8270D SIM	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	3550B	8151A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	5035A	8015M	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5MSD	7186223	MSD	METHOD	7471B	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5DUP	7186224	DUP	3050B	6010C	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5DUP	7186224	DUP	3050B	6020A	III
04-Sep-2013	SL-524-SA5D-SB-5.5-6.5DUP	7186224	DUP	METHOD	7471B	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3050B	6010C	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3050B	6020A	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3546	8015M	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3546	8081B	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3546	8082A	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3546	8270D SIM	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	3550B	8151A	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	5035A	8015M	III
04-Sep-2013	SL-824-SA5D-SB-5.5-6.5	7186225	FD	METHOD	7471B	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	3050B	6010C	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	3050B	6020A	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	3546	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
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	3546	8082A	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	3546	8270D SIM	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	METHOD	1613B	III
04-Sep-2013	SL-544-SA5D-SB-0.0-0.5	7186226	N	METHOD	7471B	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	3050B	6010C	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	3050B	6020A	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	3546	8015M	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	3546	8082A	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	3546	8270D SIM	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	5035A	8015M	III
04-Sep-2013	SL-544-SA5D-SB-6.5-7.5	7186227	N	METHOD	7471B	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	3050B	6010C	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	3050B	6020A	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	3546	8015M	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	3546	8082A	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	3546	8270D SIM	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	METHOD	1613B	III
04-Sep-2013	SL-547-SA5D-SB-0.0-0.5	7186230	N	METHOD	7471B	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	3050B	6010C	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	3050B	6020A	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	3546	8015M	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	3546	8082A	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	3546	8270D SIM	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	5035A	8015M	III
04-Sep-2013	SL-547-SA5D-SB-4.0-5.0	7186231	N	METHOD	7471B	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	3050B	6010C	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
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	3050B	6020A	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	3546	8015M	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	3546	8082A	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	3546	8270D SIM	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	METHOD	1613B	III
04-Sep-2013	SL-546-SA5D-SB-0.0-0.5	7186228	N	METHOD	7471B	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	3050B	6010C	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	3050B	6020A	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	3546	8015M	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	3546	8082A	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	3546	8270D SIM	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	5035A	8015M	III
04-Sep-2013	SL-546-SA5D-SB-4.0-5.0	7186229	N	METHOD	7471B	III
04-Sep-2013	EB-090413	7186218	EB	3005A	6010C	III
04-Sep-2013	EB-090413	7186218	EB	3510C	8015M	III
04-Sep-2013	EB-090413	7186218	EB	3510C	8081B	III
04-Sep-2013	EB-090413	7186218	EB	3510C	8082A	III
04-Sep-2013	EB-090413	7186218	EB	3510C	8270D SIM	III
04-Sep-2013	EB-090413	7186218	EB	5030B	8015M	III
04-Sep-2013	EB-090413	7186218	EB	Gen Prep	300.0	III
04-Sep-2013	EB-090413	7186218	EB	Gen Prep	6850	III
04-Sep-2013	EB-090413	7186218	EB	Gen Prep	7199	III
04-Sep-2013	EB-090413	7186218	EB	M3010A	6020A	III
04-Sep-2013	EB-090413	7186218	EB	METHOD	1613B	III
04-Sep-2013	EB-090413	7186218	EB	METHOD	7470A	III
04-Sep-2013	EB-090413	7186218	EB	METHOD	8151A	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
04-Sep-2013	EB-090413MSD	P186218M241728A	MSD	Gen Prep	6850	III
04-Sep-2013	EB-090413MS	P186218R241716A	MS	Gen Prep	6850	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 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **EB-090413** ***Collected:*** **9/4/2013 3:00:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	0.00040	J	0.00033	MDL	0.0100	PQL	mg/L	J	Z
CALCIUM	0.0346	J	0.0334	MDL	0.400	PQL	mg/L	U	B
MANGANESE	0.0011	J	0.00083	MDL	0.0100	PQL	mg/L	J	Z

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.15	U	0.768	MDL	4.15	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.780	J	0.0695	MDL	1.04	PQL	mg/Kg	J	Z
CADMIUM	0.624	J	0.0789	MDL	1.04	PQL	mg/Kg	J	Z
MANGANESE	374		0.0861	MDL	1.04	PQL	mg/Kg	J	Q
MOLYBDENUM	0.413	J	0.176	MDL	2.08	PQL	mg/Kg	U	F
TIN	2.90	J	0.228	MDL	10.4	PQL	mg/Kg	U	B

Sample ID: **SL-524-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:35:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.28	U	0.792	MDL	4.28	PQL	mg/Kg	UJ	Q
ARSENIC	4.02	J	0.749	MDL	4.28	PQL	mg/Kg	J	Z
BERYLLIUM	0.449	J	0.0717	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.456	J	0.0814	MDL	1.07	PQL	mg/Kg	J	Z
MANGANESE	182		0.0889	MDL	1.07	PQL	mg/Kg	J	Q
TIN	2.92	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	4.01	J	0.899	MDL	5.35	PQL	mg/Kg	J	Z

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.19	U	0.775	MDL	4.19	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.706	J	0.0702	MDL	1.05	PQL	mg/Kg	J	Z
CADMIUM	0.619	J	0.0796	MDL	1.05	PQL	mg/Kg	J	Z
MANGANESE	410		0.0869	MDL	1.05	PQL	mg/Kg	J	Q
MOLYBDENUM	0.487	J	0.178	MDL	2.09	PQL	mg/Kg	U	F
SODIUM	85.8	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	2.93	J	0.230	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	5.06	J	0.880	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: **SL-544-SA5D-SB-6.5-7.5** ***Collected:*** **9/4/2013 9:50:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.12	U	0.762	MDL	4.12	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.450	J	0.0690	MDL	1.03	PQL	mg/Kg	J	Z
CADMIUM	0.425	J	0.0782	MDL	1.03	PQL	mg/Kg	J	Z
MANGANESE	252		0.0855	MDL	1.03	PQL	mg/Kg	J	Q
TIN	3.14	J	0.227	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	4.93	J	0.865	MDL	5.15	PQL	mg/Kg	J	Z

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.17	U	0.772	MDL	4.17	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.631	J	0.0699	MDL	1.04	PQL	mg/Kg	J	Z
CADMIUM	0.677	J	0.0792	MDL	1.04	PQL	mg/Kg	J	Z
MANGANESE	369		0.0865	MDL	1.04	PQL	mg/Kg	J	Q
MOLYBDENUM	0.580	J	0.177	MDL	2.09	PQL	mg/Kg	U	F
SODIUM	79.8	J	17.4	MDL	104	PQL	mg/Kg	J	Z
TIN	2.87	J	0.229	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	4.28	J	0.876	MDL	5.21	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-546-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 1:45:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.53	U	0.838	MDL	4.53	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.912	J	0.0759	MDL	1.13	PQL	mg/Kg	J	Z
CADMIUM	0.600	J	0.0861	MDL	1.13	PQL	mg/Kg	J	Z
MANGANESE	428		0.0940	MDL	1.13	PQL	mg/Kg	J	Q
MOLYBDENUM	0.755	J	0.193	MDL	2.27	PQL	mg/Kg	U	F
TIN	3.37	J	0.249	MDL	11.3	PQL	mg/Kg	U	B

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.15	U	0.767	MDL	4.15	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.707	J	0.0694	MDL	1.04	PQL	mg/Kg	J	Z
CADMIUM	0.587	J	0.0788	MDL	1.04	PQL	mg/Kg	J	Z
MANGANESE	376		0.0860	MDL	1.04	PQL	mg/Kg	J	Q
MOLYBDENUM	0.396	J	0.176	MDL	2.07	PQL	mg/Kg	U	F
SODIUM	91.9	J	17.3	MDL	104	PQL	mg/Kg	J	Z
TIN	2.91	J	0.228	MDL	10.4	PQL	mg/Kg	U	B

Sample ID: **SL-547-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 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
ANTIMONY	4.38	U	0.810	MDL	4.38	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.920	J	0.0734	MDL	1.10	PQL	mg/Kg	J	Z
CADMIUM	0.494	J	0.0832	MDL	1.10	PQL	mg/Kg	J	Z
MANGANESE	405		0.0909	MDL	1.10	PQL	mg/Kg	J	Q
MOLYBDENUM	0.251	J	0.186	MDL	2.19	PQL	mg/Kg	U	F
TIN	3.16	J	0.241	MDL	11.0	PQL	mg/Kg	U	B

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.22	U	0.781	MDL	4.22	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.453	J	0.0707	MDL	1.06	PQL	mg/Kg	J	Z
CADMIUM	0.427	J	0.0802	MDL	1.06	PQL	mg/Kg	J	Z
MANGANESE	225		0.0876	MDL	1.06	PQL	mg/Kg	J	Q
TIN	2.88	J	0.232	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	4.05	J	0.886	MDL	5.28	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.132	J	0.104	MDL	0.415	PQL	mg/Kg	J	Z

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0922	J	0.0270	MDL	0.208	PQL	mg/Kg	J	Z

Sample ID: **SL-524-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0657	J	0.0278	MDL	0.214	PQL	mg/Kg	J	Z

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.240	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0299	J	0.0272	MDL	0.209	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.254	J	0.104	MDL	0.417	PQL	mg/Kg	J	Z

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0307	J	0.0271	MDL	0.209	PQL	mg/Kg	J	Z

Sample ID: **SL-546-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 1:45:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.282	J	0.113	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: **SL-546-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 1:45:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0801	J	0.0294	MDL	0.227	PQL	mg/Kg	J	Z

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.283	J	0.104	MDL	0.415	PQL	mg/Kg	J	Z

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0292	J	0.0269	MDL	0.207	PQL	mg/Kg	J	Z

Sample ID: **SL-547-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 12:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.153	J	0.110	MDL	0.438	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-547-SA5D-SB-4.0-5.0** ***Collected:*** **9/4/2013 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
SILVER	0.0627	J	0.0285	MDL	0.219	PQL	mg/Kg	J	Z

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0687	J	0.0274	MDL	0.211	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.113		0.0103	MDL	0.0172	PQL	mg/Kg	J	FD

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0132	J	0.0102	MDL	0.0169	PQL	mg/Kg	J	Z

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0110	J	0.0102	MDL	0.0170	PQL	mg/Kg	J	Z

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0172	U	0.0103	MDL	0.0172	PQL	mg/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **AQ**

Sample ID: **EB-090413** ***Collected:*** **9/4/2013 3:00:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.554	JBQ	0.0939	MDL	10.1	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.461	JBQ	0.0397	MDL	10.1	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.305	JB	0.0435	MDL	10.1	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.254	JBQ	0.111	MDL	10.1	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.194	JBQ	0.0573	MDL	10.1	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.212	JBQ	0.120	MDL	10.1	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.179	JBQ	0.0534	MDL	10.1	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.136	JBQ	0.108	MDL	10.1	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.278	JBQ	0.0561	MDL	10.1	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.517	JBQ	0.129	MDL	10.1	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.614	JQ	0.0736	MDL	10.1	PQL	pg/L	J	Z
2,3,4,6,7,8-HXCDF	0.236	JB	0.0532	MDL	10.1	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.211	JBQ	0.0638	MDL	10.1	PQL	pg/L	U	B
OCDD	0.962	JBQ	0.126	MDL	20.1	PQL	pg/L	U	B
OCDF	0.878	JBQ	0.133	MDL	20.1	PQL	pg/L	U	B

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.77	JB	0.0256	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.410	JB	0.0346	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.487	JBQ	0.0664	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.349	JBQ	0.0324	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.02	JQ	0.0684	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.310	JBQ	0.0290	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.61	JBQ	0.0652	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.689	JB	0.0348	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.371	JQ	0.0635	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.722	JBQ	0.0429	MDL	5.10	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.337	JB	0.0308	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.409	JBQ	0.0419	MDL	5.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.247	JQ	0.110	MDL	1.02	PQL	ng/Kg	J	Z

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.562	JBQ	0.0350	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.148	JB	0.0132	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0544	JBQ	0.0208	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0521	JBQ	0.0415	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0932	JB	0.0194	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.560	J	0.0437	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.130	JBQ	0.0170	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.794	JB	0.0404	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.39	JB	0.0202	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.188	J	0.0563	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.461	JBQ	0.0272	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0686	JBQ	0.0170	MDL	5.21	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.146	JBQ	0.0277	MDL	5.21	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.101	JQ	0.0756	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	6.62	JB	0.0276	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.290	JBQ	0.0386	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.97	JB	0.0407	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.462	JB	0.0175	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.187	JB	0.0263	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.211	JBQ	0.0483	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.248	JB	0.0262	MDL	5.06	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDD	0.744	JQ	0.0498	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.290	JBQ	0.0226	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.05	JB	0.0482	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.69	JB	0.0288	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.437	J	0.0694	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.617	JB	0.0326	MDL	5.06	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.242	JBQ	0.0242	MDL	5.06	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.443	JBQ	0.0334	MDL	5.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.117	JQ	0.0820	MDL	1.01	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.108	J	0.0781	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	1.05	JBQ	0.0385	MDL	10.1	PQL	ng/Kg	U	B

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.90	JB	0.0449	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.264	JBQ	0.0148	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0744	JB	0.0237	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0665	JB	0.0267	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.667	J	0.0443	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.154	JB	0.0228	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.831	JB	0.0409	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.75	JB	0.0265	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.492	JBQ	0.0284	MDL	5.22	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.109	JBQ	0.0239	MDL	5.22	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0975	JBQ	0.0303	MDL	5.22	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.106	JQ	0.0686	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	0.920	JB	0.0430	MDL	10.4	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 8015M **Matrix:** AQ

Sample ID: EB-090413 *Collected:* 9/4/2013 3:00:00 PM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.096	U	0.048	MDL	0.096	PQL	mg/L	UJ	L

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-544-SA5D-SB-0.0-0.5 *Collected:* 9/4/2013 9:40:00 AM *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)	4.4	J	2.1	MDL	5.2	PQL	mg/Kg	J	Z

Sample ID: SL-547-SA5D-SB-0.0-0.5 *Collected:* 9/4/2013 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	5.1	J	2.1	MDL	5.2	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8081B **Matrix:** SO

Sample ID: SL-524-SA5D-SB-0.0-0.5 *Collected:* 9/4/2013 8:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.50	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
DIELDRIN	0.52	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-524-SA5D-SB-5.5-6.5 *Collected:* 9/4/2013 8:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.6	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8081B** ***Matrix:*** **SO**

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.8	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	FD

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **AQ**

Sample ID: **EB-090413** ***Collected:*** **9/4/2013 3:00:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S

Sample ID: **EB-090413** ***Collected:*** **9/4/2013 3:00:00 PM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
ACENAPHTHENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
ACENAPHTHYLENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
ANTHRACENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(A)ANTHRACENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(A)PYRENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(B)FLUORANTHENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(E)PYRENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(G,H,I)PERYLENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BENZO(K)FLUORANTHENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
BIS(2-ETHYLHEXYL)PHTHALATE	1.6		0.051	MDL	1.0	PQL	ug/L	J	S
Butylbenzylphthalate	1.0	U	0.051	MDL	1.0	PQL	ug/L	UJ	S
CHRYSENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
DIBENZO(A,H)ANTHRACENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
Diethylphthalate	0.30	J	0.051	MDL	1.0	PQL	ug/L	J	Z, S
Dimethylphthalate	1.0	U	0.051	MDL	1.0	PQL	ug/L	UJ	S
Di-n-butylphthalate	0.11	J	0.051	MDL	1.0	PQL	ug/L	J	Z, S
Di-n-octylphthalate	1.0	U	0.051	MDL	1.0	PQL	ug/L	UJ	S
FLUORANTHENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **AQ**

Sample ID: **EB-090413** ***Collected:*** **9/4/2013 3:00:00 PM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
INDENO(1,2,3-CD)PYRENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
NAPHTHALENE	0.032	J	0.031	MDL	0.051	PQL	ug/L	J	Z, S
N-NITROSODIMETHYLAMINE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S
PHENANTHRENE	0.051	U	0.031	MDL	0.051	PQL	ug/L	UJ	S
PYRENE	0.051	U	0.010	MDL	0.051	PQL	ug/L	UJ	S

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.74	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-524-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 8:20:00 AM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.4	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	0.86	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.71	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-524-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:35:00 AM** ***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	0.84	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-544-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 9:40:00 AM** ***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	1.6	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	1.4	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	1.3	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-546-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 1:25:00 PM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.73	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.0	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.3	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	0.80	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	0.88	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.70	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-547-SA5D-SB-0.0-0.5** ***Collected:*** **9/4/2013 12:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.75	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.1	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.4	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.72	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.83	J	0.70	MDL	1.8	PQL	ug/Kg	U	F
PHENANTHRENE	0.71	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-824-SA5D-SB-5.5-6.5** ***Collected:*** **9/4/2013 8:45:00 AM** ***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	1.8	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Field Blank Contamination
FD	Field Duplicate Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH101

Method Blank Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2550B371705	9/18/2013 5:05:00 PM	1,2,3,4,6,7,8-HPCDD	0.485 pg/L	EB-090413
		1,2,3,4,6,7,8-HPCDF	0.513 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.444 pg/L	
		1,2,3,4,7,8-HxCDD	0.243 pg/L	
		1,2,3,4,7,8-HXCDF	0.239 pg/L	
		1,2,3,6,7,8-HXCDD	0.275 pg/L	
		1,2,3,6,7,8-HXCDF	0.321 pg/L	
		1,2,3,7,8,9-HXCDD	0.257 pg/L	
		1,2,3,7,8,9-HXCDF	0.424 pg/L	
		1,2,3,7,8-PECDD	0.336 pg/L	
		2,3,4,6,7,8-HXCDF	0.300 pg/L	
		2,3,4,7,8-PECDF	0.446 pg/L	
		2,3,7,8-TCDD	0.275 pg/L	
		OCDD	1.26 pg/L	
		OCDF	0.948 pg/L	

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
EB-090413(RES)	1,2,3,4,6,7,8-HPCDD	0.554 pg/L	0.554U pg/L
EB-090413(RES)	1,2,3,4,6,7,8-HPCDF	0.461 pg/L	0.461U pg/L
EB-090413(RES)	1,2,3,4,7,8,9-HPCDF	0.305 pg/L	0.305U pg/L
EB-090413(RES)	1,2,3,4,7,8-HxCDD	0.254 pg/L	0.254U pg/L
EB-090413(RES)	1,2,3,4,7,8-HXCDF	0.194 pg/L	0.194U pg/L
EB-090413(RES)	1,2,3,6,7,8-HXCDD	0.212 pg/L	0.212U pg/L
EB-090413(RES)	1,2,3,6,7,8-HXCDF	0.179 pg/L	0.179U pg/L
EB-090413(RES)	1,2,3,7,8,9-HXCDD	0.136 pg/L	0.136U pg/L
EB-090413(RES)	1,2,3,7,8,9-HXCDF	0.278 pg/L	0.278U pg/L
EB-090413(RES)	1,2,3,7,8-PECDD	0.517 pg/L	0.517U pg/L
EB-090413(RES)	2,3,4,6,7,8-HXCDF	0.236 pg/L	0.236U pg/L
EB-090413(RES)	2,3,4,7,8-PECDF	0.211 pg/L	0.211U pg/L
EB-090413(RES)	OCDD	0.962 pg/L	0.962U pg/L
EB-090413(RES)	OCDF	0.878 pg/L	0.878U pg/L

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2540B372247	9/13/2013 10:47:00 PM	1,2,3,4,6,7,8-HPCDD	0.0675 ng/Kg	SL-524-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0376 ng/Kg	SL-544-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0826 ng/Kg	SL-546-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0390 ng/Kg	SL-547-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0639 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0330 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0470 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0649 ng/Kg	
		1,2,3,7,8-PECDF	0.0692 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0615 ng/Kg	
		2,3,4,7,8-PECDF	0.0786 ng/Kg	
		OCDD	0.281 ng/Kg	
		OCDF	0.227 ng/Kg	

Method Blank Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-524-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.410 ng/Kg	0.410U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.148 ng/Kg	0.148U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0544 ng/Kg	0.0544U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0521 ng/Kg	0.0521U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0932 ng/Kg	0.0932U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.130 ng/Kg	0.130U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0686 ng/Kg	0.0686U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.146 ng/Kg	0.146U ng/Kg
SL-544-SA5D-SB-0.0-0.5(RES)	OCDF	0.290 ng/Kg	0.290U ng/Kg
SL-546-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.187 ng/Kg	0.187U ng/Kg
SL-546-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.248 ng/Kg	0.248U ng/Kg
SL-546-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.242 ng/Kg	0.242U ng/Kg
SL-546-SA5D-SB-0.0-0.5(RES)	OCDF	1.05 ng/Kg	1.05U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0744 ng/Kg	0.0744U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0665 ng/Kg	0.0665U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.154 ng/Kg	0.154U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.109 ng/Kg	0.109U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0975 ng/Kg	0.0975U ng/Kg
SL-547-SA5D-SB-0.0-0.5(RES)	OCDF	0.920 ng/Kg	0.920U ng/Kg

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24835AB220504	9/7/2013 5:04:00 AM	CALCIUM	0.0352 mg/L	EB-090413

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
EB-090413(RES)	CALCIUM	0.0346 mg/L	0.0346U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24837BB221019	9/6/2013 10:19:00 AM	CALCIUM TIN ZINC	8.21 mg/Kg 1.73 mg/Kg 0.413 mg/Kg	SL-524-SA5D-SB-0.0-0.5 SL-524-SA5D-SB-5.5-6.5 SL-544-SA5D-SB-0.0-0.5 SL-544-SA5D-SB-6.5-7.5 SL-546-SA5D-SB-0.0-0.5 SL-546-SA5D-SB-4.0-5.0 SL-547-SA5D-SB-0.0-0.5 SL-547-SA5D-SB-4.0-5.0 SL-824-SA5D-SB-5.5-6.5

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-524-SA5D-SB-0.0-0.5(REA)	TIN	2.90 mg/Kg	2.90U mg/Kg
SL-524-SA5D-SB-5.5-6.5(REA)	TIN	2.92 mg/Kg	2.92U mg/Kg
SL-544-SA5D-SB-0.0-0.5(REA)	TIN	2.93 mg/Kg	2.93U mg/Kg
SL-544-SA5D-SB-6.5-7.5(REA)	TIN	3.14 mg/Kg	3.14U mg/Kg
SL-546-SA5D-SB-0.0-0.5(REA)	TIN	2.87 mg/Kg	2.87U mg/Kg
SL-546-SA5D-SB-4.0-5.0(REA)	TIN	3.37 mg/Kg	3.37U mg/Kg
SL-547-SA5D-SB-0.0-0.5(REA)	TIN	2.91 mg/Kg	2.91U mg/Kg
SL-547-SA5D-SB-4.0-5.0(REA)	TIN	3.16 mg/Kg	3.16U mg/Kg
SL-824-SA5D-SB-5.5-6.5(REA)	TIN	2.88 mg/Kg	2.88U mg/Kg

Method: **8270D SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWE25B261405	9/13/2013 2:05:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	0.058 ug/L	EB-090413

Field Blank Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-524-SA5D-SB-0.0-0.5 SL-524-SA5D-SB-5.5-6.5 SL-544-SA5D-SB-0.0-0.5 SL-544-SA5D-SB-6.5-7.5 SL-546-SA5D-SB-0.0-0.5 SL-546-SA5D-SB-4.0-5.0 SL-547-SA5D-SB-0.0-0.5 SL-547-SA5D-SB-4.0-5.0 SL-824-SA5D-SB-5.5-6.5

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-524-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.413 mg/Kg	0.413U mg/Kg
SL-544-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.487 mg/Kg	0.487U mg/Kg
SL-546-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.580 mg/Kg	0.580U mg/Kg
SL-546-SA5D-SB-4.0-5.0(REA)	MOLYBDENUM	0.755 mg/Kg	0.755U mg/Kg
SL-547-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.396 mg/Kg	0.396U mg/Kg
SL-547-SA5D-SB-4.0-5.0(REA)	MOLYBDENUM	0.251 mg/Kg	0.251U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(RES)	4/11/2013 3:00:00 PM	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate NAPHTHALENE	0.019 ug/L 0.024 ug/L 0.082 ug/L 0.18 ug/L 0.17 ug/L 0.17 ug/L	SL-524-SA5D-SB-0.0-0.5 SL-524-SA5D-SB-5.5-6.5 SL-544-SA5D-SB-0.0-0.5 SL-544-SA5D-SB-6.5-7.5 SL-546-SA5D-SB-0.0-0.5 SL-546-SA5D-SB-4.0-5.0 SL-547-SA5D-SB-0.0-0.5 SL-547-SA5D-SB-4.0-5.0 SL-824-SA5D-SB-5.5-6.5

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-547-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.83 ug/Kg	1.8U ug/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PrepPH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8082A
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-524-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	128	45.00-120.00	All Target Analytes	J(all detects)
SL-544-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	125	45.00-120.00	All Target Analytes	J(all detects)
SL-544-SA5D-SB-6.5-7.5	TETRACHLORO-M-XYLENE	125	45.00-120.00	All Target Analytes	J(all detects)
SL-546-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	130	45.00-120.00	All Target Analytes	J(all detects)
SL-546-SA5D-SB-4.0-5.0	TETRACHLORO-M-XYLENE	125	45.00-120.00	All Target Analytes	J(all detects)
SL-547-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	122	45.00-120.00	All Target Analytes	J(all detects)
SL-824-SA5D-SB-5.5-6.5	TETRACHLORO-M-XYLENE	129	45.00-120.00	All Target Analytes	J(all detects)

Method: 8270D SIM
Matrix: AQ

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-090413	1-Methylnaphthalene-d10 Benzo(a)pyrene-d12	48 60	51.00-136.00 62.00-141.00	All Base Target Analytes	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-524-SA5D-SB-5.5-6.5MS (SL-524-SA5D-SB-5.5-6.5)	EFH (C21-C30)	126	-	49.00-123.00	-	EFH (C21-C30)	J (all detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-524-SA5D-SB-5.5-6.5MS (TOT) **SL-524-SA5D-SB-5.5-6.5MSD (TOT)** (SL-524-SA5D-SB-0.0-0.5 SL -524-SA5D-SB-5.5-6.5 SL -544-SA5D-SB-0.0-0.5 SL -544-SA5D-SB-6.5-7.5 SL -546-SA5D-SB-0.0-0.5 SL -546-SA5D-SB-4.0-5.0 SL -547-SA5D-SB-0.0-0.5 SL -547-SA5D-SB-4.0-5.0 SL -824-SA5D-SB-5.5-6.5)	ALUMINUM CALCIUM IRON MAGNESIUM MANGANESE TITANIUM	1308 184 1635 273 163 404	1078 145 830 177 146 291	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 IRON MAGNESIUM MANGANESE TITANIUM	J(all detects) Al, Ca, Fe, Mg, Ti, No Qual, >4x
SL-524-SA5D-SB-5.5-6.5MS (TOT) **SL-524-SA5D-SB-5.5-6.5MSD (TOT)** (SL-524-SA5D-SB-0.0-0.5 SL -524-SA5D-SB-5.5-6.5 SL -544-SA5D-SB-0.0-0.5 SL -544-SA5D-SB-6.5-7.5 SL -546-SA5D-SB-0.0-0.5 SL -546-SA5D-SB-4.0-5.0 SL -547-SA5D-SB-0.0-0.5 SL -547-SA5D-SB-4.0-5.0 SL -824-SA5D-SB-5.5-6.5)	ANTIMONY	66	65	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-524-SA5D-SB-5.5-6.5MS **SL-524-SA5D-SB-5.5-6.5MSD** (SL-524-SA5D-SB-5.5-6.5)	BIS(2-ETHYLHEXYL)PHTHALAT	171	-	39.00-167.00	53 (30.00)	BIS(2-ETHYLHEXYL)PHTHALA	J(all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 7471B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-524-SA5D-SB-5.5-6.5DUP (TOT) (SL-524-SA5D-SB-0.0-0.5 SL-524-SA5D-SB-5.5-6.5 SL -544-SA5D-SB-0.0-0.5 SL -544-SA5D-SB-6.5-7.5 SL -546-SA5D-SB-0.0-0.5 SL -546-SA5D-SB-4.0-5.0 SL -547-SA5D-SB-0.0-0.5 SL -547-SA5D-SB-4.0-5.0 SL -824-SA5D-SB-5.5-6.5)	MERCURY	84	20.00	No Qual, OK by Difference

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32524AQ321618A **P32524AY321639A** (EB-090413)	EFH (C8-C11)	66	65	70.00-130.00	-	EFH (C8-C11)	J(all detects) UJ(all non-detects)

Method: 7199
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P24821CY271451A (TOT) (EB-090413)	HEXAVALENT CHROMIUM	-	112	90.00-110.00	-	HEXAVALENT CHROMIUM	J(all detects)

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32499AQ240754A (SL-524-SA5D-SB-0.0-0.5 SL-524-SA5D-SB-5.5-6.5 SL-824-SA5D-SB-5.5-6.5)	2,4-DB	138	-	54.00-131.00	-	2,4-DB	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5	SL-824-SA5D-SB-5.5-6.5			
MOISTURE	6.6	7.1	7		No Qualifiers Applied

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5 (TOT)	SL-824-SA5D-SB-5.5-6.5 (TOT)			
ALUMINUM	13100	12800	2	50.00	No Qualifiers Applied
ARSENIC	4.02	5.01	22	50.00	
BARIUM	76.5	84.0	9	50.00	
BERYLLIUM	0.449	0.453	1	50.00	
BORON	22.7	22.1	3	50.00	
CADMIUM	0.456	0.427	7	50.00	
CALCIUM	3180	3230	2	50.00	
CHROMIUM	17.1	17.0	1	50.00	
COBALT	3.69	3.99	8	50.00	
COPPER	10.1	10.5	4	50.00	
IRON	20000	20800	4	50.00	
LEAD	4.53	3.96	13	50.00	
LITHIUM	21.8	24.5	12	50.00	
MAGNESIUM	4290	4660	8	50.00	
MANGANESE	182	225	21	50.00	
NICKEL	8.39	9.18	9	50.00	
PHOSPHORUS	305	351	14	50.00	
POTASSIUM	1690	1850	9	50.00	
SODIUM	160	141	13	50.00	
TIN	2.92	2.88	1	50.00	
TITANIUM	1250	1310	5	50.00	
VANADIUM	35.6	36.4	2	50.00	
ZINC	47.3	51.8	9	50.00	
Zirconium	4.01	4.05	1	50.00	

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5 (TOT)	SL-824-SA5D-SB-5.5-6.5 (TOT)			
SILVER	0.0657	0.0687	4	50.00	No Qualifiers Applied
STRONTIUM	25.3	32.2	24	50.00	
THALLIUM	0.233	0.328	34	50.00	

Method: 7471B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5 (TOT)	SL-824-SA5D-SB-5.5-6.5 (TOT)			
MERCURY	0.113	0.0172 U	200	50.00	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8081B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5	SL-824-SA5D-SB-5.5-6.5			
4,4'-DDE	1.6	1.8 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5	SL-824-SA5D-SB-5.5-6.5			
CHRYSENE	0.84	1.8 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-524-SA5D-SB-5.5-6.5	SL-824-SA5D-SB-5.5-6.5			
PH	7.74	7.78	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-090413	1,2,3,4,6,7,8-HPCDD	JBQ	0.554	10.1	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.461	10.1	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JB	0.305	10.1	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JBQ	0.254	10.1	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.194	10.1	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.212	10.1	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JBQ	0.179	10.1	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.136	10.1	PQL	pg/L	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.278	10.1	PQL	pg/L	
	1,2,3,7,8-PECDD	JBQ	0.517	10.1	PQL	pg/L	
	1,2,3,7,8-PECDF	JQ	0.614	10.1	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JB	0.236	10.1	PQL	pg/L	
	2,3,4,7,8-PECDF	JBQ	0.211	10.1	PQL	pg/L	
	OCDD	JBQ	0.962	20.1	PQL	pg/L	
	OCDF	JBQ	0.878	20.1	PQL	pg/L	

Method: 6010C
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-090413	BARIUM	J	0.00040	0.0100	PQL	mg/L	
	CALCIUM	J	0.0346	0.400	PQL	mg/L	J (all detects)
	MANGANESE	J	0.0011	0.0100	PQL	mg/L	

Method: 8270D SIM
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-090413	Diethylphthalate	J	0.30	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.11	1.0	PQL	ug/L	J (all detects)
	NAPHTHALENE	J	0.032	0.051	PQL	ug/L	

Method: 1613B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.77	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.410	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.487	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.349	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	2.02	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.310	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	1.61	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.689	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.371	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.722	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.337	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.409	5.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.247	1.02	PQL	ng/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-544-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.562	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.148	5.21	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0544	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0521	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0932	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.560	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.130	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.794	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.39	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.188	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.461	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0686	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.146	5.21	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.101	1.04	PQL	ng/Kg	
	OCDD	JB	6.62	10.4	PQL	ng/Kg	
	OCDF	JBQ	0.290	10.4	PQL	ng/Kg	
SL-546-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.97	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.462	5.06	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.187	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.211	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.248	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.744	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.290	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.05	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.69	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.437	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.617	5.06	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.242	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.443	5.06	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.117	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.108	1.01	PQL	ng/Kg	
	OCDF	JBQ	1.05	10.1	PQL	ng/Kg	
SL-547-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.90	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.264	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0744	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0665	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.667	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.154	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.831	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.75	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.492	5.22	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.109	5.22	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0975	5.22	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.106	1.04	PQL	ng/Kg	
	OCDF	JB	0.920	10.4	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.780	1.04	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.624	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.413	2.08	PQL	mg/Kg	
	TIN	J	2.90	10.4	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-5.5-6.5	ARSENIC	J	4.02	4.28	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.449	1.07	PQL	mg/Kg	
	CADMIUM	J	0.456	1.07	PQL	mg/Kg	
	TIN	J	2.92	10.7	PQL	mg/Kg	
	Zirconium	J	4.01	5.35	PQL	mg/Kg	
SL-544-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.706	1.05	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.619	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.487	2.09	PQL	mg/Kg	
	SODIUM	J	85.8	105	PQL	mg/Kg	
	TIN	J	2.93	10.5	PQL	mg/Kg	
	Zirconium	J	5.06	5.24	PQL	mg/Kg	
SL-544-SA5D-SB-6.5-7.5	BERYLLIUM	J	0.450	1.03	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.425	1.03	PQL	mg/Kg	
	TIN	J	3.14	10.3	PQL	mg/Kg	
	Zirconium	J	4.93	5.15	PQL	mg/Kg	
SL-546-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.631	1.04	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.677	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.580	2.09	PQL	mg/Kg	
	SODIUM	J	79.8	104	PQL	mg/Kg	
	TIN	J	2.87	10.4	PQL	mg/Kg	
	Zirconium	J	4.28	5.21	PQL	mg/Kg	
SL-546-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.912	1.13	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.600	1.13	PQL	mg/Kg	
	MOLYBDENUM	J	0.755	2.27	PQL	mg/Kg	
	TIN	J	3.37	11.3	PQL	mg/Kg	
SL-547-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.707	1.04	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.587	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.396	2.07	PQL	mg/Kg	
	SODIUM	J	91.9	104	PQL	mg/Kg	
	TIN	J	2.91	10.4	PQL	mg/Kg	
SL-547-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.920	1.10	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.494	1.10	PQL	mg/Kg	
	MOLYBDENUM	J	0.251	2.19	PQL	mg/Kg	
	TIN	J	3.16	11.0	PQL	mg/Kg	
SL-824-SA5D-SB-5.5-6.5	BERYLLIUM	J	0.453	1.06	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.427	1.06	PQL	mg/Kg	
	TIN	J	2.88	10.6	PQL	mg/Kg	
	Zirconium	J	4.05	5.28	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-0.0-0.5	SELENIUM	J	0.132	0.415	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0922	0.208	PQL	mg/Kg	
SL-524-SA5D-SB-5.5-6.5	SILVER	J	0.0657	0.214	PQL	mg/Kg	J (all detects)
SL-544-SA5D-SB-0.0-0.5	SELENIUM	J	0.240	0.419	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0299	0.209	PQL	mg/Kg	
SL-546-SA5D-SB-0.0-0.5	SELENIUM	J	0.254	0.417	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0307	0.209	PQL	mg/Kg	
SL-546-SA5D-SB-4.0-5.0	SELENIUM	J	0.282	0.453	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0801	0.227	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-547-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.283 0.0292	0.415 0.207	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-547-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.153 0.0627	0.438 0.219	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-824-SA5D-SB-5.5-6.5	SILVER	J	0.0687	0.211	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-546-SA5D-SB-0.0-0.5	MERCURY	J	0.0132	0.0169	PQL	mg/Kg	J (all detects)
SL-547-SA5D-SB-0.0-0.5	MERCURY	J	0.0110	0.0170	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-544-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	4.4	5.2	PQL	mg/Kg	J (all detects)
SL-547-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	5.1	5.2	PQL	mg/Kg	J (all detects)

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-0.0-0.5	4,4'-DDD DIELDRIN	J J	0.50 0.52	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-524-SA5D-SB-5.5-6.5	4,4'-DDE	J	1.6	1.8	PQL	ug/Kg	J (all detects)

Method: 8270D SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5D-SB-0.0-0.5	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BENZO(A)ANTHRACENE BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE NAPHTHALENE	J J J J J J	0.74 1.4 0.86 1.6 0.71 1.5	1.7 1.7 1.7 1.7 1.7 1.7	PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-524-SA5D-SB-5.5-6.5	CHRYSENE	J	0.84	1.8	PQL	ug/Kg	J (all detects)
SL-544-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE FLUORANTHENE PHENANTHRENE PYRENE	J J J J	1.6 1.4 1.4 1.3	1.7 1.7 1.7 1.7	PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH101 **Laboratory: LL**

EDD Filename: PH101 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-546-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.73	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.0	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.3	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	0.80	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.88	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.70	1.7	PQL	ug/Kg	
SL-547-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.75	1.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	
	CHRYSENE	J	1.4	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	0.72	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.83	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.71	1.8	PQL	ug/Kg	

LDC #: 30695D4

SDG #: PH101

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: a

2nd Reviewer: c

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/4/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB=1 FB= FB-041113 (PH029)

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:

1	EB-090413 W	11	SL-524-SA5D-SB-5.5-6.5MS	21		31	
2	SL-524-SA5D-SB-0.0-0.5	12	SL-524-SA5D-SB-5.5-6.5MSD	22		32	
3	SL-524-SA5D-SB-5.5-6.5	13	SL-524-SA5D-SB-5.5-6.5DUP	23		33	
4	SL-524-SA5D-SB-5.5-6.5	14		24		34	
5	SL-544-SA5D-SB-0.0-0.5	15		25		35	
6	SL-544-SA5D-SB-6.5-7.5	16		26		36	
7	SL-546-SA5D-SB-0.0-0.5	17		27		37	
8	SL-546-SA5D-SB-4.0-5.0	18		28		38	
9	SL-547-SA5D-SB-0.0-0.5	19		29		39	
10	SL-547-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 30695D4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	2	5	7	8	9	10						
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.41	0.49	0.58	0.76	0.40	0.25						

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	EB-090413 (SDG: PH101)	Action Limit	No Qualifiers									
Ba	0.00040	0.2										
Ca	0.0346	17.3										
Mn	0.0011	0.55										

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH101
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7186221BKG Matrix Spike Lab Sample ID: 7186222MS Matrix Spike Duplicate Lab Sample ID: 7186223MSD
Batch Id(s): P24837B, P24838B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		12214.5060		14829.5790		14371.2170		200.0000	200.0000	MG/KG	1308		1078		3			20	P
Antimony		0.7400	U	33.1240		32.7040		50.0000	50.0000	MG/KG	66	N	65	N	1		75 - 125	20	P
Arsenic		3.7570	B	18.7600		18.8090		15.0000	15.0000	MG/KG	100		100		0		75 - 125	20	P
Barium		71.4390		278.7530		270.6240		200.0000	200.0000	MG/KG	104		100		3		75 - 125	20	P
Beryllium		0.4190	B	5.3920		5.3520		5.0000	5.0000	MG/KG	99		99		1		75 - 125	20	P
Boron		21.1970		205.4410		204.1300		200.0000	200.0000	MG/KG	92		91		1		75 - 125	20	P
Cadmium		0.4260	B	5.1930		5.1980		5.0000	5.0000	MG/KG	95		95		0		75 - 125	20	P
Calcium		2970.1230		3705.7160		3550.6850		400.0000	400.0000	MG/KG	184		145		4			20	P
Chromium		15.9990		36.3120		36.1090		20.0000	20.0000	MG/KG	102		101		1		75 - 125	20	P
Cobalt		3.4450		50.8430		50.7970		50.0000	50.0000	MG/KG	95		95		0		75 - 125	20	P
Copper		9.4610		35.5300		35.0400		25.0000	25.0000	MG/KG	104		102		1		75 - 125	20	P
Iron		18670.6610		20305.8380		19500.2760		100.0000	100.0000	MG/KG	1635		830		4			20	P
Lead		4.2290		18.6230		18.6510		15.0000	15.0000	MG/KG	96		96		0		75 - 125	20	P
Lithium		20.3290		118.9020		117.2670		100.0000	100.0000	MG/KG	99		97		1		75 - 125	20	P
Magnesium		4006.1720		4552.3000		4360.0840		200.0000	200.0000	MG/KG	273		177		4			20	P
Manganese		170.1860		251.8330		243.2620		50.0000	50.0000	MG/KG	163	N	146	N	3		75 - 125	20	P
Mercury		0.1058		0.2495		0.2441		0.1648	0.1602	MG/KG	87		86		2		65 - 135	20	CV
Molybdenum		0.1700	U	185.4160		184.7320		200.0000	200.0000	MG/KG	93		92		0		75 - 125	20	P
Nickel		7.8350		56.3120		56.1720		50.0000	50.0000	MG/KG	97		97		0		75 - 125	20	P
Phosphorus		284.5580		393.6280		397.4130		100.0000	100.0000	MG/KG	109		113		1		75 - 125	20	P
Potassium		1574.6650		2801.8910		2759.1690		1000.0000	1000.0000	MG/KG	123		118		2		75 - 125	20	P
Selenium	78	0.1000	U	2.2120		2.0800		2.0000	2.0000	MG/KG	111		104		6		75 - 125	20	MS
Silver	107	0.0613	B	11.6080		10.5560		10.0000	10.0000	MG/KG	115		105		9		75 - 125	20	MS
Sodium		149.7370		1121.4030		1109.2980		1000.0000	1000.0000	MG/KG	97		96		1		75 - 125	20	P
Strontium	88	23.6000		33.5800		29.7400		8.0000	8.0000	MG/KG	125		77		12		75 - 125	20	MS
Thallium	203	0.2174		0.6860		0.6418		0.4000	0.4000	MG/KG	117		106		7		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH101
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7186221BKG Matrix Spike Lab Sample ID: 7186222MS Matrix Spike Duplicate Lab Sample ID: 7186223MSD
Batch Id(s): P24837B, P24838B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Tin		2.7240	B	345.1600		344.3850		400.0000	400.0000	MG/KG	86		85		0		75 - 125	20	P
Titanium		1167.3630		1571.6080		1458.4750		100.0000	100.0000	MG/KG	404		291		7			20	P
Vanadium		33.2240		84.8180		83.6580		50.0000	50.0000	MG/KG	103		101		1		75 - 125	20	P
Zinc		44.1690		95.5330		93.7240		50.0000	50.0000	MG/KG	103		99		2		75 - 125	20	P
Zirconium		3.7460	B	101.1850		100.3990		100.0000	100.0000	MG/KG	97		97		1		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH101
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7186221BKG
Duplicate Lab Sample ID: 7186224DUP
Batch ID(s): P24837B, P24838B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			12214.5060		12742.0500		4		P
Antimony			0.7400	U	0.7400	U			P
Arsenic			3.7570	B	3.7350	B	1		P
Barium			71.4390		75.2070		5		P
Beryllium			0.4190	B	0.4510	B	7		P
Boron		10.0	21.1970		21.7370		3		P
Cadmium			0.4260	B	0.4410	B	3		P
Calcium			2970.1230		3029.5350		2		P
Chromium			15.9990		16.9110		6		P
Cobalt		1.0	3.4450		3.6620		6		P
Copper		2.0	9.4610		9.6610		2		P
Iron			18670.6610		19667.3510		5		P
Lead		3.0	4.2290		4.1970		1		P
Lithium			20.3290		20.2150		1		P
Magnesium			4006.1720		4131.2630		3		P
Manganese			170.1860		178.0960		5		P
Mercury		0.0	0.1058		0.0434		84	*	CV
Molybdenum			0.1700	U	0.1700	U			P
Nickel		2.0	7.8350		8.2290		5		P
Phosphorus			284.5580		277.1660		3		P
Potassium			1574.6650		1566.3320		1		P
Selenium	78		0.1000	U	0.1000	U			MS
Silver	107		0.0613	B	0.0611	B	0		MS
Sodium		100.0	149.7370		154.4260		3		P
Strontium	88		23.6000		22.7200		4		MS
Thallium	203	0.2	0.2174		0.2210		2		MS
Tin			2.7240	B	2.5780	B	6		P
Titanium			1167.3630		1167.3890		0		P
Vanadium			33.2240		35.2550		6		P
Zinc			44.1690		44.5200		1		P
Zirconium			3.7460	B	4.1010	B	9		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH102

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 10, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level IV data validation results for samples collected on September 5, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005), and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by Environmental Protection Agency (EPA) SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Fluoride by EPA Method 300.0
Hexavalent Chromium by EPA Method 7199

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Automated Data Review outliers are presented in Enclosure I. Method specific Level IV DVRs are presented in Enclosure II.

All sample results were subjected to Level IV data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibrations, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards, interference check (ICSA and ICSAB) samples, matrix spike/matrix spike duplicates (MS/MSD), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, laboratory duplicates, method blanks, trip blanks, equipment blanks, field blanks, and the raw data to confirm sample quantitation and identification.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of the initial and continuing calibrations, ICB/CCBs, interference check samples, ICP serial dilutions and internal standards (except dioxins) which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

All criteria for the initial calibration verifications and continuing calibration of each method were met with the exception of several herbicides. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosures II.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for dioxins and metals. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosures I and II.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the exception of several metals. The associated sample results were not detected or were significantly greater than the concentrations found in the associated blanks, therefore no data were qualified.

V. 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 exception of five samples for PCBs. No data were qualified due to high %Rs since the associated results were non-detected.

VI. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for metals and fluoride. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of one LCS/LCSD pair for herbicides. No data were qualified due to high %Rs since the associated results were non-detected.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH101) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent

chromium, and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3050B	6010C	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3050B	6020A	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3546	8015M	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3546	8081B	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3546	8082A	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	3546	8270D SIM	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	METHOD	1613B	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	METHOD	300.0	IV
05-Sep-2013	SL-559-SA5D-SB-0.0-0.5	7187855	N	METHOD	7471B	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3050B	6010C	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3050B	6020A	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3546	8015M	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3546	8081B	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3546	8082A	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	3546	8270D SIM	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	5035A	8015M	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	METHOD	300.0	IV
05-Sep-2013	SL-559-SA5D-SB-6.0-7.0	7187856	N	METHOD	7471B	IV
05-Sep-2013	TB-090513	7187850	TB	5030B	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3050B	6010C	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3546	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3546	8081B	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3546	8082A	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	3546	8270D SIM	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	METHOD	1613B	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
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	METHOD	300.0	IV
05-Sep-2013	SL-555-SA5D-SB-0.0-0.5	7187851	N	METHOD	7471B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3050B	6010C	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3546	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3546	8081B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3546	8082A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	3546	8270D SIM	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	5035A	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	METHOD	300.0	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0	7187852	N	METHOD	7471B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0DUP	P187852D221106	DUP	3050B	6010C	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0DUP	P187852D221755	DUP	METHOD	7471B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0DUP	P187852D222236A	DUP	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0DUP	P187852D222236B	DUP	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0DUP	P187852D270222A	DUP	METHOD	300.0	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MSD	P187852M221114	MSD	3050B	6010C	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MSD	P187852M221759	MSD	METHOD	7471B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MSD	P187852M222241A	MSD	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MSD	P187852M222241B	MSD	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MS	P187852R221110	MS	3050B	6010C	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MS	P187852R221757	MS	METHOD	7471B	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MS	P187852R222238A	MS	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MS	P187852R222238B	MS	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-4.0-5.0MS	P187852R270238A	MS	METHOD	300.0	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3050B	6010C	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
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3050B	6020A	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3546	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3546	8081B	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3546	8082A	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	3546	8270D SIM	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	5035A	8015M	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	METHOD	300.0	IV
05-Sep-2013	SL-555-SA5D-SB-10.5-11.5	7187853	N	METHOD	7471B	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3050B	6010C	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3050B	6020A	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3060A	7199	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3546	8015M	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3546	8082A	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3546	8270D SIM	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	3550B	8151A	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	METHOD	1613B	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	METHOD	300.0	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	METHOD	6850	IV
05-Sep-2013	SL-556-SA5D-SB-0.0-0.5	7187854	N	METHOD	7471B	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3050B	6010C	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3050B	6020A	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3060A	7199	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3546	8015M	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3546	8082A	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	3546	8270D SIM	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	5035A	8015M	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	METHOD	300.0	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	METHOD	6850	IV
05-Sep-2013	SL-556-SA5D-SB-4.0-5.0	7187858	N	METHOD	7471B	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3050B	6010C	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3050B	6020A	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3060A	7199	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3546	8015M	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3546	8082A	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3546	8270D SIM	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	3550B	8151A	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	5035A	8015M	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	METHOD	300.0	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	METHOD	6850	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0	7187857	N	METHOD	7471B	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0D	P187857D271805A	DUP	3060A	7199	IV
05-Sep-2013	SL-556-SA5D-SB-11.0-12.0M	P187857R271715A	MS	3060A	7199	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3050B	6010C	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3050B	6020A	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3546	8015M	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3546	8081B	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3546	8082A	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	3546	8270D SIM	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	METHOD	1613B	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	METHOD	300.0	IV
05-Sep-2013	SL-554-SA5D-SB-0.0-0.5	7187859	N	METHOD	7471B	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
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3050B	6010C	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3050B	6020A	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3546	8015M	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3546	8081B	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3546	8082A	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	3546	8270D SIM	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	5035A	8015M	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	METHOD	300.0	IV
05-Sep-2013	SL-554-SA5D-SB-4.0-5.0	7187860	N	METHOD	7471B	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3050B	6010C	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3050B	6020A	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3546	8015M	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3546	8081B	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3546	8082A	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	3546	8270D SIM	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	5035A	8015M	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	METHOD	300.0	IV
05-Sep-2013	SL-554-SA5D-SB-7.0-8.0	7187861	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 1:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.90	J	0.42	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-554-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 1:30:00 PM** ***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		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-555-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 8:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.83	J	0.42	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-555-SA5D-SB-10.5-11.5** ***Collected:*** **9/5/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.9		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.97	J	0.41	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-556-SA5D-SB-11.0-12.0** ***Collected:*** **9/5/2013 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.4		0.42	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-556-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.0		0.42	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***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		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-559-SA5D-SB-6.0-7.0** ***Collected:*** **9/5/2013 7:55:00 AM** ***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		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 1:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.16	U	0.770	MDL	4.16	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.822	J	0.0698	MDL	1.04	PQL	mg/Kg	J	Z
BORON	8.80	J	0.875	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.281	J	0.0791	MDL	1.04	PQL	mg/Kg	J	Z
MOLYBDENUM	0.366	J	0.177	MDL	2.08	PQL	mg/Kg	U	F
POTASSIUM	4450		8.68	MDL	104	PQL	mg/Kg	J	Q
TIN	3.24	J	0.229	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	4.23	J	0.875	MDL	5.21	PQL	mg/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 1:30:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.24	U	0.784	MDL	4.24	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.936	J	0.0710	MDL	1.06	PQL	mg/Kg	J	Z
BORON	8.83	J	0.890	MDL	10.6	PQL	mg/Kg	J	Z
CADMIUM	0.268	J	0.0806	MDL	1.06	PQL	mg/Kg	J	Z
MOLYBDENUM	0.253	J	0.180	MDL	2.12	PQL	mg/Kg	U	F
POTASSIUM	3070		8.84	MDL	106	PQL	mg/Kg	J	Q
TIN	3.48	J	0.233	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	4.78	J	0.890	MDL	5.30	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-7.0-8.0** ***Collected:*** **9/5/2013 1:40:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.26	U	0.788	MDL	4.26	PQL	mg/Kg	UJ	Q
BORON	8.74	J	0.894	MDL	10.6	PQL	mg/Kg	J	Z
CADMIUM	0.185	J	0.0809	MDL	1.06	PQL	mg/Kg	J	Z
POTASSIUM	3810		8.88	MDL	106	PQL	mg/Kg	J	Q
TIN	4.11	J	0.234	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	5.14	J	0.894	MDL	5.32	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 8:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.11	U	0.761	MDL	4.11	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.819	J	0.0689	MDL	1.03	PQL	mg/Kg	J	Z
CADMIUM	0.177	J	0.0782	MDL	1.03	PQL	mg/Kg	J	Z
MOLYBDENUM	0.290	J	0.175	MDL	2.06	PQL	mg/Kg	U	F
POTASSIUM	4330		8.58	MDL	103	PQL	mg/Kg	J	Q
SODIUM	101	J	17.2	MDL	103	PQL	mg/Kg	J	Z
TIN	3.06	J	0.226	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	4.90	J	0.864	MDL	5.14	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-10.5-11.5** ***Collected:*** **9/5/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.29	U	0.794	MDL	4.29	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.875	J	0.0719	MDL	1.07	PQL	mg/Kg	J	Z
BORON	8.84	J	0.901	MDL	10.7	PQL	mg/Kg	J	Z
CADMIUM	0.0891	J	0.0816	MDL	1.07	PQL	mg/Kg	J	Z
MOLYBDENUM	0.205	J	0.182	MDL	2.15	PQL	mg/Kg	U	F
POTASSIUM	2680		8.95	MDL	107	PQL	mg/Kg	J	Q
TIN	3.47	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	4.18	J	0.901	MDL	5.37	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.34	U	0.803	MDL	4.34	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.847	J	0.0727	MDL	1.09	PQL	mg/Kg	J	Z
BORON	10.5	J	0.912	MDL	10.9	PQL	mg/Kg	J	Z
CADMIUM	0.140	J	0.0825	MDL	1.09	PQL	mg/Kg	J	Z
MOLYBDENUM	0.700	J	0.185	MDL	2.17	PQL	mg/Kg	U	F
POTASSIUM	2580		9.05	MDL	109	PQL	mg/Kg	J	Q
TIN	3.51	J	0.239	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	5.26	J	0.912	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.99	U	0.738	MDL	3.99	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.669	J	0.0669	MDL	0.998	PQL	mg/Kg	J	Z
CADMIUM	0.230	J	0.0758	MDL	0.998	PQL	mg/Kg	J	Z
POTASSIUM	4050		8.32	MDL	99.8	PQL	mg/Kg	J	Q
TIN	2.79	J	0.220	MDL	9.98	PQL	mg/Kg	U	B

Sample ID: **SL-556-SA5D-SB-11.0-12.0** ***Collected:*** **9/5/2013 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.14	U	0.767	MDL	4.14	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.543	J	0.0694	MDL	1.04	PQL	mg/Kg	J	Z
BORON	5.87	J	0.870	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.232	J	0.0787	MDL	1.04	PQL	mg/Kg	J	Z
POTASSIUM	2180		8.64	MDL	104	PQL	mg/Kg	J	Q
TIN	3.27	J	0.228	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.96	J	0.870	MDL	5.18	PQL	mg/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.23	U	0.783	MDL	4.23	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.709	J	0.0709	MDL	1.06	PQL	mg/Kg	J	Z
BORON	9.88	J	0.889	MDL	10.6	PQL	mg/Kg	J	Z
CADMIUM	0.246	J	0.0804	MDL	1.06	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-556-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.337	J	0.180	MDL	2.12	PQL	mg/Kg	U	F
POTASSIUM	3190		8.83	MDL	106	PQL	mg/Kg	J	Q
TIN	2.83	J	0.233	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	5.14	J	0.889	MDL	5.29	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.23	U	0.783	MDL	4.23	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.841	J	0.0709	MDL	1.06	PQL	mg/Kg	J	Z
CADMIUM	0.469	J	0.0804	MDL	1.06	PQL	mg/Kg	J	Z
MOLYBDENUM	0.329	J	0.180	MDL	2.12	PQL	mg/Kg	U	F
POTASSIUM	5110		8.82	MDL	106	PQL	mg/Kg	J	Q
SODIUM	85.6	J	17.7	MDL	106	PQL	mg/Kg	J	Z
TIN	2.99	J	0.233	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	2.71	J	0.889	MDL	5.29	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-6.0-7.0** ***Collected:*** **9/5/2013 7:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.29	U	0.794	MDL	4.29	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.942	J	0.0719	MDL	1.07	PQL	mg/Kg	J	Z
BORON	6.72	J	0.901	MDL	10.7	PQL	mg/Kg	J	Z
CADMIUM	0.323	J	0.0815	MDL	1.07	PQL	mg/Kg	J	Z
MOLYBDENUM	1.35	J	0.182	MDL	2.15	PQL	mg/Kg	U	F
POTASSIUM	3200		8.95	MDL	107	PQL	mg/Kg	J	Q
SODIUM	99.6	J	17.9	MDL	107	PQL	mg/Kg	J	Z
TIN	3.81	J	0.236	MDL	10.7	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 1:15:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.206	J	0.104	MDL	0.416	PQL	mg/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 1:30:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.168	J	0.106	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 1:30:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0473	J	0.0276	MDL	0.212	PQL	mg/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-7.0-8.0** ***Collected:*** **9/5/2013 1:40:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.273	J	0.106	MDL	0.426	PQL	mg/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-7.0-8.0** ***Collected:*** **9/5/2013 1:40:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0431	J	0.0277	MDL	0.213	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 8:55:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.251	J	0.103	MDL	0.411	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-10.5-11.5** ***Collected:*** **9/5/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0505	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.128	J	0.109	MDL	0.434	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0502	J	0.0282	MDL	0.217	PQL	mg/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.235	J	0.0998	MDL	0.399	PQL	mg/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0404	J	0.0259	MDL	0.200	PQL	mg/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 12:20:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.221	J	0.106	MDL	0.423	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.213	J	0.106	MDL	0.423	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0560	J	0.0275	MDL	0.212	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-6.0-7.0** ***Collected:*** **9/5/2013 7:55:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.216	J	0.107	MDL	0.429	PQL	mg/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-6.0-7.0** ***Collected:*** **9/5/2013 7:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0312	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS
Method: 6020A ***Matrix:*** SO

Method Category: METALS
Method: 7199 ***Matrix:*** SO

Sample ID: SL-556-SA5D-SB-11.0-12.0 ***Collected:*** 9/5/2013 12:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.15	MDL	0.42	PQL	mg/Kg	J	Z

Method Category: METALS
Method: 7471B ***Matrix:*** SO

Sample ID: SL-554-SA5D-SB-0.0-0.5 ***Collected:*** 9/5/2013 1:15:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0110	J	0.0099	MDL	0.0165	PQL	mg/Kg	J	Z

Sample ID: SL-555-SA5D-SB-0.0-0.5 ***Collected:*** 9/5/2013 8:55:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0100	J	0.010	MDL	0.0166	PQL	mg/Kg	J	Z

Sample ID: SL-555-SA5D-SB-10.5-11.5 ***Collected:*** 9/5/2013 9:30:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0156	J	0.0104	MDL	0.0173	PQL	mg/Kg	J	Z

Sample ID: SL-555-SA5D-SB-4.0-5.0 ***Collected:*** 9/5/2013 9:15:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0131	J	0.0110	MDL	0.0183	PQL	mg/Kg	J	Z

Sample ID: SL-556-SA5D-SB-4.0-5.0 ***Collected:*** 9/5/2013 12:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0100	J	0.0099	MDL	0.0164	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 1:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.308	JB	0.0328	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.132	JBQ	0.0155	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0465	JB	0.0266	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0372	JBQ	0.0306	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0460	JBQ	0.0168	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.374	J	0.0320	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0547	JBQ	0.0141	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.588	JB	0.0304	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.939	JB	0.0188	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.168	J	0.0493	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.328	JB	0.0198	MDL	5.26	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0620	JB	0.0151	MDL	5.26	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0864	JBQ	0.0197	MDL	5.26	PQL	ng/Kg	U	B
OCDD	2.24	JB	0.0298	MDL	10.5	PQL	ng/Kg	J	Z
OCDF	0.211	JBQ	0.0470	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: **SL-555-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 8:55:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.442	JB	0.0380	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.103	JB	0.0105	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0522	JBQ	0.0172	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0330	JB	0.0278	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0429	JBQ	0.0168	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.489	J	0.0285	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0640	JBQ	0.0143	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.737	JB	0.0278	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.957	JB	0.0175	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0837	JQ	0.0380	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.215	JBQ	0.0170	MDL	5.03	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0475	JB	0.0165	MDL	5.03	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0590	JBQ	0.0171	MDL	5.03	PQL	ng/Kg	U	B
OCDD	3.55	JB	0.0286	MDL	10.1	PQL	ng/Kg	J	Z
OCDF	0.247	JB	0.0283	MDL	10.1	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.07	JB	0.0350	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.636	JB	0.0126	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0980	JB	0.0227	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0869	JBQ	0.0353	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.174	JB	0.0270	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.281	J	0.0366	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.173	JB	0.0230	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.315	JB	0.0339	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.431	JB	0.0323	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0995	JQ	0.0378	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.551	JBQ	0.0277	MDL	4.91	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.186	JB	0.0247	MDL	4.91	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.693	JB	0.0291	MDL	4.91	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.231	J	0.0893	MDL	0.983	PQL	ng/Kg	J	Z
OCDF	1.40	JB	0.0323	MDL	9.83	PQL	ng/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.83	JB	0.0395	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.391	JBQ	0.0201	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0780	JBQ	0.0341	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0569	JB	0.0400	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0943	JBQ	0.0237	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.189	JQ	0.0411	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0855	JBQ	0.0205	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.301	JB	0.0387	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.147	JBQ	0.0251	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.124	JQ	0.0499	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.388	JBQ	0.0247	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.103	JB	0.0217	MDL	5.26	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.193	JBQ	0.0231	MDL	5.26	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.130	J	0.0697	MDL	1.05	PQL	ng/Kg	J	Z
OCDF	0.663	JB	0.0361	MDL	10.5	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-555-SA5D-SB-0.0-0.5 *Collected:* 9/5/2013 8:55:00 AM *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)	4.5	J	2.1	MDL	5.2	PQL	mg/Kg	J	Z
EFH (C30-C40)	7.2	J	4.1	MDL	10	PQL	mg/Kg	J	Z

Sample ID: SL-556-SA5D-SB-4.0-5.0 *Collected:* 9/5/2013 12:20:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	4.8	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z
EFH (C30-C40)	9.8	J	4.2	MDL	11	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081B **Matrix: SO**

Sample ID: SL-559-SA5D-SB-0.0-0.5 *Collected:* 9/5/2013 7:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.2	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
4,4'-DDT	0.56	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-556-SA5D-SB-0.0-0.5 *Collected:* 9/5/2013 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	25	U	9.2	MDL	25	PQL	ug/Kg	UJ	C

Sample ID: SL-556-SA5D-SB-11.0-12.0 *Collected:* 9/5/2013 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	26	U	9.6	MDL	26	PQL	ug/Kg	UJ	C

Sample ID: SL-556-SA5D-SB-4.0-5.0 *Collected:* 9/5/2013 12:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	25	U	9.5	MDL	25	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**
Method: **8151A** ***Matrix:*** **SO**

Method Category: **SVOA**
Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-554-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 1:15:00 PM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.73	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	0.92	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	0.86	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-554-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 1:30:00 PM** ***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	0.81	J	0.71	MDL	1.8	PQL	ug/Kg	U	F

Sample ID: **SL-554-SA5D-SB-7.0-8.0** ***Collected:*** **9/5/2013 1:40:00 PM** ***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	0.76	J	0.72	MDL	1.8	PQL	ug/Kg	U	F

Sample ID: **SL-555-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 8:55:00 AM** ***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	0.76	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-555-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 9:15:00 AM** ***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	8.1	J	6.5	MDL	20	PQL	ug/Kg	U	F

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.69	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	0.99	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.3	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	1.2	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-556-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 10:20:00** ***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	0.76	J	0.68	MDL	1.7	PQL	ug/Kg	U	F
PHENANTHRENE	0.74	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	1.0	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-556-SA5D-SB-4.0-5.0** ***Collected:*** **9/5/2013 12:20:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.0	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	0.83	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	0.92	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.3	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-559-SA5D-SB-0.0-0.5** ***Collected:*** **9/5/2013 7:40:00 AM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.85	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	0.85	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.0	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
C	Continuing Calibration Verification Percent Difference Lower Estimation
E	Laboratory Duplicate Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH102

Method Blank Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2540B372247	9/13/2013 10:47:00 PM	1,2,3,4,6,7,8-HPCDD	0.0675 ng/Kg	SL-554-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0376 ng/Kg	SL-555-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0826 ng/Kg	SL-556-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0390 ng/Kg	SL-559-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0639 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0330 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0470 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0649 ng/Kg	
		1,2,3,7,8-PECDF	0.0692 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0615 ng/Kg	
		2,3,4,7,8-PECDF	0.0786 ng/Kg	
		OCDD	0.281 ng/Kg	
		OCDF	0.227 ng/Kg	

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-554-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.308 ng/Kg	0.308U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.132 ng/Kg	0.132U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0465 ng/Kg	0.0465U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0372 ng/Kg	0.0372U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0460 ng/Kg	0.0460U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0547 ng/Kg	0.0547U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.328 ng/Kg	0.328U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0620 ng/Kg	0.0620U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0864 ng/Kg	0.0864U ng/Kg
SL-554-SA5D-SB-0.0-0.5(RES)	OCDF	0.211 ng/Kg	0.211U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.103 ng/Kg	0.103U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0522 ng/Kg	0.0522U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0330 ng/Kg	0.0330U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0429 ng/Kg	0.0429U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0640 ng/Kg	0.0640U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.215 ng/Kg	0.215U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0475 ng/Kg	0.0475U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0590 ng/Kg	0.0590U ng/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	OCDF	0.247 ng/Kg	0.247U ng/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0980 ng/Kg	0.0980U ng/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0869 ng/Kg	0.0869U ng/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.174 ng/Kg	0.174U ng/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.186 ng/Kg	0.186U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0780 ng/Kg	0.0780U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0569 ng/Kg	0.0569U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0943 ng/Kg	0.0943U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0855 ng/Kg	0.0855U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.147 ng/Kg	0.147U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.103 ng/Kg	0.103U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.193 ng/Kg	0.193U ng/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	OCDF	0.663 ng/Kg	0.663U ng/Kg

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P24937AB221049	9/11/2013 10:49:00 AM	CALCIUM ZINC	5.41 mg/Kg 0.466 mg/Kg	SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0
P24937AB222006	9/9/2013 8:06:00 PM	LITHIUM TIN	0.43 mg/Kg 1.48 mg/Kg	SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0

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-554-SA5D-SB-0.0-0.5(RES)	TIN	3.24 mg/Kg	3.24U mg/Kg
SL-554-SA5D-SB-4.0-5.0(RES)	TIN	3.48 mg/Kg	3.48U mg/Kg
SL-554-SA5D-SB-7.0-8.0(RES)	TIN	4.11 mg/Kg	4.11U mg/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	TIN	3.06 mg/Kg	3.06U mg/Kg
SL-555-SA5D-SB-10.5-11.5(RES)	TIN	3.47 mg/Kg	3.47U mg/Kg
SL-555-SA5D-SB-4.0-5.0(RES)	TIN	3.51 mg/Kg	3.51U mg/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	TIN	2.79 mg/Kg	2.79U mg/Kg
SL-556-SA5D-SB-11.0-12.0(RES)	TIN	3.27 mg/Kg	3.27U mg/Kg
SL-556-SA5D-SB-4.0-5.0(RES)	TIN	2.83 mg/Kg	2.83U mg/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	TIN	2.99 mg/Kg	2.99U mg/Kg
SL-559-SA5D-SB-6.0-7.0(RES)	TIN	3.81 mg/Kg	3.81U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-090413(RES)	9/4/2013 3:00:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate NAPHTHALENE	1.6 ug/L 0.3 ug/L 0.11 ug/L 0.032 ug/L	SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0

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-555-SA5D-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	8.1 ug/Kg	20U ug/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PrepPH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0

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-554-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.366 mg/Kg	0.366U mg/Kg
SL-554-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.253 mg/Kg	0.253U mg/Kg
SL-555-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.290 mg/Kg	0.290U mg/Kg
SL-555-SA5D-SB-10.5-11.5(RES)	MOLYBDENUM	0.205 mg/Kg	0.205U mg/Kg
SL-555-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.700 mg/Kg	0.700U mg/Kg
SL-556-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.337 mg/Kg	0.337U mg/Kg
SL-559-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.329 mg/Kg	0.329U mg/Kg
SL-559-SA5D-SB-6.0-7.0(RES)	MOLYBDENUM	1.35 mg/Kg	1.35U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(RES)	4/11/2013 3:00:00 PM	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate NAPHTHALENE	0.019 ug/L 0.024 ug/L 0.082 ug/L 0.18 ug/L 0.17 ug/L 0.17 ug/L	SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0

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-554-SA5D-SB-4.0-5.0(RES)	NAPHTHALENE	0.81 ug/Kg	1.8U ug/Kg
SL-554-SA5D-SB-7.0-8.0(RES)	NAPHTHALENE	0.76 ug/Kg	1.8U ug/Kg
SL-556-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.76 ug/Kg	1.7U ug/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **SO**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-554-SA5D-SB-4.0-5.0	TETRACHLORO-M-XYLENE	128	45.00-120.00	All Target Analytes	J (all detects)
SL-555-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	128	45.00-120.00	All Target Analytes	J(all detects)
SL-555-SA5D-SB-4.0-5.0	TETRACHLORO-M-XYLENE	121	45.00-120.00	All Target Analytes	J(all detects)
SL-556-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	121	45.00-120.00	All Target Analytes	J(all detects)
SL-559-SA5D-SB-0.0-0.5	TETRACHLORO-M-XYLENE	124	45.00-120.00	All Target Analytes	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-555-SA5D-SB-4.0-5.0MS (TOT) **SL-555-SA5D-SB-4.0-5.0MSD (TOT)** (SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0)	ALUMINUM CALCIUM MAGNESIUM POTASSIUM TITANIUM	2667 189 342 142 428	3226 194 425 131 388	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM CALCIUM MAGNESIUM POTASSIUM TITANIUM	J (all detects) Al, Ca, Mg, Ti, No Qual, >4x
SL-555-SA5D-SB-4.0-5.0MS (TOT) **SL-555-SA5D-SB-4.0-5.0MSD (TOT)** (SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0)	IRON MANGANESE	- 48	-2361 22	75.00-125.00 75.00-125.00	- -	IRON MANGANESE	No Qual, >4x
SL-555-SA5D-SB-4.0-5.0MS (TOT) **SL-555-SA5D-SB-4.0-5.0MSD (TOT)** (SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0)	ANTIMONY	38	35	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-555-SA5D-SB-4.0-5.0MS (SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0)	FLUORIDE	12	-	80.00-120.00	-	FLUORIDE	J(all detects) R(all non-detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-556-SA5D-SB-11.0-12.0DUP (TOT) (SL-556-SA5D-SB-0.0-0.5 SL -556-SA5D-SB-11.0-12.0 SL -556-SA5D-SB-4.0-5.0)	HEXAVALENT CHROMIUM	32	20.00	No Qual, OK by Difference

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-555-SA5D-SB-4.0-5.0DUP (TOT) (SL-554-SA5D-SB-0.0-0.5 SL -554-SA5D-SB-4.0-5.0 SL -554-SA5D-SB-7.0-8.0 SL -555-SA5D-SB-0.0-0.5 SL -555-SA5D-SB-10.5-11.5 SL -555-SA5D-SB-4.0-5.0 SL -556-SA5D-SB-0.0-0.5 SL -556-SA5D-SB-11.0-12.0 SL -556-SA5D-SB-4.0-5.0 SL -559-SA5D-SB-0.0-0.5 SL -559-SA5D-SB-6.0-7.0)	ARSENIC MOLYBDENUM Zirconium	27 93 23	20.00 20.00 20.00	No Qual, OK by Difference

Method: 6020A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-555-SA5D-SB-4.0-5.0DUP (TOT) (SL-554-SA5D-SB-0.0-0.5 SL -554-SA5D-SB-4.0-5.0 SL -554-SA5D-SB-7.0-8.0 SL -555-SA5D-SB-0.0-0.5 SL -555-SA5D-SB-10.5-11.5 SL -555-SA5D-SB-4.0-5.0 SL -556-SA5D-SB-0.0-0.5 SL -556-SA5D-SB-11.0-12.0 SL -556-SA5D-SB-4.0-5.0 SL -559-SA5D-SB-0.0-0.5 SL -559-SA5D-SB-6.0-7.0)	SELENIUM SILVER	200 22	20.00 20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8151A**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P32499AQ240754A (SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0)	2,4-DB	138	-	54.00-131.00	-	2,4-DB	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-554-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.308	5.26	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.132	5.26	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0465	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0372	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0460	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.374	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0547	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.588	5.26	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.939	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.168	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.328	5.26	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0620	5.26	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0864	5.26	PQL	ng/Kg	
	OCDD	JB	2.24	10.5	PQL	ng/Kg	
	OCDF	JBQ	0.211	10.5	PQL	ng/Kg	
SL-555-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.442	5.03	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.103	5.03	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0522	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0330	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0429	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.489	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0640	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.737	5.03	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.957	5.03	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0837	5.03	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.215	5.03	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0475	5.03	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0590	5.03	PQL	ng/Kg	
	OCDD	JB	3.55	10.1	PQL	ng/Kg	
	OCDF	JB	0.247	10.1	PQL	ng/Kg	
SL-556-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.07	4.91	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.636	4.91	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0980	4.91	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0869	4.91	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.174	4.91	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.281	4.91	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.173	4.91	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.315	4.91	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.431	4.91	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0995	4.91	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.551	4.91	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.186	4.91	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.693	4.91	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.231	0.983	PQL	ng/Kg	
	OCDF	JB	1.40	9.83	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-559-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.83	5.26	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.391	5.26	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0780	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0569	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0943	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.189	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0855	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.301	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.147	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.124	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.388	5.26	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.103	5.26	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.193	5.26	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.130	1.05	PQL	ng/Kg	
	OCDF	JB	0.663	10.5	PQL	ng/Kg	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-554-SA5D-SB-0.0-0.5	FLUORIDE	J	0.90	1.0	PQL	mg/Kg	J (all detects)
SL-555-SA5D-SB-0.0-0.5	FLUORIDE	J	0.83	1.0	PQL	mg/Kg	J (all detects)
SL-556-SA5D-SB-0.0-0.5	FLUORIDE	J	0.97	1.0	PQL	mg/Kg	J (all detects)

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-554-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.822	1.04	PQL	mg/Kg	J (all detects)
	BORON	J	8.80	10.4	PQL	mg/Kg	
	CADMIUM	J	0.281	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.366	2.08	PQL	mg/Kg	
	TIN	J	3.24	10.4	PQL	mg/Kg	
	Zirconium	J	4.23	5.21	PQL	mg/Kg	
SL-554-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.936	1.06	PQL	mg/Kg	J (all detects)
	BORON	J	8.83	10.6	PQL	mg/Kg	
	CADMIUM	J	0.268	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.253	2.12	PQL	mg/Kg	
	TIN	J	3.48	10.6	PQL	mg/Kg	
	Zirconium	J	4.78	5.30	PQL	mg/Kg	
SL-554-SA5D-SB-7.0-8.0	BORON	J	8.74	10.6	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.185	1.06	PQL	mg/Kg	
	TIN	J	4.11	10.6	PQL	mg/Kg	
	Zirconium	J	5.14	5.32	PQL	mg/Kg	
SL-555-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.819	1.03	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.177	1.03	PQL	mg/Kg	
	MOLYBDENUM	J	0.290	2.06	PQL	mg/Kg	
	SODIUM	J	101	103	PQL	mg/Kg	
	TIN	J	3.06	10.3	PQL	mg/Kg	
	Zirconium	J	4.90	5.14	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-555-SA5D-SB-10.5-11.5	BERYLLIUM	J	0.875	1.07	PQL	mg/Kg	J (all detects)
	BORON	J	8.84	10.7	PQL	mg/Kg	
	CADMIUM	J	0.0891	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	0.205	2.15	PQL	mg/Kg	
	TIN	J	3.47	10.7	PQL	mg/Kg	
	Zirconium	J	4.18	5.37	PQL	mg/Kg	
SL-555-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.847	1.09	PQL	mg/Kg	J (all detects)
	BORON	J	10.5	10.9	PQL	mg/Kg	
	CADMIUM	J	0.140	1.09	PQL	mg/Kg	
	MOLYBDENUM	J	0.700	2.17	PQL	mg/Kg	
	TIN	J	3.51	10.9	PQL	mg/Kg	
	Zirconium	J	5.26	5.43	PQL	mg/Kg	
SL-556-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.669	0.998	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.230	0.998	PQL	mg/Kg	
	TIN	J	2.79	9.98	PQL	mg/Kg	
SL-556-SA5D-SB-11.0-12.0	BERYLLIUM	J	0.543	1.04	PQL	mg/Kg	J (all detects)
	BORON	J	5.87	10.4	PQL	mg/Kg	
	CADMIUM	J	0.232	1.04	PQL	mg/Kg	
	TIN	J	3.27	10.4	PQL	mg/Kg	
	Zirconium	J	2.96	5.18	PQL	mg/Kg	
SL-556-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.709	1.06	PQL	mg/Kg	J (all detects)
	BORON	J	9.88	10.6	PQL	mg/Kg	
	CADMIUM	J	0.246	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.337	2.12	PQL	mg/Kg	
	TIN	J	2.83	10.6	PQL	mg/Kg	
	Zirconium	J	5.14	5.29	PQL	mg/Kg	
SL-559-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.841	1.06	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.469	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.329	2.12	PQL	mg/Kg	
	SODIUM	J	85.6	106	PQL	mg/Kg	
	TIN	J	2.99	10.6	PQL	mg/Kg	
	Zirconium	J	2.71	5.29	PQL	mg/Kg	
SL-559-SA5D-SB-6.0-7.0	BERYLLIUM	J	0.942	1.07	PQL	mg/Kg	J (all detects)
	BORON	J	6.72	10.7	PQL	mg/Kg	
	CADMIUM	J	0.323	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	1.35	2.15	PQL	mg/Kg	
	SODIUM	J	99.6	107	PQL	mg/Kg	
	TIN	J	3.81	10.7	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-554-SA5D-SB-0.0-0.5	SELENIUM	J	0.206	0.416	PQL	mg/Kg	J (all detects)
SL-554-SA5D-SB-4.0-5.0	SELENIUM	J	0.168	0.424	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0473	0.212	PQL	mg/Kg	
SL-554-SA5D-SB-7.0-8.0	SELENIUM	J	0.273	0.426	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0431	0.213	PQL	mg/Kg	
SL-555-SA5D-SB-0.0-0.5	SELENIUM	J	0.251	0.411	PQL	mg/Kg	J (all detects)
SL-555-SA5D-SB-10.5-11.5	SILVER	J	0.0505	0.215	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-555-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.128 0.0502	0.434 0.217	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-556-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.235 0.0404	0.399 0.200	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-556-SA5D-SB-4.0-5.0	SELENIUM	J	0.221	0.423	PQL	mg/Kg	J (all detects)
SL-559-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.213 0.0560	0.423 0.212	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-559-SA5D-SB-6.0-7.0	SELENIUM SILVER	J J	0.216 0.0312	0.429 0.215	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 7199
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-556-SA5D-SB-11.0-12.0	HEXAVALENT CHROMIUM	J	0.32	0.42	PQL	mg/Kg	J (all detects)

Method: 7471B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-554-SA5D-SB-0.0-0.5	MERCURY	J	0.0110	0.0165	PQL	mg/Kg	J (all detects)
SL-555-SA5D-SB-0.0-0.5	MERCURY	J	0.0100	0.0166	PQL	mg/Kg	J (all detects)
SL-555-SA5D-SB-10.5-11.5	MERCURY	J	0.0156	0.0173	PQL	mg/Kg	J (all detects)
SL-555-SA5D-SB-4.0-5.0	MERCURY	J	0.0131	0.0183	PQL	mg/Kg	J (all detects)
SL-556-SA5D-SB-4.0-5.0	MERCURY	J	0.0100	0.0164	PQL	mg/Kg	J (all detects)

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-555-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40)	J J	4.5 7.2	5.2 10	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-556-SA5D-SB-4.0-5.0	EFH (C21-C30) EFH (C30-C40)	J J	4.8 9.8	5.3 11	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 8081B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-559-SA5D-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	J J	1.2 0.56	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH102 **Laboratory: LL**

EDD Filename: PH102 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-554-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.73	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	0.92	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.1	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.86	1.7	PQL	ug/Kg	
SL-554-SA5D-SB-4.0-5.0	NAPHTHALENE	J	0.81	1.8	PQL	ug/Kg	J (all detects)
SL-554-SA5D-SB-7.0-8.0	NAPHTHALENE	J	0.76	1.8	PQL	ug/Kg	J (all detects)
SL-555-SA5D-SB-0.0-0.5	CHRYSENE	J	0.76	1.7	PQL	ug/Kg	J (all detects)
SL-555-SA5D-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.1	20	PQL	ug/Kg	J (all detects)
SL-556-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.69	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	0.99	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.3	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	1.2	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.76	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.74	1.7	PQL	ug/Kg	
	PYRENE	J	1.0	1.7	PQL	ug/Kg	
SL-556-SA5D-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	1.0	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	0.83	1.7	PQL	ug/Kg	
	CHRYSENE	J	0.92	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	1.7	PQL	ug/Kg	
SL-559-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.85	1.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	0.85	1.8	PQL	ug/Kg	
	CHRYSENE	J	1.0	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.0	1.8	PQL	ug/Kg	

Enclosure II

EPA Level IV Data Validation Reports

LDC Report# 30695E2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Semivolatiles
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270D 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.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

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.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No semivolatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-090413	9/4/13	Di-n-butylphthalate Diethylphthalate Bis(2-ethylhexyl)phthalate Naphthalene	0.11 ug/L 0.30 ug/L 1.6 ug/L 0.032 ug/L	All samples in SDG PH102

Sample FB-041113 (from SDG PH029) was identified as a field blank. No semivolatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-041113	4/11/13	Di-n-butylphthalate Diethylphthalate Bis(2-ethylhexyl)phthalate 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	0.17 ug/L 0.18 ug/L 0.082 ug/L 0.019 ug/L 0.024 ug/L 0.17 ug/L	All samples in SDG PH102

Sample concentrations were compared to concentrations detected in the field 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 field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-555-SA5D-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	8.1 ug/Kg	20U ug/Kg
SL-556-SA5D-SB-0.0-0.5	Naphthalene	0.76 ug/Kg	1.7U ug/Kg
SL-554-SA5D-SB-4.0-5.0	Naphthalene	0.81 ug/Kg	1.8U ug/Kg
SL-554-SA5D-SB-7.0-8.0	Naphthalene	0.76 ug/Kg	1.8U ug/Kg

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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
Semivolatiles - Data Qualification Summary - SDG PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG PH102

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
PH102	SL-555-SA5D-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	20U ug/Kg	A	F
PH102	SL-556-SA5D-SB-0.0-0.5	Naphthalene	1.7U ug/Kg	A	F
PH102	SL-554-SA5D-SB-4.0-5.0	Naphthalene	1.8U ug/Kg	A	F
PH102	SL-554-SA5D-SB-7.0-8.0	Naphthalene	1.8U ug/Kg	A	F

LDC #: 30695E2b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13

SDG #: PH102 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: BR

2nd Reviewer: A

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbo~~SVOCs ns (EPA SW 846 Method 8270~~C~~D-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: 9/5/13
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	RSD ≤30?
IV.	Continuing calibration/ICV	A	|CW| CCV ≤25?
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	Client spec.
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	SW	EB = EB-090413 (SDG # PH101) FB = FB-041113 (SDG # PH029)

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-555-SA5D-SB-0.0-0.5	11	SL-554-SA5D-SB-7.0-8.0	21		31	SBLK1249
2	SL-555-SA5D-SB-4.0-5.0	12		22		32	
3	SL-555-SA5D-SB-10.5-11.5	13		23		33	
4	SL-556-SA5D-SB-0.0-0.5	14		24		34	
5	SL-559-SA5D-SB-0.0-0.5	15		25		35	
6	SL-559-SA5D-SB-6.0-7.0	16		26		36	
7	SL-556-SA5D-SB-11.0-12.0	17		27		37	
8	SL-556-SA5D-SB-4.0-5.0	18		28		38	
9	SL-554-SA5D-SB-0.0-0.5	19		29		39	
10	SL-554-SA5D-SB-4.0-5.0	20		30		40	

LDC #: 30695E2b

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Method: Semivolatiles (EPA SW 846 Method 8270~~C~~D)

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%/~~15%~~ 15 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) ≤ ~~20%~~ 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 #: 30695E2b

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: [illegible]

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/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs 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 SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 30695E2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: BR
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

FB = FB-041113 (SDG # PH029)

Blank units: µg/L **Associated sample units:** µg/kg
Sampling date: 4/11/13
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Code: F

Compound	Blank ID	Sample Identification								
	FB	5x/10x	4	10	11					
XX	0.17	1.7								
LL	0.18	1.8								
EEE	0.082	0.82								
TTT	0.019	0.095								
W	0.024	0.12								
S	0.17	0.85	0.76/1.7u	0.81/1.8u	0.76/1.8u					

EB = EB-090413 (SDG # PH101)

Blank units: µg/L **Associated sample units:** µg/kg
Sampling date: 9/4/13
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: All

Code: F

Compound	Blank ID	Sample Identification								
	EB	5x/10x	2							
XX	0.11	1.1								
LL	0.30	3.0								
EEE	1.6	16	8.1/20u							
S	0.032	0.16								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above 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 #: 30695E2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer BR
2nd Reviewer

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 (IS)	Reported RRF (1 std)	Recalculated RRF (1 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	HP10623	9/6/2013	N-Nitrosodimethylamine (IS1)	1.012	1.012	1.038	1.038	5	5
			Naphthalene (IS2)	1.058	1.058	1.047	1.047	1	1
			Fluorene (IS3)	1.416	1.416	1.341	1.341	3	3
			Anthracene (IS4)	1.193	1.193	1.156	1.156	4	4
			Chrysene (IS5)	1.309	1.309	1.259	1.259	3	3
			Benzo(a)pyrene (IS6)	1.353	1.353	1.252	1.252	5	5

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# 30695E2b

VALIDATION FINDINGS WORSHEET
Continuing Calibration Results Verification

Reviewer: BR
2nd Reviewer:

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)		Average RRF (Initial RRF)	Reported (CC RRF)	Recalculated (CC RRF)	Reported %D	Recalculated %D
1	ci0231	09/13/13	N-Nitrosodimethylamine	(IS1)	1.038	1.040	1.040	0	0
			Naphthalene	(IS2)	1.047	1.052	1.052	0	0
			Fluorene	(IS3)	1.341	1.343	1.343	0	0
			Anthracene	(IS4)	1.156	1.162	1.162	1	1
			Chrysene	(IS5)	1.259	1.267	1.267	1	1
			Benzo(a)pyrene	(IS6)	1.252	1.271	1.271	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# 30695E2b

VALIDATION FINDINGS WORSHEET
Continuing Calibration Results Verification

Reviewer: BR
2nd Reviewer:

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial RRF)	Reported (CC RRF)	Recalculated (CC RRF)	Reported %D	Recalculated %D
1	ci0281	09/13/13	N-Nitrosodimethylamine (IS1)	1.038	1.032	1.032	1	1
			Naphthalene (IS2)	1.047	1.061	1.061	1	1
			Fluorene (IS3)	1.341	1.345	1.345	0	0
			Anthracene (IS4)	1.156	1.196	1.196	3	3
			Chrysene (IS5)	1.259	1.283	1.283	2	2
			Benzo(a)pyrene (IS6)	1.252	1.278	1.278	2	2

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# 30695E2b

VALIDATION FINDINGS WORSHEET
Continuing Calibration Results Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC/MS SVOA (EPA SW 846 Method 8270DSIM)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial RRF)	Reported (CC RRF)	Recalculated (CC RRF)	Reported %D	Recalculated %D
1	ci0311	09/17/13	N-Nitrosodimethylamine (IS1)	1.038	0.986	0.986	5	5
			Naphthalene (IS2)	1.047	1.079	1.079	3	3
			Fluorene (IS3)	1.341	1.305	1.305	3	3
			Anthracene (IS4)	1.156	1.174	1.174	2	2
			Chrysene (IS5)	1.259	1.302	1.302	3	3
			Benzo(a)pyrene (IS6)	1.252	1.307	1.307	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 #: 30695E26

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

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 Fluoranthene-d10	1.00	0.666	67	67	0
2-Fluorobiphenyl Benzo(a)pyrene-d12	↓	0.647	65	65	0
Terphenyl-d14 1-Methylnaphthalene-d10	↓	0.737	74	74	0
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 #: 30695E21

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

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 LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 249LI1CS

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	—	31.93	—	96	96	—	—	—	—
Pentachlorophenol										
Pyrene	33.33	—	32.47	—	97	97	—	—	—	—

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 #: 30695E26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

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:

DDD = 0.8 ug/g

Sample I.D. 1, DDD:

Conc. = $\frac{(3878)(1)(1000)(\quad)(\quad)}{(13985)(1.259)(30.2)(0.95)}$

= 0.76766272 ug/g

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

LDC Report# 30695E3a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Chlorinated Pesticides
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0

Introduction

This data review covers 8 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081B 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.

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.

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.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No chlorinated pesticide contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No chlorinated pesticide 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

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. 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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E3a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13

SDG #: PH102 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: BK

2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081~~A~~B)

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: 7/5/13
II.	GC/ECD Instrument Performance Check	A	
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	N	Client spec.
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	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	

XVI.	Field blanks	ND	EB = EB-090413 (SDG # PH101)
			FB = FB-041113 (SDG # PH029)

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-555-SA5D-SB-0.0-0.5	11		21		31	PBLK15253
2	SL-555-SA5D-SB-4.0-5.0	12		22		32	
3	SL-555-SA5D-SB-10.5-11.5	13		23		33	
4	SL-559-SA5D-SB-0.0-0.5	14		24		34	
5	SL-559-SA5D-SB-6.0-7.0	15		25		35	
6	SL-554-SA5D-SB-0.0-0.5	16		26		36	
7	SL-554-SA5D-SB-4.0-5.0	17		27		37	
8	SL-554-SA5D-SB-7.0-8.0	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30695E3a

VALIDATION FINDINGS CHECKLIST

Reviewer: KR
2nd Reviewer: C

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) ≤ 20%?	✓	✗	NA	
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓	✗	NA
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 ≤ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recovieries 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?			✓	

LDC #: 30695E3a

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
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?	✓			
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. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC#: 30695E3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC Pesticides (EPA SW 846 Method 8081B)

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)

Where

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	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/11/2013	Endosulfan I (RTX-CLP)	225000	283497	233000	233000	5	5
	H919A		Methoxychlor (RTX-CLP)	98749	115891	99194	99194	6	6
			Endosulfan I (RTX-CLPII)	63000	93809	66500	66500	6	6
			Methoxychlor (RTX-CLPII)	33400	43827	34000	34140	3	3

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#: 30695E3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW 846 Method 8081)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Average CF/ Conc	Reported Conc/CF (CC)	Recalculated Conc/CF (CC)	Reported % D	Recalculated %D
1	MIXA3FQ	9/16/2013	Endosulfan I (RTX-CLP)	10.000	10.42	10.41	4	4
		19:20	Methoxychlor (RTX-CLP)	100.000	103.34	103.34	3	3
			Endosulfan I (RTX-CLPII)	10.000	10.60	10.59	6	6
			Methoxychlor (RTX-CLPII)	100.000	109.10	109.10	9	9
2								

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 #: 36695E3a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: BR
2nd reviewer: [illegible]

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:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	10.1	RTX CLP II	8.904217	88	88	0
Decachlorobiphenyl	10.2	↓	9.566656	94	94	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 #: 30695E3c

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: BR
2nd Reviewer: [illegible]

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: LCS 15253

Compound	Spike Added (µg/kg)		Spiked Sample Concentration (µg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	3.42		3.56		104	104				
4,4'-DDT	7.15		8.2		115	115				
Aroclor 1260										

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 #: 31195E3a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd reviewer: A

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: RTX-CLP 1.2 ug/kg

Sample I.D. 4 4,4-DDE

Conc. = (819068)(10) / (2.33E5)(30)(0.936)

= 2.33364E5

1.24993950 7 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 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Polychlorinated Biphenyls
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082A 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-090413 (from SDG PH101) was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

Sample FB-041113 (from SDG PH029) 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 with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
PBLK26253	ZBmultiR2	Tetrachloro-m-xylene	133 (45-120)	All TCL compounds	J (all detects)	A
SL-555-SA5D-SB-0.0-0.5	ZBmultiR2	Tetrachloro-m-xylene	128 (45-120)	All TCL compounds	J (all detects)	A
SL-555-SA5D-SB-4.0-5.0	ZBmultiR2	Tetrachloro-m-xylene	121 (45-120)	All TCL compounds	J (all detects)	A
SL-556-SA5D-SB-0.0-0.5	ZBmultiR2	Tetrachloro-m-xylene	121 (45-120)	All TCL compounds	J (all detects)	A
SL-559-SA5D-SB-0.0-0.5	ZBmultiR2	Tetrachloro-m-xylene	124 (45-120)	All TCL compounds	J (all detects)	A
SL-554-SA5D-SB-4.0-5.0	ZBmultiR2	Tetrachloro-m-xylene	128 (45-120)	All TCL compounds	J (all detects)	A

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0	All TCL compounds	J (all detects)	A	Surrogate spikes (%R) (S)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E3b

SDG #: PH102

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 11/19/13

Page: 1 of 1

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082A)

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: 9/5/13
II.	GC/ECD Instrument Performance Check	N	
III.	Initial calibration	A	RSD ≤ 20%
IV.	Continuing calibration/ICV	A	|CV| CCV ≤ 20%
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	Client spec.
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	N	

XVI.	Field blanks	ND	EB= EB-090413 (SDG # PH101)
			FB= FB-041113 (SDG # PH029)

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-555-SA5D-SB-0.0-0.5	11	SL-554-SA5D-SB-7.0-8.0	21		31	PBLK26253
2	SL-555-SA5D-SB-4.0-5.0	12		22		32	
3	SL-555-SA5D-SB-10.5-11.5	13		23		33	
4	SL-556-SA5D-SB-0.0-0.5	14		24		34	
5	SL-559-SA5D-SB-0.0-0.5	15		25		35	
6	SL-559-SA5D-SB-6.0-7.0	16		26		36	
7	SL-556-SA5D-SB-11.0-12.0	17		27		37	
8	SL-556-SA5D-SB-4.0-5.0	18		28		38	
9	SL-554-SA5D-SB-0.0-0.5	19		29		39	
10	SL-554-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 30695E36

VALIDATION FINDINGS CHECKLIST

Reviewer: KR
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) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓	✓	B2
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 ≤ 15%.0 for individual breakdown in the Evaluation mix standards?			✓	
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recovieries 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?	✓			

LDC #: 30695E36

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
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?	✓			
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. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 30695E2

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)
Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples, standards and blanks?
Y N N/A Did all surrogate percent recoveries (%R) meet the QC limits?

#	Date	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications (Code: S)
		PBLK26253	2 multi R2	TCMX	133 (45-120)	J det / A
					( )	
					( )	
		1			128 ( )	
					( )	
		2			121 ( )	
					( )	
					( )	
		4			121 ( )	
					( )	
					( )	
		5			124 ( )	
					( )	
					( )	
		10			128 ( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

(DCB) Decachlorobiphenyl
(TCMX) Tetrachloro-m-xylene

LDC#: 30695E3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC PCBs (EPA SW 846 Method 8082A)

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (500 std)	Recalculated CF (500 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL 17342A	9/10/2013	PCB1260-1 (ZB-MultiR1)	35016	35016	36730	36730	6	6
			PCB1260-1 (ZB-MultiR2I)	56085	56085	58424	58424	3	3

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#: 30695E3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC PCBs (EPA SW 846 Method 8082)

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	Conc	Reported Conc (CCV)	Recalculated Conc (CCV)	Reported % D	Recalculated %D
1	AR163IP	9/11/2013	PCB1260 (ZB-MultiR1)	200	194.06	194.06	3	3
		19:08	PCB1260 (ZB-MultiR2)	200	189.76	189.76	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#: 30695E3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC PCBs (EPA SW 846 Method 8082)

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	Conc	Reported Conc (CCV)	Recalculated Conc (CCV)	Reported % D	Recalculated %D
1	AR163IQ	9/12/2013	PCB1260 (ZB-MultiR1)	200	193.39	193.39	3	3
		2:31	PCB1260 (ZB-MultiR2)	200	186.87	186.87	7	7

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 #: 30695E3b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: [illegible]

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	ZB Multi R2	~~ZB~~ ~~R2 10.0~~ 10	12.73934	128	127.4	0.5
Decachlorobiphenyl	↓	~~10.0~~ ↓	11.31199	113	113	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 #: 30695E2L

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

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: LCS26253

Compound	Spike Added (µg/kg)		Spiked Sample Concentration (µg/kg)		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC										
4,4'-DDT										
Aroclor 1260	167	—	181.38	—	109	109	—	—	—	—

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 #: 30695E3L

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: BR
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?

LCS 26253

PCB-1260 = 181.38 ug/kg

1260-1 = $\frac{(1996991)(10)}{(36730)(30)}$

= 181.2316544

1260-2 = 173.19731 2

1260-3 = 186.157478

1260-4 = 177.863477

1260-5 = 194.29158 8

1260-6 = 175.556686

Average = 181.3830292 ug/kg

Example:

Sample I.D. AN ND:

Conc. = _____

=

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note: _____

LDC Report# 30695E4

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 14, 2013
Matrix:	Soil
Parameters:	Metals
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0
SL-555-SA5D-SB-4.0-5.0MS
SL-555-SA5D-SB-4.0-5.0MSD
SL-555-SA5D-SB-4.0-5.0DUP

Introduction

This data review covers 14 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010C, 6020A, and 7471B for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, 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

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria 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)	Lithium Tin Calcium Zinc	0.425 mg/Kg 1.476 mg/Kg 5.41 mg/Kg 0.466 mg/Kg	All samples in SDG PH102
ICB/CCB	Cadmium Lithium	0.41 ug/L 3.1 ug/L	All samples in SDG PH102
ICB/CCB	Iron	42.8 ug/L	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0

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-555-SA5D-SB-0.0-0.5	Tin	3.06 mg/Kg	3.06U mg/Kg
SL-555-SA5D-SB-4.0-5.0	Tin	3.51 mg/Kg	3.51U mg/Kg
SL-555-SA5D-SB-10.5-11.5	Tin	3.47 mg/Kg	3.47U mg/Kg
SL-556-SA5D-SB-0.0-0.5	Tin	2.79 mg/Kg	2.79U mg/Kg
SL-559-SA5D-SB-0.0-0.5	Tin	2.99 mg/Kg	2.99U mg/Kg
SL-559-SA5D-SB-6.0-7.0	Tin	3.81 mg/Kg	3.81U mg/Kg
SL-556-SA5D-SB-11.0-12.0	Tin	3.27 mg/Kg	3.27U mg/Kg
SL-556-SA5D-SB-4.0-5.0	Tin	2.83 mg/Kg	2.83U mg/Kg
SL-554-SA5D-SB-0.0-0.5	Tin	3.24 mg/Kg	3.24U mg/Kg
SL-554-SA5D-SB-4.0-5.0	Tin	3.48 mg/Kg	3.48U mg/Kg
SL-554-SA5D-SB-7.0-8.0	Tin	4.11 mg/Kg	4.11U mg/Kg

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-090413	8/28/13	Barium Calcium Manganese	0.00040 mg/L 0.0346 mg/L 0.0011 mg/L	All samples in SDG PH102

Sample FB-041113 (from SDG PH029) was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-041113	4/11/13	Copper Molybdenum	0.0036 mg/L 0.0036 mg/L	All samples in SDG PH102

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	Analyte	Reported Concentration	Modified Final Concentration
SL-555-SA5D-SB-0.0-0.5	Molybdenum	0.290 mg/Kg	0.290U mg/Kg
SL-555-SA5D-SB-4.0-5.0	Molybdenum	0.700 mg/Kg	0.700U mg/Kg
SL-555-SA5D-SB-10.5-11.5	Molybdenum	0.205 mg/Kg	0.205U mg/Kg
SL-559-SA5D-SB-0.0-0.5	Molybdenum	0.329 mg/Kg	0.329U mg/Kg
SL-559-SA5D-SB-6.0-7.0	Molybdenum	1.35 mg/Kg	1.35U mg/Kg
SL-556-SA5D-SB-4.0-5.0	Molybdenum	0.337 mg/Kg	0.337U mg/Kg
SL-554-SA5D-SB-0.0-0.5	Molybdenum	0.366 mg/Kg	0.366U mg/Kg
SL-554-SA5D-SB-4.0-5.0	Molybdenum	0.253 mg/Kg	0.253U mg/Kg

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-555-SA5D-SB-4.0-5.0MS/MSD (All samples in SDG PH102)	Antimony	38 (75-125)	35 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-555-SA5D-SB-4.0-5.0MS/MSD (All samples in SDG PH102)	Potassium	142 (75-125)	131 (75-125)	-	J (all detects)	A

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.

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 PH102	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 PH102

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	Potassium	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	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 PH102

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH102	SL-555-SA5D-SB-0.0-0.5	Tin	3.06U mg/Kg	A	B
PH102	SL-555-SA5D-SB-4.0-5.0	Tin	3.51U mg/Kg	A	B
PH102	SL-555-SA5D-SB-10.5-11.5	Tin	3.47U mg/Kg	A	B
PH102	SL-556-SA5D-SB-0.0-0.5	Tin	2.79U mg/Kg	A	B
PH102	SL-559-SA5D-SB-0.0-0.5	Tin	2.99U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH102	SL-559-SA5D-SB-6.0-7.0	Tin	3.81U mg/Kg	A	B
PH102	SL-556-SA5D-SB-11.0-12.0	Tin	3.27U mg/Kg	A	B
PH102	SL-556-SA5D-SB-4.0-5.0	Tin	2.83U mg/Kg	A	B
PH102	SL-554-SA5D-SB-0.0-0.5	Tin	3.24U mg/Kg	A	B
PH102	SL-554-SA5D-SB-4.0-5.0	Tin	3.48U mg/Kg	A	B
PH102	SL-554-SA5D-SB-7.0-8.0	Tin	4.11U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG PH102

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
PH102	SL-555-SA5D-SB-0.0-0.5	Molybdenum	0.290U mg/Kg	A	F
PH102	SL-555-SA5D-SB-4.0-5.0	Molybdenum	0.700U mg/Kg	A	F
PH102	SL-555-SA5D-SB-10.5-11.5	Molybdenum	0.205U mg/Kg	A	F
PH102	SL-559-SA5D-SB-0.0-0.5	Molybdenum	0.329U mg/Kg	A	F
PH102	SL-559-SA5D-SB-6.0-7.0	Molybdenum	1.35U mg/Kg	A	F
PH102	SL-556-SA5D-SB-4.0-5.0	Molybdenum	0.337U mg/Kg	A	F
PH102	SL-554-SA5D-SB-0.0-0.5	Molybdenum	0.366U mg/Kg	A	F
PH102	SL-554-SA5D-SB-4.0-5.0	Molybdenum	0.253U mg/Kg	A	F

LDC #: 30695E4

SDG #: PH102

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 11/11/13

Page: 1 of 1

Reviewer: 02

2nd Reviewer: W

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7~~000~~) 7471B

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: 9/5/13
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	A	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB= EB-090413 (PH101) FB= FB-041113 (PH029)

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-555-SA5D-SB-0.0-0.5	11	SL-554-SA5D-SB-7.0-8.0	21		31	
2	SL-555-SA5D-SB-4.0-5.0	12	(n2) MS	22		32	
3	SL-555-SA5D-SB-10.5-11.5	13	MSD	23		33	
4	SL-556-SA5D-SB-0.0-0.5	14	Dup	24		34	
5	SL-559-SA5D-SB-0.0-0.5	15		25		35	
6	SL-559-SA5D-SB-6.0-7.0	16		26		36	
7	SL-556-SA5D-SB-11.0-12.0	17		27		37	
8	SL-556-SA5D-SB-4.0-5.0	18		28		38	
9	SL-554-SA5D-SB-0.0-0.5	19		29		39	
10	SL-554-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 30695E-1

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 #: 3069SE1

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
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 #: 30695E4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-11		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
QC-12-N		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 #: 30695E4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	1	2	3	4	5	6	7	8	9	10	11
Cd			0.41	0.205											
Li	0.425		3.1	2.125											
Sn	1.476			7.38	3.06	3.51	3.47	2.79	2.99	3.81	3.27	2.83	3.24	3.48	4.11
Ca	5.41			27.05											
Zn	0.466			2.33											

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1, 3-11

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	No Qualifiers										
Fe			42.8	42.8											

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 #: 30695E4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: OV
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	2	3	5	6	8	9	10				
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.290	0.700	0.205	0.329	1.35	0.337	0.366	0.253				

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification										
	EB-090413 (SDG: PH101)	Action Limit	No Qualifiers									
Ba	0.00040	0.2										
Ca	0.0346	17.3										
Mn	0.0011	0.55										

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 #: 30695E4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010B/6020A/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
	12/13	S	Sb	38	35		All	J/UJ/A (Q)
			K	142	131		↓	Jdet/A ↓

Comments: Al, Ca, Fe, Mg, Mn, Ti >4X

MSD.4SW

LDC #: 30069SE7

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: QR
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:

$\%R = \frac{Found}{True} \times 100$ 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)	Pb	588.50	600	98.1	98.1	Y
ICV	ICP/MS (Initial calibration)	Sr	51.76	50	103.5	103.5	
ICV	CVAA (Initial calibration)	Hg	2.55	2.5	102.0	102.0	
CCV2	ICP (Continuing calibration)	Ti	509.73	500	101.9	101.9	
CCV2	ICP/MS (Continuing calibration)	As	26.35	25	105.4	105.4	
CCV2	CVAA (Continuing calibration)	Hg	1.05	1.0	105.0	105.0	
	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 #: 30695S4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: 92
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	Be	504.0	500	100.8	100.8	Y
LCS	Laboratory control sample	Li	100507	100000	107	107	
12	Matrix spike	Sb	(SSR-SR) 18.8584	49.5050	38	38	
14	Duplicate	Sr	27.3267	27.3137	0	0	
2	ICP serial dilution	Co	78.07	85.25	9	9	Y

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 #: 3069SE4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
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 Fe 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:

1= 100mL(2)(149.72803 mg/L) / 0.9153(1.0248) = 30806.3 mg/kg

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Fe	30800	30800	Y
	2	Se	0.13	0.13	
	3	Hg	0.016	0.016	
	4	Li	28.8	28.8	
	5	Ag	0.056	0.056	
	6	Cr	27.2	27.2	
	7	Sr	18.2	18.2	
	8	Hg	0.010	0.010	
	9	V	58.1	58.1	
	10	Tl	0.33	0.33	
	11	Ca	6220	6220	

Note:

RECALC.4SW

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Herbicides
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-556-SA5D-SB-0.0-0.5
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-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 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 was performed 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. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) 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
9/10/13	HERB3PH	ZB-XLB	Dinoseb	21	PBLK29249	J (all detects) UJ (all non-detects)	A
9/10/13	HERB3PH	ZB35	Dinoseb	32	PBLK29249	J (all detects) UJ (all non-detects)	A
9/10/13	HERB3PI	ZB35	Dinoseb	41	SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0	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.

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.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No herbicide contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No herbicide 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 Duplicate

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 (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
LCS29249	2,4-DB	138 (54-131)	All samples in SDG PH102	J (all detects)	P

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0	Dinoseb	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
PH102	SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0	2,4-DB	J (all detects)	P	Laboratory control samples (%R) (L)
PH102	SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E5

SDG #: PH102

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 11/19/13

Page: 1 of 1

Reviewer: BR

2nd Reviewer: [illegible]

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: 9/5/13
II	Initial calibration	A	RSD ≤ 20%
III.	Calibration verification/ICV	SW	ICV/CCV ≤ 20%
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	Client spec.
VII.	Laboratory control samples	SW	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	Internal std = A
XII.	Field duplicates	N	

XIII.	Field blanks	ND	EB = EB-090413 (SDG # PH101)
			FB = FB-041113 (SDG # PH029)

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-556-SA5D-SB-0.0-0.5	11		21		31	PBLK29249
2	SL-556-SA5D-SB-11.0-12.0	12		22		32	
3	SL-556-SA5D-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	

Notes:

LDC #: 36695E5

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Method: X 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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 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?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? X %D or __%R	✓			
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) 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?			✓	
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?		✓		

LDC #: 30695E5

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
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 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: X 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: _____

cmpd_list.wpd

LDC #: 38695E5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: BR

METHOD: X __ GC __ HPLC

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 continuing calibration standards analyzed at the required frequencies?

Y N N/A Did the continuing calibration standards meet the %D 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 (Limit)	RT (limit)	Associated Samples	Code: C Qualifications
	9/10/13	CCV-HERB3PH	ZBXLB	E	21	( )	PBLK29249	J/UJ/A
			ZB35	E	32	( )		2
						( )		
						( )		
						( )		
	9/10/13	CCV-HERB3PI	ZB35	E	41	( )	1-3	J/UJ/A
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 30695E5

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: X **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 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	Code: L Qualifications
	LCS29249	B	138 (54-131)	( )	( )	All	J hit P
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#: 30695E5

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ A_x = Area of Compound A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards C_x = Concentration of compound, C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) S= Standard deviation of the RRF X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound	Reported RRF (RRF 176 std)	Recalculated RRF (RRF 176 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/9/2013	2,4-D (DB XLB)	1.04E-03	1.04E-03	1.13E-03	1.13E-03	15	15
	19850A		Dinoseb (DB XLB)	1.26E-03	1.26E-03	1.38E-03	1.38E-03	9	9
			2,4-D (DB 35)	1.21E-03	1.21E-03	1.28E-03	1.28E-03	12	12
			Dinoseb (DB 35)	1.07E-03	1.07E-03	1.15E-03	1.15E-03	8	8

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#: 30695E5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC Pesticides (EPA SW 846 Method 8081)

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 = (Ax)(Cis)/(Ais)(Cx)

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	HERB3PH	9/10/2013 6:33	2,4-D (DB XLB)	176.00	184.11	184.24	5	5
			Dinoseb (DB XLB)	100.70	122.33	122.33	21	21
			2,4-D (DB 35)	176.00	183.96	183.81	5	5
			Dinoseb (DB 35)	100.70	133.25	133.02	32	32
2	HERB3PI	9/10/2013 11:09	2,4-D (DB XLB)	176.00	181.63	181.76	3	3
			Dinoseb (DB XLB)	100.70	121.09	121.09	20	20
			2,4-D (DB 35)	176.00	183.27	183.11	4	4
			Dinoseb (DB 35)	100.70	141.52	141.28	41	41

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 #: 36695E5

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
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	
2,4-Dichlorophenylacetic acid	DBXLB	66.9	39.76428	59	59	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 #: 30695E5

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: X GC __HPLC

The percent recoveries (%R) and relative percent differences (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 =((({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

.CS/LCSD samples: LCS29249

Compound	Spike Added (µg/kg)		Spike Sample Concentration (µg/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)	83.7	—	96.8	—	116	115	—	—	—	—
Dinoseb (8151)	142	—	30.52	—	21	21.5	—	—	—	—
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 #: 36695E5

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd Reviewer:

METHOD: X 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. All Compound Name ND

LCS 29249 : 2,4-D = 96.8, DB-XLB

Concentration = (2835255)(~~0.033~~ 1/42)(10) / (8613640)(0.00113267)(30)

= 96.86835079 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 5, 2013
LDC Report Date:	November 14, 2013
Matrix:	Soil
Parameters:	Wet Chemistry
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0
SL-555-SA5D-SB-4.0-5.0MS
SL-555-SA5D-SB-4.0-5.0DUP
SL-556-SA5D-SB-11.0-12.0MS
SL-556-SA5D-SB-11.0-12.0DUP

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Fluoride and EPA SW 846 Method 7199 for Hexavalent Chromium.

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.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No contaminant concentrations were found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No contaminant concentrations were found.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
SL-555-SA5D-SB-4.0-5.0MS/MSD (All samples in SDG PH102)	Fluoride	12 (80-120)	J (all detects) R (all non-detects)	A

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 and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	Fluoride	J (all detects) R (all non-detects)	A	Matrix spike (%R) (Q)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	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 PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E6 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/11/13
SDG #: PH102 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: AR
2nd Reviewer: V

METHOD: (Analyte) Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199)

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: 9/5/13
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	MS
V	Duplicates	A	Dup (Cr^{6+} ok by difference)
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	ND	EB= EB-090113 (PH101) FB= FB-041113 (PH029)

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-555-SA5D-SB-0.0-0.5	11	SL-554-SA5D-SB-7.0-8.0	21		31	
2	SL-555-SA5D-SB-4.0-5.0	12	(#2) MS	22		32	
3	SL-555-SA5D-SB-10.5-11.5	13	↓ DUP	23		33	
4	SL-556-SA5D-SB-0.0-0.5	14	(#7) MS	24		34	
5	SL-559-SA5D-SB-0.0-0.5	15	↓ DUP	25		35	
6	SL-559-SA5D-SB-6.0-7.0	16		26		36	
7	SL-556-SA5D-SB-11.0-12.0	17		27		37	
8	SL-556-SA5D-SB-4.0-5.0	18		28		38	
9	SL-554-SA5D-SB-0.0-0.5	19		29		39	
10	SL-554-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 3069SE6

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
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?			✓	

LDC #: 30695E6

VALIDATION FINDINGS CHECKLIST

Reviewer: CL
2nd Reviewer: VL

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 #: 30695t6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Parameter
13,5,6,7,11	pH TDS Cl (F) NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
4,7,8	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
QC 12,13	pH TDS Cl (F) NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
14,15	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
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 30695E6

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Page: 1 of 1
Reviewer: CL
2nd Reviewer: [illegible]

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 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 (85-115% for Method 300.0)? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
		12	S	F	12 (80-120)	All	J/R/A (Q)

Comments:

LDC #: 30695E6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of F was recalculated. Calibration date: 9/10/13

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	0.018901	0.9997308	0.9997309	Y
		s2	0.4	0.062348			
		s3	1	0.180154			
		s4	2	0.374022			
		s5	3	0.567923			
Calibration verification	↓	ICV	1.5	1.549313	103	103	↓
Calibration verification	Cl⁻	CCV	200	189.838	95	95	
Calibration verification	↓	↓	↓	191.467	96	96	

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 #: 30695C6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: QR
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	4.95	5	99	99	Y
14	Matrix spike sample	Cr^{6+}	(SSR-SR) 37.45	40	94	94	
13	Duplicate sample	F	2.05	1.91	7	7	

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.

TOTCLC.6

LDC #: 30695E6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
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 =

$y = 0.1913x - 0.0081$

Recalculation:

$\frac{0.07 + 0.0081}{0.1913} \times \frac{50\,mL}{0.02g(0.912)} = 2.23\,mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	F	0.83	0.83	Y
	2	↓	2.2	2.2	↓
	3	↓	2.9	2.9	↓
	4	Cr^{6+}	0.62	0.62	↓
	5	F	1.3	1.3	↓
	6	↓	1.5	1.5	↓
	7	Cr^{6+}	0.32	0.32	↓
	8	Cr^{6+}	0.55	0.55	↓
	9	F	0.90	0.90	↓
	10	F	2.0	2.0	↓
	11	F	1.8	1.8	↓

Note:

LDC Report# 30695E7

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

TB-090513
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0

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-090513 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field 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

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) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	TB-090513 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E7 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/18/13
SDG #: PH102 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: BR
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: 9/5/13
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 spec.
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	N	
XIII.	Field blanks	ND	TB = 1 EB = ~~EB~~-090413 (SDG ~~#~~ PH101) FB = FB-041113 (SDG ~~#~~ PH029)

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: Water + soil

1	TB-090513 W	11		21		31	BLKSX
2	SL-555-SA5D-SB-4.0-5.0	12		22		32	BLKSU
3	SL-555-SA5D-SB-10.5-11.5	13		23		33	
4	SL-559-SA5D-SB-6.0-7.0	14		24		34	
5	SL-556-SA5D-SB-11.0-12.0	15		25		35	
6	SL-556-SA5D-SB-4.0-5.0	16		26		36	
7	SL-554-SA5D-SB-4.0-5.0	17		27		37	
8	SL-554-SA5D-SB-7.0-8.0	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 36957

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Method: X 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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 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?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? X %D or __ %R	✓			
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) 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?			✓	
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?	✓			

LDC #: 30695E7

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
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 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 #: 30695E7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C

average CF = sum of the CF/number of standards

%RSD = 100 * (S/X)

Where:

A = Area of compound

C = Concentration of compound

S = Standard deviation of calibration factors

X = Mean of calibration factors

#	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 11379F J&W DB-MTB	5/23/2013	GRO	61486	61486	61516	61516	3	3

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 #: 30695E7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	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 16394F Restek VRX	9/22/2011	GRO	24480	24480	24482	24482	7.0	7.0

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 #: 30695E7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer:

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where: N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc/CF	Reported Conc/CF	Recalculated Conc/CF	Reported % D	Recalculated %D
1	16252B002	9/9/2013	GRO	220.00	195.14	195.13	11	11
	11379F	4:06						
2	94252CB.0026	9/10/2013	GRO	550.00	612.59	612.59	11	11
		7:32						
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 #: 30695E

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer:

METHOD: X 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	
Trifluorotoluene	DB-VRX	30	21.5932	72	72	0

Sample ID: 2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Trifluorotoluene	NS	648-9	439.2920	68	68	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 30695E7

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: X GC __HPLC

The percent recoveries (%R) and relative percent differences (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 =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

.CS/LCSD samples: LCS Au

Compound		Spike Added (mg/kg)		Spike 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)	~~8.38~~ 11	—	8.38	—	76	76	—	—	—	—
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 #: 30695E7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: X 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. A11 Compound Name ND

Concentration =

LCSAU = ~~77~~ 8.38 ug/kg

$= \frac{(23540450 - 2915988)(\cancel{100}\ 25)}{(61516)(1)(1000)} = 8.38\ 17470\ 25$ ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALCnew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-555-SA5D-SB-4.0-5.0
SL-555-SA5D-SB-10.5-11.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-6.0-7.0
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-4.0-5.0
SL-554-SA5D-SB-7.0-8.0

Introduction

This data review covers 11 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 extractables contaminants were found in the method blanks.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

Sample FB-041113 (from SDG PH029) 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

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-555-SA5D-SB-4.0-5.0 SL-555-SA5D-SB-10.5-11.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-6.0-7.0 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-4.0-5.0 SL-554-SA5D-SB-7.0-8.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E8

SDG #: PH102

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 11/18/13

Page: 1 of 1

Reviewer: BK

2nd Reviewer: A

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: 9/5/13
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 spec
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	ND	EB = EB-090413 (SDG #PH101)
			FB = FB-041113 (SDG #PH029)

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-555-SA5D-SB-0.0-0.5	− 11	SL-554-SA5D-SB-7.0-8.0	21		− 31	PBLK39253
− 2	SL-555-SA5D-SB-4.0-5.0	12		22		32	
− 3	SL-555-SA5D-SB-10.5-11.5	13		23		33	
+ 4	SL-556-SA5D-SB-0.0-0.5	14		24		34	
+ 5	SL-559-SA5D-SB-0.0-0.5	15		25		35	
− 6	SL-559-SA5D-SB-6.0-7.0	16		26		36	
− 7	SL-556-SA5D-SB-11.0-12.0	17		27		37	
+ 8	SL-556-SA5D-SB-4.0-5.0	18		28		38	
+ 9	SL-554-SA5D-SB-0.0-0.5	19		29		39	
− 10	SL-554-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 30695E8

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: A

Method: X 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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 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?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? X %D or __ %R	✓			
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) 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?			✓	
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?	✓			

LDC #: 30695E8

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
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 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 #: 30695E8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (144 std)	Recalculated CF (144 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL CP23-19879A ZB-5	8/19/2013	C8-C40	22576	22576	22983	22983	7	7

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 #: 30695E8

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc/CF	Reported Conc/CF	Recalculated Conc/CF	Reported % D	Recalculated %D
1	J253.0056	9/11/2013 23:02	C8-C40	288.01	286.37	286.37	1	1
2								
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 #: 30695E

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: [illegible]

METHOD: X 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	
Chlorobenzene	ZB-5	1.973684	2.0080	102	102	0
ortho-terphenyl	↓	↓	1.7504	89	89	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 #: 30695E8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR

2nd Reviewer: [illegible]

METHOD: X GC __HPLC

The percent recoveries (%R) and relative percent differences (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 =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS 39253

Compound	Spike Added (mg/kg)		Spike 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 C30-C40 (8015)	5.01	—	4.84	—	97	97	—	—	—	—
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 #: 30695E8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: X 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. 1 Compound Name C30-C40

Concentration = (476941)(1000) / (22983)(30.4)(0.953)(1000)
= = 7.162951375 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

LDC Report# 30695E21

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-555-SA5D-SB-0.0-0.5
SL-556-SA5D-SB-0.0-0.5
SL-559-SA5D-SB-0.0-0.5
SL-554-SA5D-SB-0.0-0.5

Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

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 the USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

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. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

PFK and static resolving power were within validation criteria.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

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 within QC limits.

The percent differences (%D) of the second source calibration standard were within QC limits.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
BLK254002	9/11/13	1,2,3,4,7,8-HxCDD	0.0390 ng/Kg	All samples in SDG PH102
		1,2,3,7,8,9-HxCDD	0.0470 ng/Kg	
		1,2,3,4,6,7,8-HpCDD	0.0675 ng/Kg	
		OCDD	0.281 ng/Kg	
		1,2,3,7,8-PeCDF	0.0692 ng/Kg	
		2,3,4,7,8-PeCDF	0.0786 ng/Kg	
		1,2,3,4,7,8-HxCDF	0.0639 ng/Kg	
		1,2,3,6,7,8-HxCDF	0.0330 ng/Kg	
		2,3,4,6,7,8-HxCDF	0.0615 ng/Kg	
		1,2,3,7,8,9-HxCDF	0.0649 ng/Kg	
		1,2,3,4,6,7,8-HpCDF	0.0376 ng/Kg	
		1,2,3,4,7,8,9-HpCDF	0.0826 ng/Kg	
		OCDF	0.227 ng/Kg	

Sample concentrations were compared to concentrations detected in the method blanks. 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	Compound	Reported Concentration	Modified Final Concentration
SL-555-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	0.0330 ng/Kg	0.0330U ng/Kg
	1,2,3,7,8-PeCDF	0.215 ng/Kg	0.215U ng/Kg
	2,3,4,7,8-PeCDF	0.0590 ng/Kg	0.0590U ng/Kg
	1,2,3,4,7,8-HxCDF	0.0429 ng/Kg	0.0429U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0640 ng/Kg	0.0640U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0475 ng/Kg	0.0475U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.103 ng/Kg	0.103U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0522 ng/Kg	0.0522U ng/Kg
	OCDF	0.247 ng/Kg	0.247U ng/Kg
SL-556-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	0.0869 ng/Kg	0.0869U ng/Kg
	1,2,3,4,7,8-HxCDF	0.174 ng/Kg	0.174U ng/Kg
	2,3,4,6,7,8-HxCDF	0.186 ng/Kg	0.186U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0980 ng/Kg	0.0980U ng/Kg
SL-559-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	0.0569 ng/Kg	0.0569U ng/Kg
	2,3,4,7,8-PeCDF	0.193 ng/Kg	0.193U ng/Kg
	1,2,3,4,7,8-HxCDF	0.0943 ng/Kg	0.0943U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0855 ng/Kg	0.0855U ng/Kg
	2,3,4,6,7,8-HxCDF	0.103 ng/Kg	0.103U ng/Kg
	1,2,3,7,8,9-HxCDF	0.147 ng/Kg	0.147U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0780 ng/Kg	0.0780U ng/Kg
	OCDF	0.663 ng/Kg	0.663U ng/Kg
SL-554-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	0.0372 ng/Kg	0.0372U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.308 ng/Kg	0.308U ng/Kg
	1,2,3,7,8-PeCDF	0.328 ng/Kg	0.328U ng/Kg
	2,3,4,7,8-PeCDF	0.0864 ng/Kg	0.0864U ng/Kg
	1,2,3,4,7,8-HxCDF	0.0460 ng/Kg	0.0460U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0547 ng/Kg	0.0547U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0620 ng/Kg	0.0620U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.132 ng/Kg	0.132U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0465 ng/Kg	0.0465U ng/Kg
	OCDF	0.211 ng/Kg	0.211U ng/Kg

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No polychlorinated dioxin/dibenzofuran contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-090413	9/4/13	1,2,3,7,8-PeCDD	0.517 pg/L	All samples in SDG PH102
		1,2,3,4,7,8-HxCDD	0.254 pg/L	
		1,2,3,6,7,8-HxCDD	0.212 pg/L	
		1,2,3,7,8,9-HxCDD	0.136 pg/L	
		1,2,3,4,6,7,8-HpCDD	0.554 pg/L	
		OCDD	0.962 pg/L	
		1,2,3,7,8-PeCDF	0.614 pg/L	
		2,3,4,7,8-PeCDF	0.211 pg/L	
		1,2,3,4,7,8-HxCDF	0.194 pg/L	
		1,2,3,6,7,8-HxCDF	0.179 pg/L	
		2,3,4,6,7,8-HxCDF	0.236 pg/L	
		1,2,3,7,8,9-HxCDF	0.278 pg/L	
		1,2,3,4,6,7,8-HpCDF	0.461 pg/L	
		1,2,3,4,7,8,9-HpCDF	0.305 pg/L	
		OCDF	0.878 pg/L	

Sample FB-041113 (from SDG PH029) was identified as a field blank. No perchlorate was found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-041113	4/11/13	1,2,3,4,7,8-HxCDD	0.125 pg/L	All samples in SDG PH102
		1,2,3,7,8,9-HxCDD	0.134 pg/L	
		1,2,3,4,6,7,8-HpCDD	0.402 pg/L	
		1,2,3,7,8-PeCDF	0.398 pg/L	
		2,3,4,7,8-PeCDF	0.316 pg/L	
		1,2,3,4,7,8-HxCDF	0.324 pg/L	
		1,2,3,6,7,8-HxCDF	0.221 pg/L	
		1,2,3,7,8,9-HxCDF	0.211 pg/L	
		2,3,4,6,7,8-HxCDF	0.149 pg/L	
		1,2,3,4,6,7,8-HpCDF	0.254 pg/L	
		OCDF	0.840 pg/L	

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X for other contaminants) than the concentrations found in the associated field blanks.

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. Ongoing Precision Recovery (OPR)

Ongoing precision recovery samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5	2,3,7,8-TCDF	2nd column confirmation was not performed for this compound.	This compound must be confirmed on the 2nd column per the method.	None	P

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	All compounds reported below the RL.	J (all detects)	A

XII. System Performance

The system performance was acceptable.

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
Dioxins/Dibenzofurans - Data Qualification Summary - SDG PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5	2,3,7,8-TCDF	None	P	Compound quantitation (column confirmation) (*XI)
PH102	SL-555-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-0.0-0.5 SL-559-SA5D-SB-0.0-0.5 SL-554-SA5D-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG PH102

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
PH102	SL-555-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0330U ng/Kg 0.215U ng/Kg 0.0590U ng/Kg 0.0429U ng/Kg 0.0640U ng/Kg 0.0475U ng/Kg 0.103U ng/Kg 0.0522U ng/Kg 0.247U ng/Kg	A	B
PH102	SL-556-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD 1,2,3,4,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.0869U ng/Kg 0.174U ng/Kg 0.186U ng/Kg 0.0980U ng/Kg	A	B
PH102	SL-559-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0569U ng/Kg 0.193U ng/Kg 0.0943U ng/Kg 0.0855U ng/Kg 0.103U ng/Kg 0.147U ng/Kg 0.0780U ng/Kg 0.663U ng/Kg	A	B
PH102	SL-554-SA5D-SB-0.0-0.5	1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0372U ng/Kg 0.308U ng/Kg 0.328U ng/Kg 0.0864U ng/Kg 0.0460U ng/Kg 0.0547U ng/Kg 0.0620U ng/Kg 0.132U ng/Kg 0.0465U ng/Kg 0.211U ng/Kg	A	B

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E21 **VALIDATION COMPLETENESS WORKSHEET** Date: 1-19-13

SDG #: PH102 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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: 9/5/13
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	≤20/35
IV.	Continuing Calibration	A	QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	N	Client
VII.	Laboratory control samples	A	OPR
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	
X.	Target compound identifications	A	
XI.	Compound quantitation/RL/~~LOQ/LODs~~	SW	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	SW	EB=EB-090413 (PH101) FB=FB-041113 (PH029)

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-555-SA5D-SB-0.0-0.5	11		21		31	
2	SL-556-SA5D-SB-0.0-0.5	12		22		32	
3	SL-559-SA5D-SB-0.0-0.5	13		23		33	
4	SL-554-SA5D-SB-0.0-0.5	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	BLK254002	30		40	

Notes:

LDC #: 30695E21

VALIDATION FINDINGS CHECKLIST

Reviewer: Tm
2nd Reviewer: C

Method: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard ≥ 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?			✓	
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. 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.			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VII. 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?	✓			

LDC #: 30695E21

VALIDATION FINDINGS CHECKLIST

Reviewer: 4n
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the 25-150% criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks ≥ 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?			✓	
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✗	✓		
Was the signal to noise ratio for each target compound ~~and labeled standard~~ ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?		✓		
Was an acceptable lock mass recorded and monitored?	✓			
XI. 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?	✓			
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: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:_____

LDC #: 30695E21

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

Blank extraction date: 09/11/13 **Blank analysis date:** 09/13/13 **Associated samples:** All Qual U (B)
Conc. units: ng/kg

Compound	Blank ID	Sample Identification								
	BLK254002	5x	1	2	3	4				
C	0.0390*	0.195	0.0330	0.0869*	0.0569	0.0372*				
E	0.0470*	0.235								
F	0.0675*	0.338				0.308				
G	0.281*	1.41								
I	0.0692*	0.346	0.215*			0.328				
J	0.0786	0.393	0.0590*		0.193*	0.0864*				
K	0.0639*	0.320	0.0429*	0.174	0.0943*	0.0460*				
L	0.0330*	0.165	0.0640*		0.0855*	0.0547*				
M	0.0615*	0.308	0.0475	0.186	0.103	0.0620*				
N	0.0649	0.325			0.147*					
O	0.0376*	0.188	0.103			0.132*				
P	0.0826*	0.413	0.0522*	0.0980	0.0780*	0.0465				
Q	0.227*	1.14	0.247		0.663	0.211*				

*EMPC

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 30695A21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins (EPA Method 1613B)

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 09/04/13
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: All >5x

Compound	Blank ID	Sample Identification								
	EB-090413	5X								
B	0.517*	0.00259								
C	0.254*	0.00127								
D	0.212*	0.00106								
E	0.136*	0.00068								
F	0.554*	0.00277								
G	0.962*	0.00481								
I	0.614*	0.00307								
J	0.211*	0.00106								
K	0.194*	0.00097								
L	0.179*	0.00090								
M	0.236	0.00118								
N	0.278*	0.00139								
O	0.461*	0.00231								
P	0.305	0.00153								
Q	0.878*	0.00439								

* EMPC

EB-090413 (PH101)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the blank concentration were qualified as not detected, "U".

LDC #: 30695E21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of
Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins (EPA Method 1613B)

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 04/11/13
Field blank type: (circle one) Field Blank / Rinsate / Other: FB Associated Samples: All >5x

Compound	Blank ID	Sample Identification								
	FB-041113	5X								
C	0.125	0.00063								
E	0.134*	0.00067								
F	0.402*	0.00201								
I	0.398*	0.00199								
J	0.316*	0.00158								
K	0.324	0.00162								
L	0.221	0.00111								
N	0.211*	0.00106								
M	0.149	0.00075								
O	0.254*	0.00127								
Q	0.840*	0.00420								

* EMPC

FB-041113 (PH029)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the blank concentration were qualified as not detected, "U".

V:\Field Blanks\30695E21_FB-041113.wpd

LDC #: 30695E21

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported RLs

Reviewer:
2nd Reviewer:

METHOD: GC/MS Dioxins/Dibenzofurans (EPA Method 1613B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and RLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Compund	Finding	Associated Samples	Qualifications
		H	No 2,3,7,8-TCDF confirmation analysis	2, 3	None/P

Comments: See sample calculation verification worksheet for recalculations

LDC #: 36695E21

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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 Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	08/21/2013	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.049	1.049	1.022	1.022	6.08	6.08
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.127	1.1275	1.126	1.126	6.68	6.68
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.963	0.963	0.998	0.9975	3.50	3.52
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	1.053	1.085	1.085	2.15	2.15
			OCDF (^{13}C-OCDF)	0.993	0.993	1.015	1.014	3.31	3.32
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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 #: 30695E21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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)	Spiked Conc (ng/mL)	Reported Conc (ng/mL)	Recalculated Conc (ng/mL)	Reported %R	Recalculated %R
1	CS3CC02	9-13-13 19:57	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10	9.45	9.45	95	95
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10	10.15	10.15	101	101.5
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50	48.68	48.68	97	97
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50	50.24	50.24	100	100
			OCDF (^{13}C-OCDF)	100	94.63	94.62	95	95
2	CS3CC02	9-16-13 14:44	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10	10.31	10.31	103	103
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10	10.85	10.85	108	108.5
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50	54.31	54.31	109	109
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50	53.66	53.65	107	107
			OCDF (^{13}C-OCDF)	100	96.83	96.81	97	97
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10				
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10				
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50				
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50				
			OCDF (^{13}C-OCDF)	100				

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30695E21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of
Reviewer:
2nd Reviewer:

METHOD: GC/MS Dioxins/Dibenzofurans (EPA Method 1613B)

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: OPR254002

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	Recalculated
2,3,7,8-TCDD	20.0	NA	20.3	NA	101	101				
1,2,3,7,8-PeCDD	100		103		103	103				
1,2,3,4,7,8-HxCDD	100		105		105	105				
1,2,3,4,7,8,9-HpCDF	100		92.1		92	92				
OCDF	200		183		91	91				

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 #: 36695E21

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of ___
Reviewer: ___
2nd reviewer: ___

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
RRF	=	Relative Response Factor (average) from the initial calibration
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 3, G:

Conc. = $\frac{(32715 + 29510)(4000)(1)}{(782738 + 719022)(1.070)(10.15)(0.936)}$

= 16.3 ng/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 5, 2013
LDC Report Date:	November 20, 2013
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	Eurofins Lancaster Laboratories
Sample Delivery Group (SDG):	PH102

Sample Identification

SL-556-SA5D-SB-0.0-0.5
SL-556-SA5D-SB-11.0-12.0
SL-556-SA5D-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.

Sample EB-090413 (from SDG PH101) was identified as an equipment blank. No perchlorate was found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No perchlorate was found.

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH102	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 PH102

SDG	Sample	Compound	Flag	A or P	Reason (Code)
PH102	SL-556-SA5D-SB-0.0-0.5 SL-556-SA5D-SB-11.0-12.0 SL-556-SA5D-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG PH102

No Sample Data Qualified in this SDG

LDC #: 30695E87 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/19/13
SDG #: PH102 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: BR
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: 9/5/13
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	~~RSD ≤ 20%~~ r²
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 spec.
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	ND	EB= EB-090413 (SDG # PH101) FB= FB-041113 (SDG# PH029)

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-556-SA5D-SB-0.0-0.5	11		21		31	PBLK19252
2	SL-556-SA5D-SB-11.0-12.0	12		22		32	
3	SL-556-SA5D-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 #: 30695E87

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: A

Method: X GC _____ LC/MS

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. LC/MS Instrument performance check				
Were the instrument performance 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) ≤ 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) ≤ 15%?	✓			
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. 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?			✓	
VII. 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?	✓			
XIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 30695E87

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
IX. 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?	✓			
X. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓		✓	BR
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓		✓	BR
Were chromatogram peaks verified and accounted for?	✓			
XI. 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?	✓			
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.		✓		
Target compounds were detected in the field blanks.		✓		

LDC#:30695E87

VALIDATION FINDINGS WORKSHEET

Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: [illegible]

METHOD: LC/MS Perchlorate (EPA SW 846 Method 6850)

Calibration Date	Instrument	Compound	Standard	(Y) Response Ratio	(X) Concentration Ratio		CF
9/11/2013	Instrument1 ESI	Perchlorate	1	0.045150078	0.400		0.1129
			2	0.105807173	1.000		0.1058
			3	0.193683892	2.000		0.0968
			4	0.44789086	4.000		0.1120
			5	1.135611832	10.000		0.1136
			6	2.945989639	25.000		0.1178
						Ave	0.1098

Regression Output		*Calculated*	*Reported*
Constant	c =	*-2.426234E-02*	*-0.0087000*
Std Err of Y Est			
R Squared	r2 =	*0.9997337*	*0.9984083*
Degrees of Freedom			
X Coefficient(s)	m =	*0.11839*	*0.11620*
Std Err of Coef.			
Correlation Coefficient		*1.000*	
Coefficient of Determination (r^2)		*1.000*	*0.998*

LDC#:30695E87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: L

METHOD: LCMS X HPLC

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	MS5P25313032	9/10/2013	Perchlorate	4	3.7	3.6	8	8
2	MSP25313041	9/10/2013	Perchlorate	0.4	0.5	0.5	25	25

Comments: Refer to Continuing 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 #: 30695E87

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: BR
2nd Reviewer: [illegible]

METHOD: LC/MS Perchlorate (EPA SW 846 Method 6850/6860)

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 LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS19252

Compound	Spike Added (µg/kg)		Spike Concentration (µg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Perchlorate	100	—	86.3	—	86	86	—	—	—	—

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 #: 30695E87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: A

METHOD: LCMS Perchlorate (EPA SW 846 Method 6850/6860)

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. A11, ND:
LCS 92.52 = 86.3

Conc. = $\frac{\left[\left(\frac{31468}{29485}\right) + 0.9087\right]}{0.1162}$ (10)( )( )

= 92.595 µg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH103

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 10, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 6, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Perchlorate by EPA SW 846 Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of two MS/MSD pairs for metals, perchlorate, TPH as extractables and fluoride. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of one LCS/LCSD pair for PCBs. No data were qualified due to high %Rs since the associated results were non-detected.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

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-550-SA5D-SB-4.0-5.0	Cobalt	12 (≤10)	All soil samples in SDG PH103	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH103	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

Two field duplicate pairs were collected and analyzed for SVOCs, PCBs, metals, perchlorate, TPH as gasoline, TPH as extractables and fluoride. All RPDs were within QC limits with the exception of several SVOCs, pesticides and metals. No data was qualified on the basis of field duplicate RPDs outside the QC limits. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH101) was collected and analyzed for SVOCs, pesticides,

PCBs, metals, perchlorate, TPH as gasoline, TPH as extractables, dioxins and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were not detected or were significantly greater than the concentrations found in the equipment blanks, therefore no data were qualified.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, perchlorate, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for SVOCs, metals, dioxins, and fluoride. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Sep-2013	TB-090613	7189526	TB	5030B	8015M	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	3050B	6010C	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	3050B	6020A	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	3546	8015M	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	3546	8082A	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	3546	8270D SIM	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	METHOD	1613B	III
06-Sep-2013	SL-550-SA5D-SB-0.0-0.5	7189527	N	METHOD	7471B	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	3050B	6010C	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	3050B	6020A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	3546	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	3546	8082A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	3546	8270D SIM	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	5035A	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0	7189528	N	METHOD	7471B	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	3050B	6010C	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	3050B	6020A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	3546	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	3546	8082A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	3546	8270D SIM	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	5035A	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MS	7189529	MS	METHOD	7471B	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	3050B	6010C	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	3050B	6020A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	3546	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	3546	8082A	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
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	3546	8270D SIM	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	5035A	8015M	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0MSD	7189530	MSD	METHOD	7471B	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0DUP	7189531	DUP	3050B	6010C	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0DUP	7189531	DUP	3050B	6020A	III
06-Sep-2013	SL-550-SA5D-SB-4.0-5.0DUP	7189531	DUP	METHOD	7471B	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	3050B	6010C	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	3050B	6020A	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	3546	8015M	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	3546	8082A	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	3546	8270D SIM	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	5035A	8015M	III
06-Sep-2013	SL-850-SA5D-SB-4.0-5.0	7189532	FD	METHOD	7471B	III
06-Sep-2013	SL-590-SA5D-SB-0.0-0.5	7189535	N	METHOD	300.0	III
06-Sep-2013	SL-590-SA5D-SB-0.0-0.5	7189535	N	METHOD	6850	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0	7189536	N	METHOD	300.0	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0	7189536	N	METHOD	6850	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0MS	7189537	MS	METHOD	300.0	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0MS	7189537	MS	METHOD	6850	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0MSD	7189538	MSD	METHOD	6850	III
06-Sep-2013	SL-590-SA5D-SB-4.0-5.0DUP	7189539	DUP	METHOD	300.0	III
06-Sep-2013	SL-890-SA5D-SB-4.0-5.0	7189540	FD	METHOD	300.0	III
06-Sep-2013	SL-890-SA5D-SB-4.0-5.0	7189540	FD	METHOD	6850	III
06-Sep-2013	SL-590-SA5D-SB-11.0-12.0	7189541	N	METHOD	300.0	III
06-Sep-2013	SL-590-SA5D-SB-11.0-12.0	7189541	N	METHOD	6850	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3050B	6010C	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
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3050B	6020A	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3546	8015M	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3546	8081B	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3546	8082A	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	3546	8270D SIM	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	METHOD	1613B	III
06-Sep-2013	SL-552-SA5D-SB-0.0-0.5	7189533	N	METHOD	7471B	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3050B	6010C	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3050B	6020A	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3546	8015M	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3546	8081B	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3546	8082A	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	3546	8270D SIM	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	5035A	8015M	III
06-Sep-2013	SL-552-SA5D-SB-4.0-5.0	7189534	N	METHOD	7471B	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 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-590-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 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	0.92	J	0.41	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-590-SA5D-SB-11.0-12.0** ***Collected:*** **9/6/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.1		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-590-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	14.2		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-890-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 12:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	13.4		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.03	U	0.746	MDL	4.03	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.712	J	0.0675	MDL	1.01	PQL	mg/Kg	J	Z
BORON	5.31	J	0.847	MDL	10.1	PQL	mg/Kg	J	Z
CADMIUM	0.190	J	0.0766	MDL	1.01	PQL	mg/Kg	J	Z
CHROMIUM	28.5		0.161	MDL	3.02	PQL	mg/Kg	J	Q
COBALT	7.96		0.0998	MDL	1.01	PQL	mg/Kg	J	A
MOLYBDENUM	0.354	J	0.171	MDL	2.02	PQL	mg/Kg	U	F
PHOSPHORUS	441		2.91	MDL	10.1	PQL	mg/Kg	J	Q
POTASSIUM	4970		8.41	MDL	101	PQL	mg/Kg	J	Q
SODIUM	100	J	16.8	MDL	101	PQL	mg/Kg	J	Z
TIN	2.37	J	0.222	MDL	10.1	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:00:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.33	U	0.802	MDL	4.33	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.865	J	0.0726	MDL	1.08	PQL	mg/Kg	J	Z
BORON	4.63	J	0.910	MDL	10.8	PQL	mg/Kg	J	Z
CADMIUM	0.119	J	0.0824	MDL	1.08	PQL	mg/Kg	J	Z
CHROMIUM	31.4		0.173	MDL	3.25	PQL	mg/Kg	J	Q
COBALT	8.28		0.107	MDL	1.08	PQL	mg/Kg	J	A
MOLYBDENUM	0.304	J	0.184	MDL	2.17	PQL	mg/Kg	U	F
PHOSPHORUS	344		3.13	MDL	10.8	PQL	mg/Kg	J	Q
POTASSIUM	3430		9.04	MDL	108	PQL	mg/Kg	J	Q
SODIUM	99.0	J	18.1	MDL	108	PQL	mg/Kg	J	Z
TIN	2.82	J	0.238	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: **SL-552-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 1:10:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.19	U	0.776	MDL	4.19	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.686	J	0.0702	MDL	1.05	PQL	mg/Kg	J	Z
BORON	4.88	J	0.881	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.189	J	0.0797	MDL	1.05	PQL	mg/Kg	J	Z
CHROMIUM	32.1		0.168	MDL	3.14	PQL	mg/Kg	J	Q
COBALT	8.63		0.104	MDL	1.05	PQL	mg/Kg	J	A
MOLYBDENUM	0.284	J	0.178	MDL	2.10	PQL	mg/Kg	U	F
PHOSPHORUS	595		3.03	MDL	10.5	PQL	mg/Kg	J	Q
POTASSIUM	5400		8.74	MDL	105	PQL	mg/Kg	J	Q
SODIUM	87.4	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	2.58	J	0.231	MDL	10.5	PQL	mg/Kg	U	B

Sample ID: **SL-552-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.48	U	0.829	MDL	4.48	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.820	J	0.0750	MDL	1.12	PQL	mg/Kg	J	Z
BORON	3.94	J	0.941	MDL	11.2	PQL	mg/Kg	J	Z
CADMIUM	0.0885	J	0.0851	MDL	1.12	PQL	mg/Kg	J	Z
CHROMIUM	38.9		0.179	MDL	3.36	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-552-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	9.45		0.111	MDL	1.12	PQL	mg/Kg	J	A
MOLYBDENUM	0.253	J	0.190	MDL	2.24	PQL	mg/Kg	U	F
PHOSPHORUS	489		3.24	MDL	11.2	PQL	mg/Kg	J	Q
POTASSIUM	3710		9.34	MDL	112	PQL	mg/Kg	J	Q
SODIUM	100	J	18.7	MDL	112	PQL	mg/Kg	J	Z
TIN	2.90	J	0.246	MDL	11.2	PQL	mg/Kg	U	B

Sample ID: **SL-850-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:10:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.34	U	0.804	MDL	4.34	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.925	J	0.0728	MDL	1.09	PQL	mg/Kg	J	Z
BORON	5.46	J	0.912	MDL	10.9	PQL	mg/Kg	J	Z
CADMIUM	0.0934	J	0.0825	MDL	1.09	PQL	mg/Kg	J	Z
CHROMIUM	35.2		0.174	MDL	3.26	PQL	mg/Kg	J	Q
COBALT	8.55		0.108	MDL	1.09	PQL	mg/Kg	J	A
MOLYBDENUM	0.275	J	0.185	MDL	2.17	PQL	mg/Kg	U	F
PHOSPHORUS	390		3.14	MDL	10.9	PQL	mg/Kg	J	Q
POTASSIUM	3660		9.06	MDL	109	PQL	mg/Kg	J	Q
SODIUM	108	J	18.1	MDL	109	PQL	mg/Kg	J	Z
TIN	2.96	J	0.239	MDL	10.9	PQL	mg/Kg	U	B

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.224	J	0.101	MDL	0.403	PQL	mg/Kg	J	Z

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0269	J	0.0262	MDL	0.202	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:00:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.142	J	0.108	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: **SL-550-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:00:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0367	J	0.0282	MDL	0.217	PQL	mg/Kg	J	Z

Sample ID: **SL-552-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 1:10:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.183	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: **SL-552-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 1:25:00 PM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.162	J	0.112	MDL	0.448	PQL	mg/Kg	J	Z

Sample ID: **SL-850-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:10:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.135	J	0.109	MDL	0.434	PQL	mg/Kg	J	Z

Sample ID: **SL-850-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 9:10:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0360	J	0.0282	MDL	0.217	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.89	J	0.0866	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.357	JB	0.0355	MDL	5.06	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.0610	JBQ	0.0562	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.108	JQ	0.0531	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.104	JQ	0.0457	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.599	J	0.0555	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.229	J	0.0442	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.747	J	0.0518	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.38	J	0.0515	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.217	JQ	0.0719	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.403	JQ	0.0574	MDL	5.06	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0947	JBQ	0.0402	MDL	5.06	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0913	JQ	0.0543	MDL	5.06	PQL	ng/Kg	J	Z
OCDF	0.772	JB	0.0971	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID: **SL-552-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 1:10:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.18	J	0.124	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.546	JB	0.0419	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0773	JBQ	0.0626	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0823	J	0.0782	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0940	JQ	0.0547	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.514	J	0.0856	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0544	JQ	0.0499	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.723	J	0.0807	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.12	J	0.0532	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.250	J	0.0634	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0952	JBQ	0.0512	MDL	5.23	PQL	ng/Kg	U	B
OCDF	1.54	JB	0.0972	MDL	10.5	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **6850** ***Matrix:*** **SO**

Sample ID: **SL-590-SA5D-SB-11.0-12.0** ***Collected:*** **9/6/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.4	J	2.2	MDL	5.3	PQL	ug/Kg	J	Z

Sample ID: **SL-590-SA5D-SB-4.0-5.0** ***Collected:*** **9/6/2013 12:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	8.2		2.3	MDL	5.5	PQL	ug/Kg	J	Q

Method Category: **SVOA**

Method: **8081B** ***Matrix:*** **SO**

Sample ID: **SL-552-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 1:10:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.46	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-550-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 8:40:00 AM** ***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	0.74	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	0.88	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-552-SA5D-SB-0.0-0.5** ***Collected:*** **9/6/2013 1:10:00 PM** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.78	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.4	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.6	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	1.5	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PrepPH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Matrix Spike Precision
F	Field Blank Contamination
L	Laboratory Control Spike Upper Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH103

Method Blank Outlier Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2550B370931	9/14/2013 9:31:00 AM	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 2,3,4,6,7,8-HXCDF OCDD OCDF	0.0282 ng/Kg 0.0482 ng/Kg 0.0500 ng/Kg 0.194 ng/Kg 0.0941 ng/Kg	SL-550-SA5D-SB-0.0-0.5 SL-552-SA5D-SB-0.0-0.5

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-550-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0610 ng/Kg	0.0610U ng/Kg
SL-550-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0947 ng/Kg	0.0947U ng/Kg
SL-552-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0773 ng/Kg	0.0773U ng/Kg
SL-552-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0952 ng/Kg	0.0952U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P25037BB220352	9/11/2013 3:52:00 AM	CALCIUM TIN ZINC	4.05 mg/Kg 1.50 mg/Kg 0.454 mg/Kg	SL-550-SA5D-SB-0.0-0.5 SL-550-SA5D-SB-4.0-5.0 SL-552-SA5D-SB-0.0-0.5 SL-552-SA5D-SB-4.0-5.0 SL-850-SA5D-SB-4.0-5.0

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-550-SA5D-SB-0.0-0.5(RES)	TIN	2.37 mg/Kg	2.37U mg/Kg
SL-550-SA5D-SB-4.0-5.0(RES)	TIN	2.82 mg/Kg	2.82U mg/Kg
SL-552-SA5D-SB-0.0-0.5(RES)	TIN	2.58 mg/Kg	2.58U mg/Kg
SL-552-SA5D-SB-4.0-5.0(RES)	TIN	2.90 mg/Kg	2.90U mg/Kg
SL-850-SA5D-SB-4.0-5.0(RES)	TIN	2.96 mg/Kg	2.96U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-550-SA5D-SB-0.0-0.5 SL-550-SA5D-SB-4.0-5.0 SL-552-SA5D-SB-0.0-0.5 SL-552-SA5D-SB-4.0-5.0 SL-590-SA5D-SB-0.0-0.5 SL-590-SA5D-SB-11.0-12.0 SL-590-SA5D-SB-4.0-5.0 SL-850-SA5D-SB-4.0-5.0 SL-890-SA5D-SB-4.0-5.0

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-550-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.354 mg/Kg	0.354U mg/Kg
SL-550-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.304 mg/Kg	0.304U mg/Kg
SL-552-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.284 mg/Kg	0.284U mg/Kg
SL-552-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.253 mg/Kg	0.253U mg/Kg
SL-850-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.275 mg/Kg	0.275U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6850
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-590-SA5D-SB-4.0-5.0MS SL-590-SA5D-SB-4.0-5.0MSD (SL-590-SA5D-SB-4.0-5.0)	PERCHLORATE	77	74	80.00-120.00	-	PERCHLORATE	J (all detects) UJ (all non-detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-550-SA5D-SB-4.0-5.0MS (SL-550-SA5D-SB-4.0-5.0)	GASOLINE RANGE ORGANICS (	67	-	69.00-123.00	-	GASOLINE RANGE ORGANICS	No Qual, Diluted Out
SL-550-SA5D-SB-4.0-5.0MSD (SL-550-SA5D-SB-4.0-5.0)	EFH (C15-C20) EFH (C21-C30)	- -	128 132	49.00-123.00 49.00-123.00	27 (20.00) 27 (20.00)	EFH (C15-C20) EFH (C21-C30)	J(all detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-550-SA5D-SB-4.0-5.0MS (TOT) SL-550-SA5D-SB-4.0-5.0MSD (TOT) (SL-550-SA5D-SB-0.0-0.5 SL -550-SA5D-SB-4.0-5.0 SL -552-SA5D-SB-0.0-0.5 SL -552-SA5D-SB-4.0-5.0 SL -850-SA5D-SB-4.0-5.0)	ALUMINUM CALCIUM CHROMIUM IRON MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM TITANIUM	3315 206 126 2419 312 136 140 159 530	3521 193 127 402 414 129 - 193 471	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 75.00-125.00	- - - - - - - - -	ALUMINUM CALCIUM CHROMIUM IRON MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM TITANIUM	J(all detects) Al, Ca, Fe, Mg, Mn, Ti, No Qual, >4x
SL-550-SA5D-SB-4.0-5.0MS (TOT) SL-550-SA5D-SB-4.0-5.0MSD (TOT) (SL-550-SA5D-SB-0.0-0.5 SL -550-SA5D-SB-4.0-5.0 SL -552-SA5D-SB-0.0-0.5 SL -552-SA5D-SB-4.0-5.0 SL -850-SA5D-SB-4.0-5.0)	ANTIMONY	27	23	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike = 102%

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-590-SA5D-SB-4.0-5.0MS (SL-590-SA5D-SB-0.0-0.5 SL -590-SA5D-SB-11.0-12.0 SL -590-SA5D-SB-4.0-5.0 SL -890-SA5D-SB-4.0-5.0)	FLUORIDE	365	-	80.00-120.00	-	FLUORIDE	J(all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P32552AQ242023A **P32552AY242004A** (SL-550-SA5D-SB-0.0-0.5 SL -550-SA5D-SB-4.0-5.0 SL -552-SA5D-SB-0.0-0.5 SL -552-SA5D-SB-4.0-5.0 SL -850-SA5D-SB-4.0-5.0)	Aroclor 5442	91	90	62.00-87.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-550-SA5D-SB-4.0-5.0	SL-850-SA5D-SB-4.0-5.0			
MOISTURE	10.4	10.6	2		No Qualifiers Applied

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-590-SA5D-SB-4.0-5.0	SL-890-SA5D-SB-4.0-5.0			
MOISTURE	8.3	8.1	2		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-590-SA5D-SB-4.0-5.0	SL-890-SA5D-SB-4.0-5.0			
FLUORIDE	14.2	13.4	6	50.00	No Qualifiers Applied

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-550-SA5D-SB-4.0-5.0 (TOT)	SL-850-SA5D-SB-4.0-5.0 (TOT)			
ALUMINUM	22600	24600	8	50.00	No Qualifiers Applied
ARSENIC	5.72	6.06	6	50.00	
BARIUM	113	115	2	50.00	
BERYLLIUM	0.865	0.925	7	50.00	
BORON	4.63	5.46	16	50.00	
CADMIUM	0.119	0.0934	24	50.00	
CALCIUM	3350	3570	6	50.00	
CHROMIUM	31.4	35.2	11	50.00	
COBALT	8.28	8.55	3	50.00	
COPPER	13.8	14.1	2	50.00	
IRON	29400	28200	4	50.00	
LEAD	7.37	8.02	8	50.00	
LITHIUM	28.8	30.2	5	50.00	
MAGNESIUM	6460	6830	6	50.00	
MANGANESE	359	387	8	50.00	
MOLYBDENUM	0.304	0.275	10	50.00	
NICKEL	18.1	18.8	4	50.00	
PHOSPHORUS	344	390	13	50.00	
POTASSIUM	3430	3660	6	50.00	
SODIUM	99.0	108	9	50.00	
TIN	2.82	2.96	5	50.00	
TITANIUM	1010	1240	20	50.00	
VANADIUM	56.8	63.8	12	50.00	
ZINC	62.3	62.1	0	50.00	
Zirconium	7.16	8.09	12	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-550-SA5D-SB-4.0-5.0 (TOT)	SL-850-SA5D-SB-4.0-5.0 (TOT)			
SELENIUM	0.142	0.135	5	50.00	No Qualifiers Applied
SILVER	0.0367	0.0360	2	50.00	
STRONTIUM	28.2	28.3	0	50.00	
THALLIUM	0.295	0.290	2	50.00	

Method: 6850
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-590-SA5D-SB-4.0-5.0	SL-890-SA5D-SB-4.0-5.0			
PERCHLORATE	8.2	7.5	9	50.00	No Qualifiers Applied

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-550-SA5D-SB-4.0-5.0	SL-850-SA5D-SB-4.0-5.0			
PH	7.74	7.63	1	50.00	No Qualifiers Applied

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-590-SA5D-SB-4.0-5.0	SL-890-SA5D-SB-4.0-5.0			
PH	7.23	7.27	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	1.89	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.357	5.06	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0610	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.108	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.104	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.599	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.229	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.747	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	1.38	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.217	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.403	5.06	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0947	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0913	5.06	PQL	ng/Kg	
	OCDF	JB	0.772	10.1	PQL	ng/Kg	
SL-552-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	3.18	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.546	5.23	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0773	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0823	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0940	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.514	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.0544	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.723	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	1.12	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.250	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0952	5.23	PQL	ng/Kg	
	OCDF	JB	1.54	10.5	PQL	ng/Kg	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-590-SA5D-SB-0.0-0.5	FLUORIDE	J	0.92	1.0	PQL	mg/Kg	J (all detects)

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.712	1.01	PQL	mg/Kg	J (all detects)
	BORON	J	5.31	10.1	PQL	mg/Kg	
	CADMIUM	J	0.190	1.01	PQL	mg/Kg	
	MOLYBDENUM	J	0.354	2.02	PQL	mg/Kg	
	SODIUM	J	100	101	PQL	mg/Kg	
	TIN	J	2.37	10.1	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.865	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	4.63	10.8	PQL	mg/Kg	
	CADMIUM	J	0.119	1.08	PQL	mg/Kg	
	MOLYBDENUM	J	0.304	2.17	PQL	mg/Kg	
	SODIUM	J	99.0	108	PQL	mg/Kg	
	TIN	J	2.82	10.8	PQL	mg/Kg	
SL-552-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.686	1.05	PQL	mg/Kg	J (all detects)
	BORON	J	4.88	10.5	PQL	mg/Kg	
	CADMIUM	J	0.189	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.284	2.10	PQL	mg/Kg	
	SODIUM	J	87.4	105	PQL	mg/Kg	
	TIN	J	2.58	10.5	PQL	mg/Kg	
SL-552-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.820	1.12	PQL	mg/Kg	J (all detects)
	BORON	J	3.94	11.2	PQL	mg/Kg	
	CADMIUM	J	0.0885	1.12	PQL	mg/Kg	
	MOLYBDENUM	J	0.253	2.24	PQL	mg/Kg	
	SODIUM	J	100	112	PQL	mg/Kg	
	TIN	J	2.90	11.2	PQL	mg/Kg	
SL-850-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.925	1.09	PQL	mg/Kg	J (all detects)
	BORON	J	5.46	10.9	PQL	mg/Kg	
	CADMIUM	J	0.0934	1.09	PQL	mg/Kg	
	MOLYBDENUM	J	0.275	2.17	PQL	mg/Kg	
	SODIUM	J	108	109	PQL	mg/Kg	
	TIN	J	2.96	10.9	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA5D-SB-0.0-0.5	SELENIUM	J	0.224	0.403	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0269	0.202	PQL	mg/Kg	
SL-550-SA5D-SB-4.0-5.0	SELENIUM	J	0.142	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0367	0.217	PQL	mg/Kg	
SL-552-SA5D-SB-0.0-0.5	SELENIUM	J	0.183	0.419	PQL	mg/Kg	J (all detects)
SL-552-SA5D-SB-4.0-5.0	SELENIUM	J	0.162	0.448	PQL	mg/Kg	J (all detects)
SL-850-SA5D-SB-4.0-5.0	SELENIUM	J	0.135	0.434	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0360	0.217	PQL	mg/Kg	

Method: 6850

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-590-SA5D-SB-11.0-12.0	PERCHLORATE	J	3.4	5.3	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH103 **Laboratory: LL**

EDD Filename: PH103 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-552-SA5D-SB-0.0-0.5	4,4'-DDE	J	0.46	1.8	PQL	ug/Kg	J (all detects)

Method: 8270D SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	0.74	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.88	1.7	PQL	ug/Kg	
SL-552-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.78	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.4	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.6	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.7	PQL	ug/Kg	
	PYRENE	J	1.5	1.7	PQL	ug/Kg	

LDC #: 30695F4

SDG #: PH103

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/6/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Co: 12% - All Soil J/UJ/A (A)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(2,3)
XV	Field Blanks	SW	FB= FB-041113 (PH029) EB= EB090413 (PH101)

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-550-SA5D-SB-0.0-0.5	11		21		31	
2	SL-550-SA5D-SB-4.0-5.0	12		22		32	
3	SL-850-SA5D-SB-4.0-5.0	13		23		33	
4	SL-552-SA5D-SB-0.0-0.5	14		24		34	
5	SL-552-SA5D-SB-4.0-5.0	15		25		35	
6	SL-550-SA5D-SB-4.0-5.0MS	16		26		36	
7	SL-550-SA5D-SB-4.0-5.0MSD	17		27		37	
8	SL-550-SA5D-SB-4.0-5.0DUP	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30695FE4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: a
2nd Reviewer: n

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	2	3	4	5							
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.354	0.304	0.275	0.284	0.253							

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-090413 (SDG: PH101)	Action Limit	No Qualifiers									
Ba	0.00040	0.2										
Ca	0.0346	17.3										
Mn	0.0011	0.55										

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH103
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7189528BKG Matrix Spike Lab Sample ID: 7189529MS Matrix Spike Duplicate Lab Sample ID: 7189530MSD
Batch Id(s): P25037B, P25038B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		20276.0126		26713.8612		27318.3420		194.1748	200.0000	MG/KG	3315		3521	*	2			20	P
Antimony		0.7184	U	13.0340		11.6300		48.5437	50.0000	MG/KG	27	N	23	N	11		75 - 125	20	P
Arsenic		5.1214		20.9369		20.1730		14.5631	15.0000	MG/KG	109		100		4		75 - 125	20	P
Barium		101.5748		298.2000		307.8270		194.1748	200.0000	MG/KG	101		103		3		75 - 125	20	P
Beryllium		0.7748	B	5.7388		5.9440		4.8544	5.0000	MG/KG	102		103		4		75 - 125	20	P
Boron		4.1485	B	190.7631		199.0340		194.1748	200.0000	MG/KG	96		97		4		75 - 125	20	P
Cadmium		0.1068	B	4.6466		4.8690		4.8544	5.0000	MG/KG	94		95		5		75 - 125	20	P
Calcium		2997.9155		3799.7291		3771.3740		388.3495	400.0000	MG/KG	206		193		1			20	P
Chromium		28.1505		52.6874		53.6330		19.4175	20.0000	MG/KG	126	N	127	N	2		75 - 125	20	P
Cobalt		7.4214		52.4272		55.0310		48.5437	50.0000	MG/KG	93		95		5		75 - 125	20	P
Copper		12.4087		37.9670		39.5250		24.2718	25.0000	MG/KG	105		108		4		75 - 125	20	P
Iron		26313.8233		28662.6854		26715.6920		97.0874	100.0000	MG/KG	2419		402		7			20	P
Lead		6.6000		20.7650		20.9300		14.5631	15.0000	MG/KG	97		96		1		75 - 125	20	P
Lithium		25.7806		126.3883		131.0910		97.0874	100.0000	MG/KG	104		105		4		75 - 125	20	P
Magnesium		5788.4699		6394.4505		6617.1600		194.1748	200.0000	MG/KG	312		414		3			20	P
Manganese		321.7136		387.7078		386.3130		48.5437	50.0000	MG/KG	136		129	*	0			20	P
Mercury		0.0099	U	0.1760		0.1785		0.1597	0.1601	MG/KG	110		111		1		65 - 135	20	CV
Molybdenum		0.2728	B	176.6126		184.4770		194.1748	200.0000	MG/KG	91		92		4		75 - 125	20	P
Nickel		16.1835		62.3126		64.7300		48.5437	50.0000	MG/KG	95		97		4		75 - 125	20	P
Phosphorus		307.9466		443.6252		431.4810		97.0874	100.0000	MG/KG	140	N	124		3		75 - 125	20	P
Potassium		3074.1893		4621.5447		5002.2930		970.8738	1000.0000	MG/KG	159	N	193	N	8		75 - 125	20	P
Selenium	78	0.1268	B	2.0544		2.0540		1.9417	2.0000	MG/KG	99		96		0		75 - 125	20	MS
Silver	107	0.0329	B	9.6932		9.7360		9.7087	10.0000	MG/KG	100		97		0		75 - 125	20	MS
Sodium		88.6845	B	1043.9068		1087.9660		970.8738	1000.0000	MG/KG	98		100		4		75 - 125	20	P
Strontium	88	25.2621		32.9320		32.0600		7.7670	8.0000	MG/KG	99		85		3		75 - 125	20	MS
Thallium	203	0.2641		0.7045		0.6924		0.3883	0.4000	MG/KG	113		107		2		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

74K

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH103
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7189528BKG Matrix Spike Lab Sample ID: 7189529MS Matrix Spike Duplicate Lab Sample ID: 7189530MSD
Batch Id(s): P25037B, P25038B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Tin		2.5243	B	326.3874		342.3470		388.3495	400.0000	MG/KG	83		85		5		75 - 125	20	P
Titanium		901.9641		1416.1961		1373.1830		97.0874	100.0000	MG/KG	530		471		3			20	P
Vanadium		50.8738		109.3388		111.7900		48.5437	50.0000	MG/KG	120		122		2		75 - 125	20	P
Zinc		55.8068		105.1573		109.1330		48.5437	50.0000	MG/KG	102		107		4		75 - 125	20	P
Zirconium		6.4184		101.3262		106.4280		97.0874	100.0000	MG/KG	98		100		5		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH103
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7189528BKG
Duplicate Lab Sample ID: 7189531DUP
Batch ID(s): P25037B, P25038B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			20276.0126		21555.7050		6		P
Antimony			-1.1854	B	-1.6139	B	-31		P
Arsenic		3.9	5.1214		5.5228		8		P
Barium			101.5748		104.3802		3		P
Beryllium			0.7748	B	0.8099	B	4		P
Boron			4.1485	B	3.8099	B	9		P
Cadmium			0.1068	B	0.0901	B	17		P
Calcium			2997.9155		3094.0871		3		P
Chromium			28.1505		29.1604		4		P
Cobalt			7.4214		7.3535		1		P
Copper			12.4087		12.9485		4		P
Iron			26313.8233		27161.7822		3		P
Lead		2.9	6.6000		6.6426		1		P
Lithium			25.7806		26.8812		4		P
Magnesium			5788.4699		5937.2515		3		P
Manganese			321.7136		324.1802		1		P
Mercury			0.0099	U	0.0098	U			CV
Molybdenum			0.2728	B	0.2376	B	14		P
Nickel			16.1835		16.7614		4		P
Phosphorus			307.9466		320.9455		4		P
Potassium			3074.1893		3269.4683		6		P
Selenium	78		0.1268	B	0.1074	B	17		MS
Silver	107		0.0329	B	0.0389	B	17		MS
Sodium			88.6845	B	92.7693	B	5		P
Strontium	88		25.2621		25.3861		0		MS
Thallium	203	0.2	0.2641		0.3018		13		MS
Tin			2.5243	B	2.6842	B	6		P
Titanium			901.9641		981.5327		8		P
Vanadium			50.8738		52.7297		4		P
Zinc			55.8068		57.1267		2		P
Zirconium		4.9	6.4184		7.3426		13		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by reference

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH104

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 10, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 9, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of two MS/MSD pairs for SVOCs, metals, TPH as extractables and fluoride. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of one LCS/LCSD pair for SVOCs. No data were qualified due to high %Rs since the associated results were non-detected.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

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-515-SA5D-SB-0.0-0.5	Cobalt Strontium	11 (≤10) 24 (≤10)	All soil samples in SDG PH104	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH104	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as extractables, dioxins, and fluoride. All RPDs were within QC limits with the exception of SVOCs, metals, TPH as extractables and dioxins. In these duplicate pairs, the associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH106) was collected and analyzed for SVOCs, pesticides,

PCBs, metals, TPH as gasoline, TPH as extractables, dioxins and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables, dioxins and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Sep-2013	SL-599-SA5D-SB-0.0-0.5	7191090	N	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-4.0-5.0	7191091	N	METHOD	300.0	III
09-Sep-2013	TB-090913	7191081	TB	5030B	8015M	III
09-Sep-2013	SL-599-SA5D-SB-9.0-10.0	7191092	N	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-14.0-15.0	7191093	N	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-19.0-20.0	7191094	N	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-22.0-23.0	7191095	N	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-22.0-23.0D	P191095D270403B	DUP	METHOD	300.0	III
09-Sep-2013	SL-599-SA5D-SB-22.0-23.0M	P191095R270419B	MS	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3546	8081B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	METHOD	1613B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5	7191082	N	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3546	8081B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	METHOD	1613B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	METHOD	300.0	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
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MS	7191083	MS	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3546	8081B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	METHOD	1613B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5MSD	7191084	MSD	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5DUP	7191085	DUP	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5DUP	7191085	DUP	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5DUP	7191085	DUP	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-0.0-0.5DUP	7191085	DUP	METHOD	7471B	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3050B	6010C	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3050B	6020A	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3546	8015M	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3546	8081B	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3546	8082A	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	3546	8270D SIM	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	METHOD	1613B	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	METHOD	300.0	III
09-Sep-2013	SL-815-SA5D-SB-0.0-0.5	7191086	FD	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3546	8081B	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
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	5035A	8015M	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-4.0-5.0	7191087	N	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3546	8081B	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	5035A	8015M	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-9.0-10.0	7191088	N	METHOD	7471B	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3050B	6010C	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3050B	6020A	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3546	8015M	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3546	8081B	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3546	8082A	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	3546	8270D SIM	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	5035A	8015M	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	METHOD	300.0	III
09-Sep-2013	SL-515-SA5D-SB-22.0-23.0	7191089	N	METHOD	7471B	III
09-Sep-2013	SL-601-SA5D-SB-0.0-0.5	7191096	N	METHOD	300.0	III
09-Sep-2013	SL-601-SA5D-SB-4.0-5.0	7191097	N	METHOD	300.0	III
09-Sep-2013	SL-601-SA5D-SB-9.0-10.0	7191098	N	METHOD	300.0	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
09-Sep-2013	SL-601-SA5D-SB-14.0-15.0	7191099	N	METHOD	300.0	III
09-Sep-2013	SL-601-SA5D-SB-20.5-21.5	7191100	N	METHOD	300.0	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*

Attachment 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***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	0.44	MDL	1.1	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-515-SA5D-SB-22.0-23.0** ***Collected:*** **9/9/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.7		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***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		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-515-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 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	6.5		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-599-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 7:45:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.55	J	0.44	MDL	1.1	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-599-SA5D-SB-14.0-15.0** ***Collected:*** **9/9/2013 8:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.2		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-599-SA5D-SB-19.0-20.0** ***Collected:*** **9/9/2013 8:25:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.9		0.46	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-599-SA5D-SB-22.0-23.0** ***Collected:*** **9/9/2013 8:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.1		0.45	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-599-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 7:55:00 AM** ***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		0.46	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-599-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 8:05:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	10.9		0.46	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-601-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 1:10:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-601-SA5D-SB-14.0-15.0** ***Collected:*** **9/9/2013 1:40:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	10.7		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-601-SA5D-SB-20.5-21.5** ***Collected:*** **9/9/2013 1:45:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.4		0.41	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: **SL-601-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 1:20:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.5		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-601-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 1:30:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.0		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-815-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.0	J	0.43	MDL	1.1	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.25	J	0.791	MDL	4.28	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.841	J	0.0716	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.623	J	0.0813	MDL	1.07	PQL	mg/Kg	J	Z
CHROMIUM	34.7		0.171	MDL	3.21	PQL	mg/Kg	J	Q
COBALT	9.13		0.106	MDL	1.07	PQL	mg/Kg	J	A
MOLYBDENUM	0.504	J	0.182	MDL	2.14	PQL	mg/Kg	UJ	FD, F, F
TIN	3.34	J	0.235	MDL	10.7	PQL	mg/Kg	U	B
VANADIUM	65.9		0.139	MDL	1.07	PQL	mg/Kg	J	Q
Zirconium	2.64	J	0.898	MDL	5.35	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-22.0-23.0** ***Collected:*** **9/9/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.67	U	0.864	MDL	4.67	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.915	J	0.0783	MDL	1.17	PQL	mg/Kg	J	Z
BORON	11.6	J	0.981	MDL	11.7	PQL	mg/Kg	J	Z
CADMIUM	0.504	J	0.0888	MDL	1.17	PQL	mg/Kg	J	Z
CHROMIUM	32.9		0.187	MDL	3.50	PQL	mg/Kg	J	Q
COBALT	9.46		0.116	MDL	1.17	PQL	mg/Kg	J	A
TIN	3.66	J	0.257	MDL	11.7	PQL	mg/Kg	U	B
VANADIUM	61.3		0.152	MDL	1.17	PQL	mg/Kg	J	Q
Zirconium	2.13	J	0.981	MDL	5.84	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.17	J	0.869	MDL	4.69	PQL	mg/Kg	J	Z, Q
BERYLLIUM	1.03	J	0.0786	MDL	1.17	PQL	mg/Kg	J	Z
CADMIUM	0.558	J	0.0892	MDL	1.17	PQL	mg/Kg	J	Z
CHROMIUM	40.0		0.188	MDL	3.52	PQL	mg/Kg	J	Q
COBALT	10.5		0.116	MDL	1.17	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	116	J	19.6	MDL	117	PQL	mg/Kg	J	Z
TIN	4.04	J	0.258	MDL	11.7	PQL	mg/Kg	U	B
VANADIUM	78.8		0.153	MDL	1.17	PQL	mg/Kg	J	Q
Zirconium	4.45	J	0.986	MDL	5.87	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 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
ANTIMONY	0.958	J	0.851	MDL	4.60	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.929	J	0.0771	MDL	1.15	PQL	mg/Kg	J	Z
CADMIUM	0.508	J	0.0874	MDL	1.15	PQL	mg/Kg	J	Z
CHROMIUM	34.2		0.184	MDL	3.45	PQL	mg/Kg	J	Q
COBALT	9.88		0.114	MDL	1.15	PQL	mg/Kg	J	A
TIN	3.43	J	0.253	MDL	11.5	PQL	mg/Kg	U	B
VANADIUM	63.5		0.150	MDL	1.15	PQL	mg/Kg	J	Q
Zirconium	2.56	J	0.966	MDL	5.75	PQL	mg/Kg	J	Z

Sample ID: **SL-815-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.25	J	0.786	MDL	4.25	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.829	J	0.0712	MDL	1.06	PQL	mg/Kg	J	Z
CADMIUM	0.648	J	0.0807	MDL	1.06	PQL	mg/Kg	J	Z
CHROMIUM	33.8		0.170	MDL	3.19	PQL	mg/Kg	J	Q
COBALT	9.08		0.105	MDL	1.06	PQL	mg/Kg	J	A
MOLYBDENUM	0.247	J	0.181	MDL	2.12	PQL	mg/Kg	UJ	FD, F, F
TIN	3.54	J	0.234	MDL	10.6	PQL	mg/Kg	U	B
VANADIUM	64.7		0.138	MDL	1.06	PQL	mg/Kg	J	Q
Zirconium	1.93	J	0.892	MDL	5.31	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.327	J	0.107	MDL	0.428	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0315	J	0.0278	MDL	0.214	PQL	mg/Kg	J	Z
STRONTIUM	89.4		0.0727	MDL	0.428	PQL	mg/Kg	J	A

Sample ID: **SL-515-SA5D-SB-22.0-23.0** ***Collected:*** **9/9/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0505	J	0.0304	MDL	0.234	PQL	mg/Kg	J	Z
STRONTIUM	37.4		0.0794	MDL	0.467	PQL	mg/Kg	J	A

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.220	J	0.117	MDL	0.469	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0433	J	0.0305	MDL	0.235	PQL	mg/Kg	J	Z
STRONTIUM	49.2		0.0798	MDL	0.469	PQL	mg/Kg	J	A

Sample ID: **SL-515-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 10:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.140	J	0.115	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-9.0-10.0** ***Collected:*** **9/9/2013 10:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0376	J	0.0299	MDL	0.230	PQL	mg/Kg	J	Z
STRONTIUM	49.0		0.0782	MDL	0.460	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-815-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:40:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.346	J	0.106	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: SL-815-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:40:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0321	J	0.0276	MDL	0.212	PQL	mg/Kg	J	Z
STRONTIUM	82.8		0.0722	MDL	0.425	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-515-SA5D-SB-9.0-10.0 *Collected:* 9/9/2013 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
MERCURY	0.0122	J	0.0115	MDL	0.0191	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-515-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:30:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.403	J	0.0568	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.159	JBQ	0.0224	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0746	JBQ	0.0383	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	5.24	U	0.0393	MDL	5.24	PQL	ng/Kg	UJ	FD
1,2,3,4,7,8-HXCDF	0.0599	JQ	0.0290	MDL	5.24	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	5.24	U	0.0392	MDL	5.24	PQL	ng/Kg	UJ	FD
1,2,3,6,7,8-HXCDF	5.24	U	0.0280	MDL	5.24	PQL	ng/Kg	UJ	FD
1,2,3,7,8,9-HXCDD	0.0862	JQ	0.0416	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.174	JQ	0.0365	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0657	JQ	0.0602	MDL	5.24	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.156	JQ	0.0465	MDL	5.24	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	5.24	U	0.0259	MDL	5.24	PQL	ng/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	5.24	U	0.0469	MDL	5.24	PQL	ng/Kg	UJ	FD
OCDD	3.47	JB	0.0626	MDL	10.5	PQL	ng/Kg	J	Z
OCDF	0.321	JB	0.0644	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: **SL-815-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:40:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.529	J	0.0620	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.196	JBQ	0.0297	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.114	JB	0.0479	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0610	JQ	0.0440	MDL	5.40	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.194	JQ	0.0402	MDL	5.40	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	0.151	J	0.0471	MDL	5.40	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.101	JQ	0.0365	MDL	5.40	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	0.133	JQ	0.0475	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.192	JQ	0.0486	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	5.40	U	0.0686	MDL	5.40	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	5.40	U	0.0585	MDL	5.40	PQL	ng/Kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.149	JBQ	0.0364	MDL	5.40	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.112	JQ	0.0573	MDL	5.40	PQL	ng/Kg	J	Z, FD
OCDD	3.63	JB	0.0783	MDL	10.8	PQL	ng/Kg	J	Z
OCDF	0.382	JB	0.0758	MDL	10.8	PQL	ng/Kg	U	B

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***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)	5.5	J	2.2	MDL	5.5	PQL	mg/Kg	J	Q, Q, FD
EFH (C30-C40)	11	J	4.4	MDL	11	PQL	mg/Kg	J	Q, Q, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-515-SA5D-SB-4.0-5.0 *Collected:* 9/9/2013 9:50:00 AM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	4.4	J	2.3	MDL	5.9	PQL	mg/Kg	J	Z
EFH (C30-C40)	9.0	J	4.7	MDL	12	PQL	mg/Kg	J	Z

Sample ID: SL-515-SA5D-SB-9.0-10.0 *Collected:* 9/9/2013 10:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	2.8	J	2.4	MDL	5.9	PQL	mg/Kg	J	Z
EFH (C30-C40)	6.9	J	4.7	MDL	12	PQL	mg/Kg	J	Z

Sample ID: SL-815-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:40:00 AM *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)	10		2.2	MDL	5.4	PQL	mg/Kg	J	FD
EFH (C30-C40)	22		4.3	MDL	11	PQL	mg/Kg	J	FD

Method Category: SVOA
Method: 8081B **Matrix:** SO

Sample ID: SL-515-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:30:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.65	J	0.36	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-815-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.58	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8270D SIM **Matrix:** SO

Sample ID: SL-515-SA5D-SB-0.0-0.5 *Collected:* 9/9/2013 9:30:00 AM *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	1.5	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-515-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:30:00 AM** ***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	0.37	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.8	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
NAPHTHALENE	1.8	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
PHENANTHRENE	1.8	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD

Sample ID: **SL-515-SA5D-SB-22.0-23.0** ***Collected:*** **9/9/2013 10:30:00** ***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	7.6	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: **SL-515-SA5D-SB-4.0-5.0** ***Collected:*** **9/9/2013 9:50:00 AM** ***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	10	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: **SL-815-SA5D-SB-0.0-0.5** ***Collected:*** **9/9/2013 9:40:00 AM** ***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	1.4	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.5	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.89	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, FD
NAPHTHALENE	0.79	J	0.72	MDL	1.8	PQL	ug/Kg	UJ	F, FD
PHENANTHRENE	0.81	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH104

Method Blank Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2550B370931	9/14/2013 9:31:00 AM	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 2,3,4,6,7,8-HXCDF OCDD OCDF	0.0282 ng/Kg 0.0482 ng/Kg 0.0500 ng/Kg 0.194 ng/Kg 0.0941 ng/Kg	SL-515-SA5D-SB-0.0-0.5 SL-815-SA5D-SB-0.0-0.5

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-515-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0746 ng/Kg	0.0746U ng/Kg
SL-515-SA5D-SB-0.0-0.5(RES)	OCDF	0.321 ng/Kg	0.321U ng/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.114 ng/Kg	0.114U ng/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	OCDF	0.382 ng/Kg	0.382U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P25637BB221459	9/17/2013 2:59:00 PM	CALCIUM TIN	5.14 mg/Kg 1.20 mg/Kg	SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5

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-515-SA5D-SB-0.0-0.5(RES)	TIN	3.34 mg/Kg	3.34U mg/Kg
SL-515-SA5D-SB-22.0-23.0(RES)	TIN	3.66 mg/Kg	3.66U mg/Kg
SL-515-SA5D-SB-4.0-5.0(RES)	TIN	4.04 mg/Kg	4.04U mg/Kg
SL-515-SA5D-SB-9.0-10.0(RES)	TIN	3.43 mg/Kg	3.43U mg/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	TIN	3.54 mg/Kg	3.54U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PrepPH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-091113(REA2)	9/11/2013 3:00:00 PM	COPPER MANGANESE MOLYBDENUM	0.004 mg/L 0.0019 mg/L 0.0087 mg/L	SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-599-SA5D-SB-0.0-0.5 SL-599-SA5D-SB-14.0-15.0 SL-599-SA5D-SB-19.0-20.0 SL-599-SA5D-SB-22.0-23.0 SL-599-SA5D-SB-4.0-5.0 SL-599-SA5D-SB-9.0-10.0 SL-601-SA5D-SB-0.0-0.5 SL-601-SA5D-SB-14.0-15.0 SL-601-SA5D-SB-20.5-21.5 SL-601-SA5D-SB-4.0-5.0 SL-601-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5

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-515-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.504 mg/Kg	0.504U mg/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.247 mg/Kg	0.247U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PrepPH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-599-SA5D-SB-0.0-0.5 SL-599-SA5D-SB-14.0-15.0 SL-599-SA5D-SB-19.0-20.0 SL-599-SA5D-SB-22.0-23.0 SL-599-SA5D-SB-4.0-5.0 SL-599-SA5D-SB-9.0-10.0 SL-601-SA5D-SB-0.0-0.5 SL-601-SA5D-SB-14.0-15.0 SL-601-SA5D-SB-20.5-21.5 SL-601-SA5D-SB-4.0-5.0 SL-601-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5

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-515-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.504 mg/Kg	0.504U mg/Kg
SL-815-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.247 mg/Kg	0.247U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(RES)	4/11/2013 3:00:00 PM	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate NAPHTHALENE	0.019 ug/L 0.024 ug/L 0.082 ug/L 0.18 ug/L 0.17 ug/L 0.17 ug/L	SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-599-SA5D-SB-0.0-0.5 SL-599-SA5D-SB-14.0-15.0 SL-599-SA5D-SB-19.0-20.0 SL-599-SA5D-SB-22.0-23.0 SL-599-SA5D-SB-4.0-5.0 SL-599-SA5D-SB-9.0-10.0 SL-601-SA5D-SB-0.0-0.5 SL-601-SA5D-SB-14.0-15.0 SL-601-SA5D-SB-20.5-21.5 SL-601-SA5D-SB-4.0-5.0 SL-601-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5

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-815-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.79 ug/Kg	1.8U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-515-SA5D-SB-0.0-0.5MS SL-515-SA5D-SB-0.0-0.5MSD (SL-515-SA5D-SB-0.0-0.5)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	145 127 127	182 273 384	49.00-123.00 49.00-123.00 49.00-123.00	22 (20.00) 46 (20.00) 57 (20.00)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	J (all detects)

Method: 8270D SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-515-SA5D-SB-0.0-0.5MS SL-515-SA5D-SB-0.0-0.5MSD (SL-515-SA5D-SB-0.0-0.5)	N-NITROSODIMETHYLAMINE	177	171	48.00-113.00	-	N-NITROSODIMETHYLAMINE	J(all detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-515-SA5D-SB-0.0-0.5MS (TOT) SL-515-SA5D-SB-0.0-0.5MSD (TOT) (SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5)	ALUMINUM CHROMIUM IRON MAGNESIUM POTASSIUM TITANIUM VANADIUM	4743 128 1924 519 196 605 130	4362 - 1020 442 183 550 -	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 CHROMIUM IRON MAGNESIUM POTASSIUM TITANIUM VANADIUM	J(all detects) Al, Fe, Mg, K, Ti, No Qual, >4x
SL-515-SA5D-SB-0.0-0.5MS (TOT) SL-515-SA5D-SB-0.0-0.5MSD (TOT) (SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5)	CALCIUM	-243	618	75.00-125.00	-	CALCIUM	No Qual, >4x
SL-515-SA5D-SB-0.0-0.5MS (TOT) SL-515-SA5D-SB-0.0-0.5MSD (TOT) (SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5)	ANTIMONY	48	48	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-515-SA5D-SB-0.0-0.5MSD (TOT) (SL-515-SA5D-SB-0.0-0.5 SL -515-SA5D-SB-22.0-23.0 SL -515-SA5D-SB-4.0-5.0 SL -515-SA5D-SB-9.0-10.0 SL -815-SA5D-SB-0.0-0.5)	STRONTIUM	-	144	75.00-125.00	-	STRONTIUM	No Qual, >4x

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-515-SA5D-SB-0.0-0.5MS (SL-515-SA5D-SB-0.0-0.5 SL -515-SA5D-SB-22.0-23.0 SL -515-SA5D-SB-4.0-5.0 SL -515-SA5D-SB-9.0-10.0 SL -599-SA5D-SB-0.0-0.5 SL -599-SA5D-SB-14.0-15.0 SL -599-SA5D-SB-19.0-20.0 SL -599-SA5D-SB-4.0-5.0 SL -599-SA5D-SB-9.0-10.0 SL -815-SA5D-SB-0.0-0.5)	FLUORIDE	67	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-599-SA5D-SB-22.0-23.0MS (SL-599-SA5D-SB-22.0-23.0 SL -601-SA5D-SB-0.0-0.5 SL -601-SA5D-SB-14.0-15.0 SL -601-SA5D-SB-20.5-21.5 SL -601-SA5D-SB-4.0-5.0 SL -601-SA5D-SB-9.0-10.0)	FLUORIDE	58	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-515-SA5D-SB-0.0-0.5DUP (TOT) (SL-515-SA5D-SB-0.0-0.5 SL -515-SA5D-SB-22.0-23.0 SL -515-SA5D-SB-4.0-5.0 SL -515-SA5D-SB-9.0-10.0 SL -815-SA5D-SB-0.0-0.5)	MOLYBDENUM Zirconium	73 34	20.00 20.00	No Qual, OK by Difference

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P5LBLCSQ260429 (SL-515-SA5D-SB-0.0-0.5 SL-515-SA5D-SB-22.0-23.0 SL-515-SA5D-SB-4.0-5.0 SL-515-SA5D-SB-9.0-10.0 SL-815-SA5D-SB-0.0-0.5)	N-NITROSODIMETHYLAMINE	189	-	71.00-124.00	-	N-NITROSODIMETHYLAMINE	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-515-SA5D-SB-0.0-0.5	SL-815-SA5D-SB-0.0-0.5			
MOISTURE	9.2	7.7	18		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-515-SA5D-SB-0.0-0.5	SL-815-SA5D-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	0.403	0.529	27	50.00	No Qualifiers Applied
1,2,3,4,6,7,8-HPCDF	0.159	0.196	21	50.00	
1,2,3,4,7,8,9-HPCDF	0.0746	0.114	42	50.00	
1,2,3,7,8,9-HXCDD	0.0862	0.133	43	50.00	
1,2,3,7,8,9-HXCDF	0.174	0.192	10	50.00	
OCDD	3.47	3.63	5	50.00	
OCDF	0.321	0.382	17	50.00	
1,2,3,4,7,8-HxCDD	5.24 U	0.0610	200	50.00	J(all detects) UJ(all non-detects)
1,2,3,4,7,8-HXCDF	0.0599	0.194	106	50.00	
1,2,3,6,7,8-HXCDD	5.24 U	0.151	200	50.00	
1,2,3,6,7,8-HXCDF	5.24 U	0.101	200	50.00	
1,2,3,7,8-PECDD	0.0657	5.40 U	200	50.00	
1,2,3,7,8-PECDF	0.156	5.40 U	200	50.00	
2,3,4,6,7,8-HXCDF	5.24 U	0.149	200	50.00	
2,3,4,7,8-PECDF	5.24 U	0.112	200	50.00	

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-515-SA5D-SB-0.0-0.5	SL-815-SA5D-SB-0.0-0.5			
FLUORIDE	0.91	1.0	9	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg) SL-515-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-815-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	24700	24600	0	50.00	No Qualifiers Applied
ANTIMONY	1.25	1.25	0	50.00	
ARSENIC	5.42	5.34	1	50.00	
BARIUM	102	100	2	50.00	
BERYLLIUM	0.841	0.829	1	50.00	
BORON	20.1	19.1	5	50.00	
CADMIUM	0.623	0.648	4	50.00	
CALCIUM	45600	37200	20	50.00	
CHROMIUM	34.7	33.8	3	50.00	
COBALT	9.13	9.08	1	50.00	
COPPER	17.6	17.6	0	50.00	
IRON	33100	31800	4	50.00	
LEAD	9.92	9.96	0	50.00	
LITHIUM	23.8	23.6	1	50.00	
MAGNESIUM	7600	7620	0	50.00	
MANGANESE	421	424	1	50.00	
NICKEL	18.4	18.4	0	50.00	
PHOSPHORUS	720	737	2	50.00	
POTASSIUM	6910	7150	3	50.00	
SODIUM	111	109	2	50.00	
TIN	3.34	3.54	6	50.00	
TITANIUM	1250	1250	0	50.00	
VANADIUM	65.9	64.7	2	50.00	
ZINC	81.6	81.2	0	50.00	
Zirconium	2.64	1.93	31	50.00	
MOLYBDENUM	0.504	0.247	68	50.00	J(all detects)

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-515-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-815-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
SELENIUM	0.327	0.346	6	50.00	No Qualifiers Applied
SILVER	0.0315	0.0321	2	50.00	
STRONTIUM	89.4	82.8	8	50.00	
THALLIUM	0.329	0.356	8	50.00	

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-515-SA5D-SB-0.0-0.5	Concentration (mg/Kg) SL-815-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	5.5	10	58	50.00	J(all detects)
EFH (C30-C40)	11	22	67	50.00	

Method: 8081B
Matrix: SO

Analyte	Concentration (ug/Kg) SL-515-SA5D-SB-0.0-0.5	Concentration (ug/Kg) SL-815-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
4,4'-DDE	0.65	0.58	11	50.00	No Qualifiers Applied

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8270D SIM
Matrix: SO

Analyte	Concentration (ug/Kg) SL-515-SA5D-SB-0.0-0.5	Concentration (ug/Kg) SL-815-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
BENZO(B)FLUORANTHENE	1.5	1.4	7	50.00	No Qualifiers Applied
CHRYSENE	1.2	1.5	22	50.00	
FLUORANTHENE	1.8 U	0.89	200	50.00	J(all detects) UJ(all non-detects)
NAPHTHALENE	1.8 U	0.79	200	50.00	
PHENANTHRENE	1.8 U	0.81	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit) SL-515-SA5D-SB-0.0-0.5	Concentration (pH unit) SL-815-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
PH	7.60	8.05	6	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	0.403	5.24	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.159	5.24	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0746	5.24	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0599	5.24	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0862	5.24	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.174	5.24	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0657	5.24	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.156	5.24	PQL	ng/Kg	
	OCDD	JB	3.47	10.5	PQL	ng/Kg	
	OCDF	JB	0.321	10.5	PQL	ng/Kg	
SL-815-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	0.529	5.40	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.196	5.40	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.114	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0610	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.194	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.151	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.101	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.133	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.192	5.40	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.149	5.40	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.112	5.40	PQL	ng/Kg	
	OCDD	JB	3.63	10.8	PQL	ng/Kg	
	OCDF	JB	0.382	10.8	PQL	ng/Kg	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	FLUORIDE	J	0.91	1.1	PQL	mg/Kg	J (all detects)
SL-599-SA5D-SB-0.0-0.5	FLUORIDE	J	0.55	1.1	PQL	mg/Kg	J (all detects)
SL-815-SA5D-SB-0.0-0.5	FLUORIDE	J	1.0	1.1	PQL	mg/Kg	J (all detects)

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	ANTIMONY	J	1.25	4.28	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.841	1.07	PQL	mg/Kg	
	CADMIUM	J	0.623	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	0.504	2.14	PQL	mg/Kg	
	TIN	J	3.34	10.7	PQL	mg/Kg	
	Zirconium	J	2.64	5.35	PQL	mg/Kg	
SL-515-SA5D-SB-22.0-23.0	BERYLLIUM	J	0.915	1.17	PQL	mg/Kg	J (all detects)
	BORON	J	11.6	11.7	PQL	mg/Kg	
	CADMIUM	J	0.504	1.17	PQL	mg/Kg	
	TIN	J	3.66	11.7	PQL	mg/Kg	
	Zirconium	J	2.13	5.84	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-4.0-5.0	ANTIMONY	J	1.17	4.69	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	1.03	1.17	PQL	mg/Kg	
	CADMIUM	J	0.558	1.17	PQL	mg/Kg	
	SODIUM	J	116	117	PQL	mg/Kg	
	TIN	J	4.04	11.7	PQL	mg/Kg	
	Zirconium	J	4.45	5.87	PQL	mg/Kg	
SL-515-SA5D-SB-9.0-10.0	ANTIMONY	J	0.958	4.60	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.929	1.15	PQL	mg/Kg	
	CADMIUM	J	0.508	1.15	PQL	mg/Kg	
	TIN	J	3.43	11.5	PQL	mg/Kg	
	Zirconium	J	2.56	5.75	PQL	mg/Kg	
SL-815-SA5D-SB-0.0-0.5	ANTIMONY	J	1.25	4.25	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.829	1.06	PQL	mg/Kg	
	CADMIUM	J	0.648	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.247	2.12	PQL	mg/Kg	
	TIN	J	3.54	10.6	PQL	mg/Kg	
	Zirconium	J	1.93	5.31	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	SELENIUM	J	0.327	0.428	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0315	0.214	PQL	mg/Kg	
SL-515-SA5D-SB-22.0-23.0	SILVER	J	0.0505	0.234	PQL	mg/Kg	J (all detects)
SL-515-SA5D-SB-4.0-5.0	SELENIUM	J	0.220	0.469	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0433	0.235	PQL	mg/Kg	
SL-515-SA5D-SB-9.0-10.0	SELENIUM	J	0.140	0.460	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0376	0.230	PQL	mg/Kg	
SL-815-SA5D-SB-0.0-0.5	SELENIUM	J	0.346	0.425	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0321	0.212	PQL	mg/Kg	

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-9.0-10.0	MERCURY	J	0.0122	0.0191	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH104 **Laboratory: LL**

EDD Filename: PH104 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-4.0-5.0	EFH (C21-C30) EFH (C30-C40)	J J	4.4 9.0	5.9 12	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-515-SA5D-SB-9.0-10.0	EFH (C21-C30) EFH (C30-C40)	J J	2.8 6.9	5.9 12	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	4,4'-DDE	J	0.65	1.9	PQL	ug/Kg	J (all detects)
SL-815-SA5D-SB-0.0-0.5	4,4'-DDE	J	0.58	1.8	PQL	ug/Kg	J (all detects)

Method: 8270D SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE CHRYSENE	J J	1.5 1.2	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-515-SA5D-SB-22.0-23.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.6	21	PQL	ug/Kg	J (all detects)
SL-515-SA5D-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	10	21	PQL	ug/Kg	J (all detects)
SL-815-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE NAPHTHALENE PHENANTHRENE	J J J J J	1.4 1.5 0.89 0.79 0.81	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)

LDC #: 30695G4

SDG #: PH104

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/9/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	DUP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(1,2)
XV	Field Blanks	SW	EB= EB-041113 (PH106) FB= FB-041113 (PH020)

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-515-SA5D-SB-0.0-0.5	11		21		31	
2	SL-815-SA5D-SB-0.0-0.5	12		22		32	
3	SL-515-SA5D-SB-4.0-5.0	13		23		33	
4	SL-515-SA5D-SB-9.0-10.0	14		24		34	
5	SL-515-SA5D-SB-22.0-23.0	15		25		35	
6	SL-515-SA5D-SB-0.0-0.5MS	16		26		36	
7	SL-515-SA5D-SB-0.0-0.5MSD	17		27		37	
8	SL-515-SA5D-SB-0.0-0.5DUP	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 30695G4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	2										
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.504	~~0.25~~ 0.247 APL 12/4/13										

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB-091113 (SDG: PH106)	Action Limit	1	2									
Cu	0.0040	2											
Mn	0.0019	0.95											
Mo	0.0087	4.35	See FB	See FB									

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH104
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7191082BKG Matrix Spike Lab Sample ID: 7191083MS Matrix Spike Duplicate Lab Sample ID: 7191084MSD
Batch Id(s): P25637B, P25638B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		22412.1864		31621.7553		30881.3515		194.1748	194.1748	MG/KG	4743		4362		2			20	P
Antimony		1.1359	B	24.5252		24.6641		48.5437	48.5437	MG/KG	48	N	48	N	1		75 - 125	20	P
Arsenic		4.9223		19.2311		19.2534		14.5631	14.5631	MG/KG	98		98		0		75 - 125	20	P
Barium		93.0680		291.2010		290.7883		194.1748	194.1748	MG/KG	102		102		0		75 - 125	20	P
Beryllium		0.7641	B	5.6252		5.5845		4.8544	4.8544	MG/KG	100		99		1		75 - 125	20	P
Boron		18.2437		210.3864		209.3252		194.1748	194.1748	MG/KG	99		98		1		75 - 125	20	P
Cadmium		0.5660	B	5.0427		5.0777		4.8544	4.8544	MG/KG	92		93		1		75 - 125	20	P
Calcium		41435.6942		40492.8417		43835.8621		388.3495	388.3495	MG/KG	-243		618		8			20	P
Chromium		31.5000		56.2981		55.1068		19.4175	19.4175	MG/KG	128	N	122		2		75 - 125	20	P
Cobalt		8.2903		52.3534		52.5913		48.5437	48.5437	MG/KG	91		91		0		75 - 125	20	P
Copper		15.9417		42.0126		41.4961		24.2718	24.2718	MG/KG	107		105		1		75 - 125	20	P
Iron		30065.2718		31933.4796		31055.6194		97.0874	97.0874	MG/KG	1924		1020		3			20	P
Lead		9.0039		22.2204		22.3981		14.5631	14.5631	MG/KG	91		92		1		75 - 125	20	P
Lithium		21.6466		124.9534		125.6000		97.0874	97.0874	MG/KG	106		107		1		75 - 125	20	P
Magnesium		6896.5553		7905.1456		7755.2903		194.1748	194.1748	MG/KG	519		442		2			20	P
Manganese		382.0680		431.9515		431.4612		48.5437	48.5437	MG/KG	103		102		0			20	P
Mercury		0.0096	U	0.1820		0.1903		0.1572	0.1601	MG/KG	116		119		4		65 - 135	20	CV
Molybdenum		0.4573	B	180.0330		180.6563		194.1748	194.1748	MG/KG	92		93		0		75 - 125	20	P
Nickel		16.6699		61.6223		61.6301		48.5437	48.5437	MG/KG	93		93		0		75 - 125	20	P
Phosphorus		653.8893		750.4990		726.9660		97.0874	97.0874	MG/KG	100		75		3			20	P
Potassium		6272.6495		8179.2573		8047.6592		970.8738	970.8738	MG/KG	196		183		2			20	P
Selenium	78	0.2973	B	2.0117		2.1184		1.9417	1.9417	MG/KG	88		94		5		75 - 125	20	MS
Silver	107	0.0286	B	9.6369		9.8447		9.7087	9.7087	MG/KG	99		101		2		75 - 125	20	MS
Sodium		100.6524		1070.7942		1085.1058		970.8738	970.8738	MG/KG	100		101		1		75 - 125	20	P
Strontium	88	81.1650		90.1456		92.3301		7.7670	7.7670	MG/KG	116		144		2			20	MS
Thallium	203	0.2990		0.6833		0.6751		0.3883	0.3883	MG/KG	99		97		1		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH104
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7191082BKG Matrix Spike Lab Sample ID: 7191083MS Matrix Spike Duplicate Lab Sample ID: 7191084MSD
Batch Id(s): P25637B, P25638B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Tin		3.0369	B	344.5932		345.0243		388.3495	388.3495	MG/KG	88		88		0		75 - 125	20	P
Titanium		1135.2505		1722.9505		1669.6117		97.0874	97.0874	MG/KG	605		550		3			20	P
Vanadium		59.8282		122.8748		120.1883		48.5437	48.5437	MG/KG	130	N	124		2		75 - 125	20	P
Zinc		74.1078		124.1660		123.3029		48.5437	48.5437	MG/KG	103		101		1		75 - 125	20	P
Zirconium		2.3981	B	77.6650		77.4184		97.0874	97.0874	MG/KG	78		77		0		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH104
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7191082BKG
Duplicate Lab Sample ID: 7191085DUP
Batch ID(s): P25637B, P25638B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			22412.1864		22931.0592		2		P
Antimony			1.1359	B	0.9709	B	16		P
Arsenic		3.9	4.9223		4.7320		4		P
Barium			93.0680		92.5699		1		P
Beryllium			0.7641	B	0.7718	B	1		P
Boron		9.7	18.2437		17.5214		4		P
Cadmium			0.5660	B	0.5680	B	0		P
Calcium			41435.6942		42533.7204		3		P
Chromium			31.5000		31.2825		1		P
Cobalt			8.2903		8.5262		3		P
Copper			15.9417		16.0854		1		P
Iron			30065.2718		30156.8718		0		P
Lead		2.9	9.0039		9.0350		0		P
Lithium			21.6466		22.0437		2		P
Magnesium			6896.5553		7035.8010		2		P
Manganese			382.0680		381.3825		0		P
Mercury			0.0096	U	0.0095	U			CV
Molybdenum			0.4573	B	0.2126	B	73		P
Nickel			16.6699		16.7408		0		P
Phosphorus			653.8893		652.8816		0		P
Potassium			6272.6495		6411.6864		2		P
Selenium	78		0.2973	B	0.2858	B	4		MS
Silver	107		0.0286	B	0.0299	B	4		MS
Sodium		97.1	100.6524		103.6476		3		P
Strontium	88		81.1650		76.5049		6		MS
Thallium	203	0.2	0.2990		0.3285		9		MS
Tin			3.0369	B	3.2835	B	8		P
Titanium			1135.2505		1164.7961		3		P
Vanadium			59.8282		60.1670		1		P
Zinc			74.1078		74.5592		1		P
Zirconium			2.3981	B	3.3825	B	34		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: PH104
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7191082BKG Serial Dilution Lab Sample ID: 7191082L
Batch ID(s): P25637B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		230845.5200		245277.4500		6		P
Antimony		11.7000	B	37.0000	U	100		P
Arsenic		50.7000		70.2000	B	38		P
Barium		958.6000		1004.5000		5		P
Beryllium		7.8700	B	8.3500	B	6		P
Boron		187.9100		209.6500	B	12		P
Cadmium		5.8300	B	8.0000	B	37		P
Calcium		426787.6500		446670.9500		5		P
Chromium		324.4500		337.9000		4		P
Cobalt		85.3900		95.1500		11	E	P
Copper		164.2000		168.2500		2		P
Iron		154836.1500		150588.2000		3		P
Lead		92.7400		93.1500	B	0		P
Lithium		222.9600		227.6000		2		P
Magnesium		71034.5200		74843.9500		5		P
Manganese		3935.3000		4080.5500		4		P
Molybdenum		4.7100	B	15.3000	B	225		P
Nickel		171.7000		186.5000		9		P
Phosphorus		6735.0600		6922.3000		3		P
Potassium		64608.2900		66473.3500		3		P
Selenium	78	1.5310	B	2.5000	U	100		MS
Silver	107	0.1474	B	0.6500	U	100		MS
Sodium		1036.7200		1065.8500	B	3		P
Strontium	88	418.0000		517.0000		24	E	MS
Thallium	203	1.5400		2.0470	B	33		MS
Tin		31.2800	B	37.2500	B	19		P
Titanium		11693.0800		12231.6000		5		P
Vanadium		616.2300		636.4000		3		P
Zinc		763.3100		779.4000		2		P
Zirconium		24.7000	B	42.0000	U	100		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

5/05/A CA

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH105

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 10, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 10, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Herbicides by EPA SW 846 Method 8151A
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for fluoride and one pair for metals in SDG PH107. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I of this DVR and the DVR for SDG PH107.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the exception of one DUP for fluoride. The associated sample results were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

IX. 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 with the exception of one LCS/LCSD pair for SVOCs. No data were qualified due to high %Rs since the associated results were non-detected.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory (in SDG PH107). The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-553-SA5D-SB-0.0-0.5 (SDG PH107)	Cobalt Strontium	12 (≤10) 12 (≤10)	All soil samples in SDG PH105	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH105	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for fluoride. All RPDs were within QC limits with the exception of fluoride. In these duplicate pairs, the associated sample results were qualified as detected estimated (J). The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH106) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, TPH as gasoline, TPH as extractables, dioxins and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, TPH as gasoline, TPH as extractables, dioxins and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Sep-2013	SL-605-SA5D-SB-0.0-0.5	7192789	N	METHOD	300.0	III
10-Sep-2013	SL-605-SA5D-SB-4.0-5.0	7192790	N	METHOD	300.0	III
10-Sep-2013	SL-605-SA5D-SB-4.0-5.0MS	7192791	MS	METHOD	300.0	III
10-Sep-2013	SL-605-SA5D-SB-4.0-5.0DUP	7192792	DUP	METHOD	300.0	III
10-Sep-2013	TB-091013	7192780	TB	5030B	8015M	III
10-Sep-2013	SL-905-SA5D-SB-4.0-5.0	7192793	FD	METHOD	300.0	III
10-Sep-2013	SL-905-SA5D-SB-4.0-5.0DUP	P192793D271316A	DUP	METHOD	300.0	III
10-Sep-2013	SL-905-SA5D-SB-4.0-5.0MS	P192793R271333A	MS	METHOD	300.0	III
10-Sep-2013	SL-605-SA5D-SB-9.0-10.0	7192794	N	METHOD	300.0	III
10-Sep-2013	SL-605-SA5D-SB-14.5-15.5	7192795	N	METHOD	300.0	III
10-Sep-2013	SL-604-SA5D-SB-0.0-0.5	7192785	N	METHOD	300.0	III
10-Sep-2013	SL-604-SA5D-SB-4.0-5.0	7192786	N	METHOD	300.0	III
10-Sep-2013	SL-604-SA5D-SB-9.0-10.0	7192787	N	METHOD	300.0	III
10-Sep-2013	SL-604-SA5D-SB-16.5-17.5	7192788	N	METHOD	300.0	III
10-Sep-2013	SL-603-SA5D-SB-0.0-0.5	7192781	N	METHOD	300.0	III
10-Sep-2013	SL-603-SA5D-SB-4.0-5.0	7192782	N	METHOD	300.0	III
10-Sep-2013	SL-603-SA5D-SB-9.0-10.0	7192783	N	METHOD	300.0	III
10-Sep-2013	SL-603-SA5D-SB-13.0-14.0	7192784	N	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-0.0-0.5	7192800	N	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-4.0-5.0	7192801	N	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-9.0-10.0	7192802	N	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-13.0-14.0	7192803	N	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-13.0-14.0D	P192803D271712B	DUP	METHOD	300.0	III
10-Sep-2013	SL-606-SA5D-SB-13.0-14.0M	P192803R271729B	MS	METHOD	300.0	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3050B	6010C	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3050B	6020A	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
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3546	8015M	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3546	8081B	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3546	8082A	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3546	8270D SIM	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	3550B	8151A	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	METHOD	1613B	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	METHOD	300.0	III
10-Sep-2013	SL-518-SA5D-SB-0.0-0.5	7192796	N	METHOD	7471B	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3050B	6010C	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3050B	6020A	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3546	8015M	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3546	8081B	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3546	8082A	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3546	8270D SIM	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	3550B	8151A	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	5035A	8015M	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	METHOD	300.0	III
10-Sep-2013	SL-518-SA5D-SB-4.0-5.0	7192797	N	METHOD	7471B	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3050B	6010C	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3050B	6020A	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3546	8015M	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3546	8081B	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3546	8082A	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3546	8270D SIM	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	3550B	8151A	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	5035A	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
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	METHOD	300.0	III
10-Sep-2013	SL-518-SA5D-SB-9.0-10.0	7192798	N	METHOD	7471B	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3050B	6010C	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3050B	6020A	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3546	8015M	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3546	8081B	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3546	8082A	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3546	8270D SIM	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	3550B	8151A	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	5035A	8015M	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	METHOD	300.0	III
10-Sep-2013	SL-518-SA5D-SB-15.0-16.0	7192799	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-518-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.7	J	1.5	MDL	3.8	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-518-SA5D-SB-15.0-16.0** ***Collected:*** **9/10/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1	J	0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-518-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.75	J	0.47	MDL	1.2	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-518-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 1:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-603-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 10:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.2		0.42	MDL	1.0	PQL	mg/Kg	J	Q, E

Sample ID: **SL-603-SA5D-SB-13.0-14.0** ***Collected:*** **9/10/2013 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	2.3		0.44	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-603-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.3		0.45	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-603-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.5		0.46	MDL	1.1	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-604-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 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
FLUORIDE	1.6		0.44	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-604-SA5D-SB-16.5-17.5** ***Collected:*** **9/10/2013 9:25:00** ***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		0.45	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-604-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 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	2.0		0.45	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-604-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 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
FLUORIDE	5.7		0.45	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: **SL-605-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 7:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.45	MDL	0.56	PQL	mg/Kg	J	Q, E

Sample ID: **SL-605-SA5D-SB-14.5-15.5** ***Collected:*** **9/10/2013 8:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-605-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 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	3.2		0.46	MDL	1.2	PQL	mg/Kg	J	Q, E, FD

Sample ID: **SL-605-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.6		0.45	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-606-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.83	J	0.43	MDL	1.1	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-606-SA5D-SB-13.0-14.0** ***Collected:*** **9/10/2013 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-606-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-606-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-905-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 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
FLUORIDE	1.5		0.46	MDL	1.2	PQL	mg/Kg	J	Q, FD

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-518-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.32	U	0.800	MDL	4.32	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.983	J	0.0724	MDL	1.08	PQL	mg/Kg	J	Z
BORON	5.36	J	0.908	MDL	10.8	PQL	mg/Kg	J	Z
CADMIUM	0.513	J	0.0821	MDL	1.08	PQL	mg/Kg	J	Z
COBALT	9.33		0.107	MDL	1.08	PQL	mg/Kg	J	A
MOLYBDENUM	0.351	J	0.184	MDL	2.16	PQL	mg/Kg	U	F, F
SODIUM	90.4	J	18.1	MDL	108	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-518-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.02	J	0.238	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: **SL-518-SA5D-SB-15.0-16.0** ***Collected:*** **9/10/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.32	U	0.800	MDL	4.32	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.665	J	0.0724	MDL	1.08	PQL	mg/Kg	J	Z
CADMIUM	0.196	J	0.0821	MDL	1.08	PQL	mg/Kg	J	Z
COBALT	4.38		0.107	MDL	1.08	PQL	mg/Kg	J	A
SODIUM	87.7	J	18.1	MDL	108	PQL	mg/Kg	J	Z
TIN	2.92	J	0.238	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.64	J	0.908	MDL	5.40	PQL	mg/Kg	J	Z

Sample ID: **SL-518-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.59	U	0.850	MDL	4.59	PQL	mg/Kg	UJ	Q
BERYLLIUM	1.07	J	0.0769	MDL	1.15	PQL	mg/Kg	J	Z
BORON	2.63	J	0.964	MDL	11.5	PQL	mg/Kg	J	Z
CADMIUM	0.352	J	0.0872	MDL	1.15	PQL	mg/Kg	J	Z
COBALT	7.61		0.114	MDL	1.15	PQL	mg/Kg	J	A
MOLYBDENUM	0.240	J	0.195	MDL	2.30	PQL	mg/Kg	U	F, F
SODIUM	99.5	J	19.2	MDL	115	PQL	mg/Kg	J	Z
TIN	3.29	J	0.253	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: **SL-518-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 1:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.63	U	0.856	MDL	4.63	PQL	mg/Kg	UJ	Q
BERYLLIUM	1.04	J	0.0775	MDL	1.16	PQL	mg/Kg	J	Z
CADMIUM	0.212	J	0.0879	MDL	1.16	PQL	mg/Kg	J	Z
COBALT	10.1		0.115	MDL	1.16	PQL	mg/Kg	J	A
MOLYBDENUM	0.296	J	0.197	MDL	2.31	PQL	mg/Kg	U	F, F
SODIUM	98.0	J	19.3	MDL	116	PQL	mg/Kg	J	Z
TIN	3.35	J	0.254	MDL	11.6	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-518-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 1:20:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.265	J	0.108	MDL	0.432	PQL	mg/Kg	J	Z

Sample ID: **SL-518-SA5D-SB-0.0-0.5** ***Collected:*** **9/10/2013 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0639	J	0.0281	MDL	0.216	PQL	mg/Kg	J	Z, Q
STRONTIUM	36.2		0.0735	MDL	0.432	PQL	mg/Kg	J	Q, A
THALLIUM	0.437		0.0324	MDL	0.216	PQL	mg/Kg	J	Q

Sample ID: **SL-518-SA5D-SB-15.0-16.0** ***Collected:*** **9/10/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	25.9		0.0735	MDL	0.432	PQL	mg/Kg	J	Q, A
THALLIUM	0.322		0.0324	MDL	0.216	PQL	mg/Kg	J	Q

Sample ID: **SL-518-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 1:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.116	J	0.115	MDL	0.459	PQL	mg/Kg	J	Z

Sample ID: **SL-518-SA5D-SB-4.0-5.0** ***Collected:*** **9/10/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0557	J	0.0298	MDL	0.230	PQL	mg/Kg	J	Z, Q
STRONTIUM	54.0		0.0781	MDL	0.459	PQL	mg/Kg	J	Q, A
THALLIUM	0.453		0.0344	MDL	0.230	PQL	mg/Kg	J	Q

Sample ID: **SL-518-SA5D-SB-9.0-10.0** ***Collected:*** **9/10/2013 1:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0508	J	0.0301	MDL	0.231	PQL	mg/Kg	J	Z, Q
STRONTIUM	36.8		0.0787	MDL	0.463	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS
Method: 6020A **Matrix:** SO

Sample ID: SL-518-SA5D-SB-9.0-10.0 *Collected:* 9/10/2013 1:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.345		0.0347	MDL	0.231	PQL	mg/Kg	J	Q

Method Category: METALS
Method: 7471B **Matrix:** SO

Sample ID: SL-518-SA5D-SB-15.0-16.0 *Collected:* 9/10/2013 1:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0109	J	0.0108	MDL	0.0181	PQL	mg/Kg	J	Z

Sample ID: SL-518-SA5D-SB-4.0-5.0 *Collected:* 9/10/2013 1:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0179	J	0.0111	MDL	0.0186	PQL	mg/Kg	J	Z

Sample ID: SL-518-SA5D-SB-9.0-10.0 *Collected:* 9/10/2013 1:40:00 *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	0.0112	MDL	0.0186	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 1613B **Matrix:** SO

Sample ID: SL-518-SA5D-SB-0.0-0.5 *Collected:* 9/10/2013 1:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.68	J	0.0989	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.450	JB	0.0343	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.126	JBQ	0.0561	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0869	JQ	0.0521	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.121	JQ	0.0476	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.163	JQ	0.0544	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.165	J	0.0437	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.209	J	0.0520	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.338	J	0.0588	MDL	5.32	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 1613B **Matrix:** SO

Sample ID: SL-518-SA5D-SB-0.0-0.5 *Collected:* 9/10/2013 1:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.487	JQ	0.0678	MDL	5.32	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.131	JBQ	0.0447	MDL	5.32	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.105	JQ	0.0645	MDL	5.32	PQL	ng/Kg	J	Z
OCDF	0.774	JB	0.0731	MDL	10.6	PQL	ng/Kg	J	Z

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-518-SA5D-SB-4.0-5.0 *Collected:* 9/10/2013 1:30:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	5.1	J	2.3	MDL	5.8	PQL	mg/Kg	J	Z
EFH (C30-C40)	8.6	J	4.6	MDL	12	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8081B **Matrix:** SO

Sample ID: SL-518-SA5D-SB-0.0-0.5 *Collected:* 9/10/2013 1:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.2	J	0.36	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8270D SIM **Matrix:** SO

Sample ID: SL-518-SA5D-SB-0.0-0.5 *Collected:* 9/10/2013 1:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.76	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	0.84	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.7	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.99	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category:	SVOA		
Method:	8270D SIM	*Matrix:*	SO

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH105

Method Blank Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2550B370931	9/14/2013 9:31:00 AM	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 2,3,4,6,7,8-HXCDF OCDD OCDF	0.0282 ng/Kg 0.0482 ng/Kg 0.0500 ng/Kg 0.194 ng/Kg 0.0941 ng/Kg	SL-518-SA5D-SB-0.0-0.5

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-518-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.126 ng/Kg	0.126U ng/Kg
SL-518-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.131 ng/Kg	0.131U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26237AB222024	9/21/2013 8:24:00 PM	CALCIUM TIN	10.3 mg/Kg 1.36 mg/Kg	SL-518-SA5D-SB-0.0-0.5 SL-518-SA5D-SB-15.0-16.0 SL-518-SA5D-SB-4.0-5.0 SL-518-SA5D-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-518-SA5D-SB-0.0-0.5(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-518-SA5D-SB-15.0-16.0(RES)	TIN	2.92 mg/Kg	2.92U mg/Kg
SL-518-SA5D-SB-4.0-5.0(RES)	TIN	3.29 mg/Kg	3.29U mg/Kg
SL-518-SA5D-SB-9.0-10.0(RES)	TIN	3.35 mg/Kg	3.35U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-091113(REA2)	9/11/2013 3:00:00 PM	COPPER MANGANESE MOLYBDENUM	0.004 mg/L 0.0019 mg/L 0.0087 mg/L	SL-518-SA5D-SB-0.0-0.5 SL-518-SA5D-SB-15.0-16.0 SL-518-SA5D-SB-4.0-5.0 SL-518-SA5D-SB-9.0-10.0 SL-603-SA5D-SB-0.0-0.5 SL-603-SA5D-SB-13.0-14.0 SL-603-SA5D-SB-4.0-5.0 SL-603-SA5D-SB-9.0-10.0 SL-604-SA5D-SB-0.0-0.5 SL-604-SA5D-SB-16.5-17.5 SL-604-SA5D-SB-4.0-5.0 SL-604-SA5D-SB-9.0-10.0 SL-605-SA5D-SB-0.0-0.5 SL-605-SA5D-SB-14.5-15.5 SL-605-SA5D-SB-4.0-5.0 SL-605-SA5D-SB-9.0-10.0 SL-606-SA5D-SB-0.0-0.5 SL-606-SA5D-SB-13.0-14.0 SL-606-SA5D-SB-4.0-5.0 SL-606-SA5D-SB-9.0-10.0 SL-905-SA5D-SB-4.0-5.0

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-518-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.351 mg/Kg	0.351U mg/Kg
SL-518-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.240 mg/Kg	0.240U mg/Kg
SL-518-SA5D-SB-9.0-10.0(RES)	MOLYBDENUM	0.296 mg/Kg	0.296U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-518-SA5D-SB-0.0-0.5 SL-518-SA5D-SB-15.0-16.0 SL-518-SA5D-SB-4.0-5.0 SL-518-SA5D-SB-9.0-10.0 SL-603-SA5D-SB-0.0-0.5 SL-603-SA5D-SB-13.0-14.0 SL-603-SA5D-SB-4.0-5.0 SL-603-SA5D-SB-9.0-10.0 SL-604-SA5D-SB-0.0-0.5 SL-604-SA5D-SB-16.5-17.5 SL-604-SA5D-SB-4.0-5.0 SL-604-SA5D-SB-9.0-10.0 SL-605-SA5D-SB-0.0-0.5 SL-605-SA5D-SB-14.5-15.5 SL-605-SA5D-SB-4.0-5.0 SL-605-SA5D-SB-9.0-10.0 SL-606-SA5D-SB-0.0-0.5 SL-606-SA5D-SB-13.0-14.0 SL-606-SA5D-SB-4.0-5.0 SL-606-SA5D-SB-9.0-10.0 SL-905-SA5D-SB-4.0-5.0

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-518-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.351 mg/Kg	0.351U mg/Kg
SL-518-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.240 mg/Kg	0.240U mg/Kg
SL-518-SA5D-SB-9.0-10.0(RES)	MOLYBDENUM	0.296 mg/Kg	0.296U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-605-SA5D-SB-4.0-5.0MS (SL-603-SA5D-SB-0.0-0.5 SL-603-SA5D-SB-13.0-14.0 SL-603-SA5D-SB-4.0-5.0 SL-603-SA5D-SB-9.0-10.0 SL-604-SA5D-SB-0.0-0.5 SL-604-SA5D-SB-16.5-17.5 SL-604-SA5D-SB-4.0-5.0 SL-604-SA5D-SB-9.0-10.0 SL-605-SA5D-SB-0.0-0.5 SL-605-SA5D-SB-4.0-5.0)	FLUORIDE	65	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)
SL-905-SA5D-SB-4.0-5.0MS (SL-518-SA5D-SB-0.0-0.5 SL-518-SA5D-SB-15.0-16.0 SL-518-SA5D-SB-4.0-5.0 SL-518-SA5D-SB-9.0-10.0 SL-605-SA5D-SB-14.5-15.5 SL-605-SA5D-SB-9.0-10.0 SL-606-SA5D-SB-0.0-0.5 SL-606-SA5D-SB-4.0-5.0 SL-606-SA5D-SB-9.0-10.0 SL-905-SA5D-SB-4.0-5.0)	FLUORIDE	70	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-606-SA5D-SB-13.0-14.0MS (SL-606-SA5D-SB-13.0-14.0)	FLUORIDE	77	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-605-SA5D-SB-4.0-5.0DUP (SL-603-SA5D-SB-0.0-0.5 SL-603-SA5D-SB-13.0-14.0 SL-603-SA5D-SB-4.0-5.0 SL-603-SA5D-SB-9.0-10.0 SL-604-SA5D-SB-0.0-0.5 SL-604-SA5D-SB-16.5-17.5 SL-604-SA5D-SB-4.0-5.0 SL-604-SA5D-SB-9.0-10.0 SL-605-SA5D-SB-0.0-0.5 SL-605-SA5D-SB-4.0-5.0)	FLUORIDE	2.9 mg/kg	≤0.92 mg/kg	J (all detects) UJ (all non-detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P5LBLCSQ260429 (SL-518-SA5D-SB-0.0-0.5 SL-518-SA5D-SB-15.0-16.0 SL-518-SA5D-SB-4.0-5.0 SL-518-SA5D-SB-9.0-10.0)	N-NITROSODIMETHYLAMINE	189	-	71.00-124.00	-	N-NITROSODIMETHYLAMINE	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-605-SA5D-SB-4.0-5.0	SL-905-SA5D-SB-4.0-5.0			
MOISTURE	13.9	14.5	4		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-605-SA5D-SB-4.0-5.0	SL-905-SA5D-SB-4.0-5.0			
FLUORIDE	3.2	1.5	72	50.00	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	2.68	5.32	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.450	5.32	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.126	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0869	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.121	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.163	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.165	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.209	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.338	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.487	5.32	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.131	5.32	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.105	5.32	PQL	ng/Kg	
	OCDF	JB	0.774	10.6	PQL	ng/Kg	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-0.0-0.5	FLUORIDE	J	1.7	3.8	PQL	mg/Kg	J (all detects)
SL-518-SA5D-SB-4.0-5.0	FLUORIDE	J	0.75	1.2	PQL	mg/Kg	J (all detects)
SL-606-SA5D-SB-0.0-0.5	FLUORIDE	J	0.83	1.1	PQL	mg/Kg	J (all detects)

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.983	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	5.36	10.8	PQL	mg/Kg	
	CADMIUM	J	0.513	1.08	PQL	mg/Kg	
	MOLYBDENUM	J	0.351	2.16	PQL	mg/Kg	
	SODIUM	J	90.4	108	PQL	mg/Kg	
	TIN	J	3.02	10.8	PQL	mg/Kg	
SL-518-SA5D-SB-15.0-16.0	BERYLLIUM	J	0.665	1.08	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.196	1.08	PQL	mg/Kg	
	SODIUM	J	87.7	108	PQL	mg/Kg	
	TIN	J	2.92	10.8	PQL	mg/Kg	
	Zirconium	J	3.64	5.40	PQL	mg/Kg	
SL-518-SA5D-SB-4.0-5.0	BERYLLIUM	J	1.07	1.15	PQL	mg/Kg	J (all detects)
	BORON	J	2.63	11.5	PQL	mg/Kg	
	CADMIUM	J	0.352	1.15	PQL	mg/Kg	
	MOLYBDENUM	J	0.240	2.30	PQL	mg/Kg	
	SODIUM	J	99.5	115	PQL	mg/Kg	
	TIN	J	3.29	11.5	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-9.0-10.0	BERYLLIUM	J	1.04	1.16	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.212	1.16	PQL	mg/Kg	
	MOLYBDENUM	J	0.296	2.31	PQL	mg/Kg	
	SODIUM	J	98.0	116	PQL	mg/Kg	
	TIN	J	3.35	11.6	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-0.0-0.5	SELENIUM	J	0.265	0.432	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0639	0.216	PQL	mg/Kg	
SL-518-SA5D-SB-4.0-5.0	SELENIUM	J	0.116	0.459	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0557	0.230	PQL	mg/Kg	
SL-518-SA5D-SB-9.0-10.0	SILVER	J	0.0508	0.231	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-15.0-16.0	MERCURY	J	0.0109	0.0181	PQL	mg/Kg	J (all detects)
SL-518-SA5D-SB-4.0-5.0	MERCURY	J	0.0179	0.0186	PQL	mg/Kg	J (all detects)
SL-518-SA5D-SB-9.0-10.0	MERCURY	J	0.0181	0.0186	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-4.0-5.0	EFH (C21-C30)	J	5.1	5.8	PQL	mg/Kg	J (all detects)
	EFH (C30-C40)	J	8.6	12	PQL	mg/Kg	

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5D-SB-0.0-0.5	4,4'-DDE	J	1.2	1.9	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH105 **Laboratory: LL**

EDD Filename: PH105 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-518-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.76	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	0.84	1.8	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.7	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.99	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.8	PQL	ug/Kg	
	PYRENE	J	1.4	1.8	PQL	ug/Kg	

LDC #: 30695H4
SDG #: PH105
Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11/11/13
Page: 1 of 1
Reviewer: CR
2nd Reviewer: ✓

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/10/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (See PH107)
VII.	Duplicate Sample Analysis	N	Dup ↓
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	See PH107
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB=EB-091113 (PH106) FB=FB-041113 (PH029)

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-518-SA5D-SB-0.0-0.5	11		21		31	
2	SL-518-SA5D-SB-4.0-5.0	12		22		32	
3	SL-518-SA5D-SB-9.0-10.0	13		23		33	
4	SL-518-SA5D-SB-15.0-16.0	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	

Notes:

LDC #: 30695H4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: a
2nd Reviewer: ✓

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification													
	FB-041113 (SDG: PH029)	Action Limit	1	2	3										
Cu	0.0036	1.8													
Mo	0.0036	1.8	0.35 1	0.24 0	~~0.30~~ 0.29 6										

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB-091113 (SDG: PH106)	Action Limit	1	2	3								
Cu	0.0040	2											
Mn	0.0019	0.95											
Mo	0.0087	4.35	See FB	See FB	See FB								

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".

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH106

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 10, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 11, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, 7470A and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Hexavalent Chromium by EPA Method 7199
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks and field blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the following exceptions:

SDG/ Method	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PH106/ 6010C	ICB/CCB	Copper Molybdenum	4.2 ug/L 3.7 ug/L	EB-091113

Sample concentrations were compared to concentrations detected in the initial and continuing blanks. The sample concentrations were not detected or were significantly greater than the concentrations found in the associated blanks with the following exceptions:

SDG/Method	Sample	Compound	Reported Concentration	Modified Final Concentration
PH106/ 6010C	EB-091113	Copper Molybdenum	4.0 ug/L 8.7 ug/L	4.0U ug/L 8.7U ug/L

V. 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 exception of one sample for PCBs. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosure I.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for SVOCs, TPH as extractables, and one pair for metals from SDG PH104. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I of this DVR and the DVR for SDG PH104.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of two LCS/LCSD pairs for SVOCs. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory (in SDG PH104). The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-515-SA5D-SB-0.0-0.5 (from SDG PH104)	Cobalt Strontium	11 (≤10) 24 (≤10)	All soil samples in SDG PH106	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH106	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium, and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH029) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	3050B	6010C	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	3050B	6020A	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	3546	8015M	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	3546	8082A	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	3546	8270D SIM	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	METHOD	1613B	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5	7194441	N	METHOD	7471B	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MSD	P194441M241004A	MSD	3546	8082A	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MSD	P194441M260847	MSD	3546	8270D SIM	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MSD	P194441M322241A	MSD	3546	8015M	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MS	P194441R240945A	MS	3546	8082A	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MS	P194441R260815	MS	3546	8270D SIM	III
11-Sep-2013	SL-519-SA5D-SB-0.0-0.5MS	P194441R322220A	MS	3546	8015M	III
11-Sep-2013	TB-091113	7194440	TB	5030B	8015M	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	3050B	6010C	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	3050B	6020A	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	3546	8015M	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	3546	8082A	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	3546	8270D SIM	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	5035A	8015M	III
11-Sep-2013	SL-519-SA5D-SB-4.0-5.0	7194442	N	METHOD	7471B	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3050B	6010C	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3050B	6020A	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3546	8015M	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3546	8081B	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3546	8082A	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
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	3546	8270D SIM	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	METHOD	1613B	III
11-Sep-2013	SL-520-SA5D-SB-0.0-0.5	7194443	N	METHOD	7471B	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3050B	6010C	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3050B	6020A	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3546	8015M	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3546	8081B	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3546	8082A	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	3546	8270D SIM	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	5035A	8015M	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	METHOD	1613B	III
11-Sep-2013	SL-520-SA5D-SB-4.0-5.0	7194444	N	METHOD	7471B	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3050B	6010C	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3050B	6020A	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3546	8015M	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3546	8081B	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3546	8082A	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	3546	8270D SIM	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	5035A	8015M	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	METHOD	1613B	III
11-Sep-2013	SL-520-SA5D-SB-8.0-9.0	7194445	N	METHOD	7471B	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	3050B	6010C	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	3050B	6020A	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	3546	8015M	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	3546	8082A	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	3546	8270D 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
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	METHOD	1613B	III
11-Sep-2013	SL-521-SA5D-SB-0.0-0.5	7194446	N	METHOD	7471B	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	3050B	6010C	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	3050B	6020A	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	3546	8015M	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	3546	8082A	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	3546	8270D SIM	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	5035A	8015M	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	METHOD	1613B	III
11-Sep-2013	SL-521-SA5D-SB-5.5-6.5	7194447	N	METHOD	7471B	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3050B	6010C	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3050B	6020A	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3546	8015M	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3546	8081B	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3546	8082A	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	3546	8270D SIM	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	METHOD	1613B	III
11-Sep-2013	SL-522-SA5D-SB-0.0-0.5	7194448	N	METHOD	7471B	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3050B	6010C	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3050B	6020A	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3546	8015M	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3546	8081B	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3546	8082A	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	3546	8270D SIM	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	5035A	8015M	III
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	METHOD	1613B	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
11-Sep-2013	SL-522-SA5D-SB-6.0-7.0	7194449	N	METHOD	7471B	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3050B	6010C	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3050B	6020A	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3546	8015M	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3546	8081B	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3546	8082A	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	3546	8270D SIM	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	METHOD	1613B	III
11-Sep-2013	SL-523-SA5D-SB-0.0-0.5	7194452	N	METHOD	7471B	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3050B	6010C	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3050B	6020A	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3546	8015M	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3546	8081B	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3546	8082A	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	3546	8270D SIM	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	METHOD	1613B	III
11-Sep-2013	SL-529-SA5D-SB-0.0-0.5	7194453	N	METHOD	7471B	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3050B	6010C	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3050B	6020A	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3546	8015M	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3546	8081B	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3546	8082A	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	3546	8270D SIM	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	5035A	8015M	III
11-Sep-2013	SL-529-SA5D-SB-3.0-4.0	7194454	N	METHOD	7471B	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	3050B	6010C	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
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	3050B	6020A	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	3546	8015M	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	3546	8082A	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	3546	8270D SIM	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	METHOD	1613B	III
11-Sep-2013	SL-506-SA5D-SB-0.0-0.5	7194450	N	METHOD	7471B	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	3050B	6010C	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	3050B	6020A	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	3546	8015M	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	3546	8082A	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	3546	8270D SIM	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	5035A	8015M	III
11-Sep-2013	SL-506-SA5D-SB-4.0-5.0	7194451	N	METHOD	7471B	III
11-Sep-2013	EB-091113	7194439	EB	3005A	6010C	III
11-Sep-2013	EB-091113	7194439	EB	3510C	8015M	III
11-Sep-2013	EB-091113	7194439	EB	3510C	8081B	III
11-Sep-2013	EB-091113	7194439	EB	3510C	8082A	III
11-Sep-2013	EB-091113	7194439	EB	3510C	8270D SIM	III
11-Sep-2013	EB-091113	7194439	EB	5030B	8015M	III
11-Sep-2013	EB-091113	7194439	EB	Gen Prep	300.0	III
11-Sep-2013	EB-091113	7194439	EB	Gen Prep	6850	III
11-Sep-2013	EB-091113	7194439	EB	Gen Prep	7199	III
11-Sep-2013	EB-091113	7194439	EB	M3010A	6020A	III
11-Sep-2013	EB-091113	7194439	EB	METHOD	1613B	III
11-Sep-2013	EB-091113	7194439	EB	METHOD	7470A	III
11-Sep-2013	EB-091113	7194439	EB	METHOD	8151A	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
11-Sep-2013	EB-091113MSD	P194439M242312A	MSD	Gen Prep	6850	III
11-Sep-2013	EB-091113MS	P194439R242259A	MS	Gen Prep	6850	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **EB-091113** ***Collected:*** **9/11/2013 3:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.0040	J	0.0027	MDL	0.0200	PQL	mg/L	U	B, B
MANGANESE	0.0019	J	0.00083	MDL	0.0100	PQL	mg/L	J	Z
MOLYBDENUM	0.0087	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.910	J	0.819	MDL	4.43	PQL	mg/Kg	J	Z, Q
BERYLLIUM	1.00	J	0.0742	MDL	1.11	PQL	mg/Kg	J	Z
CADMIUM	0.617	J	0.0842	MDL	1.11	PQL	mg/Kg	J	Z
CHROMIUM	35.9		0.177	MDL	3.32	PQL	mg/Kg	J	Q
COBALT	11.8		0.110	MDL	1.11	PQL	mg/Kg	J	A
TIN	3.60	J	0.244	MDL	11.1	PQL	mg/Kg	U	B
VANADIUM	65.1		0.144	MDL	1.11	PQL	mg/Kg	J	Q
Zirconium	1.78	J	0.930	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: **SL-506-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.26	J	0.841	MDL	4.54	PQL	mg/Kg	J	Z, Q
BERYLLIUM	1.06	J	0.0761	MDL	1.14	PQL	mg/Kg	J	Z
CADMIUM	0.325	J	0.0863	MDL	1.14	PQL	mg/Kg	J	Z
CHROMIUM	41.0		0.182	MDL	3.41	PQL	mg/Kg	J	Q
COBALT	8.91		0.112	MDL	1.14	PQL	mg/Kg	J	A
TIN	3.84	J	0.250	MDL	11.4	PQL	mg/Kg	U	B
VANADIUM	75.0		0.148	MDL	1.14	PQL	mg/Kg	J	Q
Zirconium	4.15	J	0.954	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.04	J	0.791	MDL	4.28	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.938	J	0.0716	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.628	J	0.0813	MDL	1.07	PQL	mg/Kg	J	Z
CHROMIUM	35.7		0.171	MDL	3.21	PQL	mg/Kg	J	Q
COBALT	10.1		0.106	MDL	1.07	PQL	mg/Kg	J	A
MOLYBDENUM	0.280	J	0.182	MDL	2.14	PQL	mg/Kg	U	F, F
SODIUM	87.6	J	17.9	MDL	107	PQL	mg/Kg	J	Z
TIN	3.49	J	0.235	MDL	10.7	PQL	mg/Kg	U	B
VANADIUM	65.7		0.139	MDL	1.07	PQL	mg/Kg	J	Q
Zirconium	4.49	J	0.898	MDL	5.35	PQL	mg/Kg	J	Z

Sample ID: **SL-519-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 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
ANTIMONY	0.850	J	0.820	MDL	4.43	PQL	mg/Kg	J	Z, Q
BERYLLIUM	1.03	J	0.0742	MDL	1.11	PQL	mg/Kg	J	Z
CADMIUM	0.417	J	0.0842	MDL	1.11	PQL	mg/Kg	J	Z
CHROMIUM	39.3		0.177	MDL	3.32	PQL	mg/Kg	J	Q
COBALT	10.5		0.110	MDL	1.11	PQL	mg/Kg	J	A
TIN	4.04	J	0.244	MDL	11.1	PQL	mg/Kg	U	B
VANADIUM	71.6		0.144	MDL	1.11	PQL	mg/Kg	J	Q
Zirconium	3.54	J	0.931	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.16	J	0.820	MDL	4.43	PQL	mg/Kg	J	Z, Q
BERYLLIUM	1.04	J	0.0742	MDL	1.11	PQL	mg/Kg	J	Z
CADMIUM	0.495	J	0.0842	MDL	1.11	PQL	mg/Kg	J	Z
CHROMIUM	37.2		0.177	MDL	3.32	PQL	mg/Kg	J	Q
COBALT	10.3		0.110	MDL	1.11	PQL	mg/Kg	J	A
SODIUM	102	J	18.5	MDL	111	PQL	mg/Kg	J	Z
TIN	3.69	J	0.244	MDL	11.1	PQL	mg/Kg	U	B
VANADIUM	68.3		0.144	MDL	1.11	PQL	mg/Kg	J	Q
Zirconium	4.08	J	0.930	MDL	5.54	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-520-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 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
ANTIMONY	1.21	J	0.870	MDL	4.70	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.958	J	0.0788	MDL	1.18	PQL	mg/Kg	J	Z
CADMIUM	0.600	J	0.0894	MDL	1.18	PQL	mg/Kg	J	Z
CHROMIUM	37.1		0.188	MDL	3.53	PQL	mg/Kg	J	Q
COBALT	10.7		0.116	MDL	1.18	PQL	mg/Kg	J	A
TIN	3.91	J	0.259	MDL	11.8	PQL	mg/Kg	U	B
VANADIUM	69.1		0.153	MDL	1.18	PQL	mg/Kg	J	Q
Zirconium	3.92	J	0.988	MDL	5.88	PQL	mg/Kg	J	Z

Sample ID: **SL-520-SA5D-SB-8.0-9.0** ***Collected:*** **9/11/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.50	U	0.832	MDL	4.50	PQL	mg/Kg	UJ	Q
ARSENIC	3.59	J	0.787	MDL	4.50	PQL	mg/Kg	J	Z
BERYLLIUM	0.546	J	0.0754	MDL	1.12	PQL	mg/Kg	J	Z
BORON	8.62	J	0.945	MDL	11.2	PQL	mg/Kg	J	Z
CADMIUM	0.470	J	0.0855	MDL	1.12	PQL	mg/Kg	J	Z
CHROMIUM	19.2		0.180	MDL	3.37	PQL	mg/Kg	J	Q
COBALT	5.45		0.111	MDL	1.12	PQL	mg/Kg	J	A
TIN	3.20	J	0.247	MDL	11.2	PQL	mg/Kg	U	B
VANADIUM	37.5		0.146	MDL	1.12	PQL	mg/Kg	J	Q
Zirconium	2.48	J	0.945	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.30	U	0.795	MDL	4.30	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.858	J	0.0719	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.559	J	0.0816	MDL	1.07	PQL	mg/Kg	J	Z
CHROMIUM	31.3		0.172	MDL	3.22	PQL	mg/Kg	J	Q
COBALT	9.77		0.106	MDL	1.07	PQL	mg/Kg	J	A
MOLYBDENUM	0.366	J	0.183	MDL	2.15	PQL	mg/Kg	U	F, F
SODIUM	96.1	J	17.9	MDL	107	PQL	mg/Kg	J	Z
TIN	3.64	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
VANADIUM	58.6		0.140	MDL	1.07	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	2.99	J	0.902	MDL	5.37	PQL	mg/Kg	J	Z

Sample ID: **SL-521-SA5D-SB-5.5-6.5** ***Collected:*** **9/11/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.23	U	0.782	MDL	4.23	PQL	mg/Kg	UJ	Q
ARSENIC	3.89	J	0.740	MDL	4.23	PQL	mg/Kg	J	Z
BERYLLIUM	0.447	J	0.0708	MDL	1.06	PQL	mg/Kg	J	Z
BORON	7.52	J	0.887	MDL	10.6	PQL	mg/Kg	J	Z
CADMIUM	0.318	J	0.0803	MDL	1.06	PQL	mg/Kg	J	Z
CHROMIUM	17.2		0.169	MDL	3.17	PQL	mg/Kg	J	Q
COBALT	4.76		0.105	MDL	1.06	PQL	mg/Kg	J	A
SODIUM	85.4	J	17.6	MDL	106	PQL	mg/Kg	J	Z
TIN	3.45	J	0.232	MDL	10.6	PQL	mg/Kg	U	B
VANADIUM	33.9		0.137	MDL	1.06	PQL	mg/Kg	J	Q

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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
ANTIMONY	4.28	U	0.791	MDL	4.28	PQL	mg/Kg	UJ	Q
ARSENIC	3.86	J	0.748	MDL	4.28	PQL	mg/Kg	J	Z
BERYLLIUM	0.756	J	0.0716	MDL	1.07	PQL	mg/Kg	J	Z
CADMIUM	0.521	J	0.0813	MDL	1.07	PQL	mg/Kg	J	Z
CHROMIUM	34.8		0.171	MDL	3.21	PQL	mg/Kg	J	Q
COBALT	9.25		0.106	MDL	1.07	PQL	mg/Kg	J	A
MOLYBDENUM	0.365	J	0.182	MDL	2.14	PQL	mg/Kg	U	F, F
TIN	3.22	J	0.235	MDL	10.7	PQL	mg/Kg	U	B
VANADIUM	57.8		0.139	MDL	1.07	PQL	mg/Kg	J	Q

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.04	J	0.796	MDL	4.30	PQL	mg/Kg	J	Z, Q
CADMIUM	0.476	J	0.0818	MDL	1.08	PQL	mg/Kg	J	Z
CHROMIUM	34.8		0.172	MDL	3.23	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	9.62		0.107	MDL	1.08	PQL	mg/Kg	J	A
TIN	4.23	J	0.237	MDL	10.8	PQL	mg/Kg	U	B
VANADIUM	63.2		0.140	MDL	1.08	PQL	mg/Kg	J	Q

Sample ID: **SL-523-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.15	U	0.767	MDL	4.15	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.455	J	0.0694	MDL	1.04	PQL	mg/Kg	J	Z
BORON	6.99	J	0.870	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.268	J	0.0788	MDL	1.04	PQL	mg/Kg	J	Z
CHROMIUM	24.2		0.166	MDL	3.11	PQL	mg/Kg	J	Q
COBALT	6.03		0.103	MDL	1.04	PQL	mg/Kg	J	A
TIN	3.62	J	0.228	MDL	10.4	PQL	mg/Kg	U	B
VANADIUM	42.3		0.135	MDL	1.04	PQL	mg/Kg	J	Q
Zirconium	1.49	J	0.870	MDL	5.18	PQL	mg/Kg	J	Z

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.825	J	0.774	MDL	4.19	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.713	J	0.0701	MDL	1.05	PQL	mg/Kg	J	Z
BORON	9.15	J	0.879	MDL	10.5	PQL	mg/Kg	J	Z
CADMIUM	0.398	J	0.0795	MDL	1.05	PQL	mg/Kg	J	Z
CHROMIUM	25.1		0.167	MDL	3.14	PQL	mg/Kg	J	Q
COBALT	7.18		0.104	MDL	1.05	PQL	mg/Kg	J	A
MOLYBDENUM	0.292	J	0.178	MDL	2.09	PQL	mg/Kg	U	F, F
SODIUM	104	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	3.22	J	0.230	MDL	10.5	PQL	mg/Kg	U	B
VANADIUM	46.8		0.136	MDL	1.05	PQL	mg/Kg	J	Q
Zirconium	2.32	J	0.879	MDL	5.23	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-529-SA5D-SB-3.0-4.0** ***Collected:*** **9/11/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.21	J	0.772	MDL	4.17	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.693	J	0.0699	MDL	1.04	PQL	mg/Kg	J	Z
BORON	8.48	J	0.876	MDL	10.4	PQL	mg/Kg	J	Z
CADMIUM	0.286	J	0.0793	MDL	1.04	PQL	mg/Kg	J	Z
CHROMIUM	29.3		0.167	MDL	3.13	PQL	mg/Kg	J	Q
COBALT	7.56		0.103	MDL	1.04	PQL	mg/Kg	J	A
MOLYBDENUM	0.200	J	0.177	MDL	2.09	PQL	mg/Kg	U	F, F
TIN	3.70	J	0.229	MDL	10.4	PQL	mg/Kg	U	B
VANADIUM	54.6		0.136	MDL	1.04	PQL	mg/Kg	J	Q
Zirconium	1.56	J	0.876	MDL	5.21	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.196	J	0.111	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0511	J	0.0288	MDL	0.221	PQL	mg/Kg	J	Z
STRONTIUM	42.9		0.0753	MDL	0.443	PQL	mg/Kg	J	A

Sample ID: **SL-506-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0670	J	0.0295	MDL	0.227	PQL	mg/Kg	J	Z
STRONTIUM	42.9		0.0772	MDL	0.454	PQL	mg/Kg	J	A

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.243	J	0.107	MDL	0.428	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0463	J	0.0278	MDL	0.214	PQL	mg/Kg	J	Z
STRONTIUM	32.9		0.0727	MDL	0.428	PQL	mg/Kg	J	A

Sample ID: **SL-519-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 8:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.127	J	0.111	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: **SL-519-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 8:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0493	J	0.0288	MDL	0.222	PQL	mg/Kg	J	Z
STRONTIUM	39.7		0.0753	MDL	0.443	PQL	mg/Kg	J	A

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.274	J	0.111	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0488	J	0.0288	MDL	0.221	PQL	mg/Kg	J	Z
STRONTIUM	33.7		0.0753	MDL	0.443	PQL	mg/Kg	J	A

Sample ID: **SL-520-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 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
SILVER	0.0489	J	0.0306	MDL	0.235	PQL	mg/Kg	J	Z
STRONTIUM	37.7		0.0800	MDL	0.470	PQL	mg/Kg	J	A

Sample ID: **SL-520-SA5D-SB-8.0-9.0** ***Collected:*** **9/11/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0388	J	0.0292	MDL	0.225	PQL	mg/Kg	J	Z
STRONTIUM	30.4		0.0765	MDL	0.450	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.208	J	0.107	MDL	0.430	PQL	mg/Kg	J	Z

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0373	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z
STRONTIUM	30.1		0.0730	MDL	0.430	PQL	mg/Kg	J	A

Sample ID: **SL-521-SA5D-SB-5.5-6.5** ***Collected:*** **9/11/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	19.6		0.0718	MDL	0.423	PQL	mg/Kg	J	A

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 10:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.204	J	0.107	MDL	0.428	PQL	mg/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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
SILVER	0.0324	J	0.0278	MDL	0.214	PQL	mg/Kg	J	Z
STRONTIUM	28.6		0.0727	MDL	0.428	PQL	mg/Kg	J	A

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.219	J	0.108	MDL	0.430	PQL	mg/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.157	J	0.0280	MDL	0.215	PQL	mg/Kg	J	Z
STRONTIUM	35.9		0.0732	MDL	0.430	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-523-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	14.8		0.0705	MDL	0.415	PQL	mg/Kg	J	A

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.152	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0281	J	0.0272	MDL	0.209	PQL	mg/Kg	J	Z
STRONTIUM	24.3		0.0712	MDL	0.419	PQL	mg/Kg	J	A

Sample ID: **SL-529-SA5D-SB-3.0-4.0** ***Collected:*** **9/11/2013 1:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.142	J	0.104	MDL	0.417	PQL	mg/Kg	J	Z

Sample ID: **SL-529-SA5D-SB-3.0-4.0** ***Collected:*** **9/11/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	25.4		0.0709	MDL	0.417	PQL	mg/Kg	J	A

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0157	J	0.0111	MDL	0.0184	PQL	mg/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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	0.0112	J	0.0105	MDL	0.0175	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 7471B **Matrix:** SO

Sample ID: SL-522-SA5D-SB-6.0-7.0 **Collected:** 9/11/2013 10:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0110	J	0.0108	MDL	0.0180	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix:** AQ

Sample ID: EB-091113 **Collected:** 9/11/2013 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
1,2,3,4,6,7,8-HPCDD	1.74	JQ	0.272	MDL	9.62	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	1.63	JQ	0.157	MDL	9.62	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.942	J	0.122	MDL	9.62	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	1.49	JQ	0.387	MDL	9.62	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	2.00	JQ	0.351	MDL	9.62	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	1.68	JQ	0.385	MDL	9.62	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	1.83	JQ	0.342	MDL	9.62	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	1.48	JQ	0.221	MDL	9.62	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.931	JQ	0.169	MDL	9.62	PQL	pg/L	U	B
1,2,3,7,8-PECDD	2.30	JQ	0.525	MDL	9.62	PQL	pg/L	U	B
1,2,3,7,8-PECDF	1.67	JQ	0.248	MDL	9.62	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	1.37	JQ	0.222	MDL	9.62	PQL	pg/L	U	B
2,3,4,7,8-PECDF	1.79	JQ	0.309	MDL	9.62	PQL	pg/L	U	B
2,3,7,8-TCDD	0.813	JQ	0.458	MDL	1.92	PQL	pg/L	J	Z
OCDD	2.74	J	0.245	MDL	19.2	PQL	pg/L	U	B
OCDF	2.98	J	0.382	MDL	19.2	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-506-SA5D-SB-0.0-0.5 **Collected:** 9/11/2013 1:30:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.171	JB	0.0563	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0542	JBQ	0.0181	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0751	JBQ	0.0347	MDL	5.28	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.0624	JBQ	0.0477	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0546	J	0.0503	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.253	JQ	0.0523	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.307	JBQ	0.0492	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.665	JB	0.0626	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.563	JB	0.0511	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0702	JQ	0.0449	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0605	JQ	0.0487	MDL	5.28	PQL	ng/Kg	J	Z
OCDD	0.920	JB	0.0497	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.149	JB	0.0829	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.03	JBQ	0.0912	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.212	JB	0.0238	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0548	J	0.0477	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.342	J	0.0654	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0606	JBQ	0.0434	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.506	JB	0.0628	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.727	JB	0.0526	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.185	JBQ	0.115	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.345	JBQ	0.0592	MDL	5.32	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0469	JQ	0.0420	MDL	5.32	PQL	ng/Kg	J	Z
OCDF	0.508	JB	0.0986	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.465	JB	0.0607	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.109	JB	0.0195	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0571	JQ	0.0453	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0786	JQ	0.0573	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.278	JBQ	0.0565	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.413	JB	0.0492	MDL	5.55	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.128	JBQ	0.0483	MDL	5.55	PQL	ng/Kg	U	B
OCDD	4.19	JBQ	0.0730	MDL	11.1	PQL	ng/Kg	J	Z
OCDF	0.158	JBQ	0.101	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: **SL-520-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 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
1,2,3,4,6,7,8-HPCDD	0.142	JBQ	0.0533	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0418	JBQ	0.0230	MDL	5.69	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0597	JQ	0.0590	MDL	5.69	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.172	JQ	0.144	MDL	1.14	PQL	ng/Kg	J	Z
OCDD	0.674	JBQ	0.0591	MDL	11.4	PQL	ng/Kg	U	B
OCDF	0.284	JBQ	0.105	MDL	11.4	PQL	ng/Kg	U	B

Sample ID: **SL-520-SA5D-SB-8.0-9.0** ***Collected:*** **9/11/2013 9:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.15	JBQ	0.0784	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.156	JBQ	0.0294	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0914	JBQ	0.0516	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0716	JQ	0.0589	MDL	5.53	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0660	JQ	0.0612	MDL	5.53	PQL	ng/Kg	J	Z
OCDF	0.432	JB	0.113	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.860	JBQ	0.0615	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.110	JBQ	0.0172	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0691	JQ	0.0552	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.725	J	0.0664	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.101	JBQ	0.0497	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	1.04	JB	0.0664	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.84	JB	0.0638	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.198	JB	0.0953	MDL	5.41	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.327	JB	0.0543	MDL	5.41	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0719	JQ	0.0508	MDL	5.41	PQL	ng/Kg	J	Z
OCDF	0.288	JBQ	0.0839	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: **SL-521-SA5D-SB-5.5-6.5** ***Collected:*** **9/11/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.265	JBQ	0.0582	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0497	JB	0.0171	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0601	JQ	0.0519	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0476	JBQ	0.0335	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.124	JBQ	0.0434	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.104	JBQ	0.0516	MDL	5.33	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0879	JQ	0.0489	MDL	5.33	PQL	ng/Kg	J	Z
OCDD	2.46	JB	0.0666	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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
1,2,3,4,6,7,8-HPCDD	0.419	JBQ	0.0554	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.0487	JBQ	0.0179	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0703	JB	0.0306	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0665	JBQ	0.0510	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.108	JQ	0.0458	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.317	J	0.0519	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0998	JBQ	0.0407	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.680	JB	0.0506	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.11	JB	0.0519	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.195	JBQ	0.0952	MDL	5.40	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.381	JBQ	0.0510	MDL	5.40	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0928	JQ	0.0413	MDL	5.40	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.172	J	0.0458	MDL	5.40	PQL	ng/Kg	J	Z
OCDD	4.89	JB	0.0643	MDL	10.8	PQL	ng/Kg	J	Z
OCDF	0.153	JBQ	0.0811	MDL	10.8	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.471	JBQ	0.0849	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.0390	JB	0.0240	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0967	JQ	0.0458	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.150	JQ	0.106	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0729	JB	0.0409	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.265	JBQ	0.113	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0731	JBQ	0.0559	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.168	JBQ	0.151	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.141	JBQ	0.0730	MDL	5.46	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0865	J	0.0695	MDL	5.46	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.254	J	0.211	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	0.328	JBQ	0.0629	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: **SL-523-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 12:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.121	JB	0.0507	MDL	4.94	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0342	JBQ	0.0175	MDL	4.94	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0464	JBQ	0.0341	MDL	4.94	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0733	JQ	0.0396	MDL	4.94	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.0874	JBQ	0.0398	MDL	4.94	PQL	ng/Kg	U	B
OCDD	0.525	JBQ	0.0420	MDL	9.89	PQL	ng/Kg	U	B
OCDF	0.107	JBQ	0.0842	MDL	9.89	PQL	ng/Kg	U	B

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.96	JB	0.0722	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.281	JB	0.0204	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0533	JB	0.0351	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0689	JQ	0.0385	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.283	JQ	0.0463	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0509	JBQ	0.0356	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.335	JB	0.0471	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.375	JBQ	0.0458	MDL	5.06	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.117	JBQ	0.0430	MDL	5.06	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.109	J	0.0349	MDL	5.06	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0575	JQ	0.0407	MDL	5.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.141	JQ	0.120	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	0.733	JB	0.0886	MDL	10.1	PQL	ng/Kg	U	B

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***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)	3.7	J	2.2	MDL	5.5	PQL	mg/Kg	J	Z
EFH (C30-C40)	7.6	J	4.4	MDL	11	PQL	mg/Kg	J	Z

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	5.1	J	2.2	MDL	5.4	PQL	mg/Kg	J	Z, Q
EFH (C30-C40)	9.8	J	4.3	MDL	11	PQL	mg/Kg	J	Z, Q
EFH (C8-C11)	2.2	J	2.2	MDL	5.4	PQL	mg/Kg	J	Z, Q, Q, Q

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***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)	2.9	J	2.2	MDL	5.6	PQL	mg/Kg	J	Z

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.2	J	2.1	MDL	5.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-521-SA5D-SB-5.5-6.5** ***Collected:*** **9/11/2013 9:55:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	3.4	J	2.1	MDL	5.4	PQL	mg/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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
EFH (C15-C20)	2.2	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z
EFH (C21-C30)	5.1	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z
EFH (C30-C40)	10	J	4.2	MDL	11	PQL	mg/Kg	J	Z

Sample ID: **SL-522-SA5D-SB-6.0-7.0** ***Collected:*** **9/11/2013 10:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	3.2	J	2.2	MDL	5.5	PQL	mg/Kg	J	Z

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***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)	4.7	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **8082A** ***Matrix:*** **AQ**

Sample ID: **EB-091113** ***Collected:*** **9/11/2013 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
AROCLOR 1016	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1221	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1232	0.41	U	0.17	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1242	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1248	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1254	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1260	0.41	U	0.12	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 1262	0.41	U	0.17	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 1268	0.41	U	0.13	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 5432	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8082A** ***Matrix:*** **AQ**

Sample ID: **EB-091113** ***Collected:*** **9/11/2013 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
Aroclor 5442	0.41	U	0.083	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 5460	0.41	U	0.091	MDL	0.41	PQL	ug/L	UJ	S

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **AQ**

Sample ID: **EB-091113** ***Collected:*** **9/11/2013 3:00:00** ***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	0.21	J	0.051	MDL	1.0	PQL	ug/L	J	Z
Butylbenzylphthalate	1.0	U	0.051	MDL	1.0	PQL	ug/L	UJ	L, E
Diethylphthalate	0.24	J	0.051	MDL	1.0	PQL	ug/L	J	Z, L, E
Dimethylphthalate	1.0	U	0.051	MDL	1.0	PQL	ug/L	UJ	L, E
Di-n-butylphthalate	0.20	J	0.051	MDL	1.0	PQL	ug/L	J	Z
NAPHTHALENE	0.038	J	0.031	MDL	0.051	PQL	ug/L	J	Z

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-506-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.46	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.84	J	0.74	MDL	1.8	PQL	ug/Kg	U	F

Sample ID: **SL-506-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 1:50:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.99	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.4	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, Q
BENZO(E)PYRENE	18	U	3.6	MDL	18	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-519-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 7:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.7	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z, Q
FLUORANTHENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, Q
NAPHTHALENE	1.4	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, Q
PHENANTHRENE	0.94	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, Q
PYRENE	0.98	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, Q

Sample ID: **SL-520-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 8:50:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.0	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-520-SA5D-SB-4.0-5.0** ***Collected:*** **9/11/2013 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
NAPHTHALENE	1.0	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: **SL-520-SA5D-SB-8.0-9.0** ***Collected:*** **9/11/2013 9:10:00** ***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	0.38	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.6	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.4	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.85	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.1	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-521-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 9:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.73	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-521-SA5D-SB-5.5-6.5** ***Collected:*** **9/11/2013 9:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.83	J	0.72	MDL	1.8	PQL	ug/Kg	U	F

Sample ID: **SL-522-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 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
BENZO(B)FLUORANTHENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.5	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.82	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.83	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-523-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 12:20:00** ***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	0.82	J	0.69	MDL	1.7	PQL	ug/Kg	U	F

Sample ID: **SL-529-SA5D-SB-0.0-0.5** ***Collected:*** **9/11/2013 1:10:00** ***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	0.61	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.85	J	0.70	MDL	1.8	PQL	ug/Kg	U	F

Sample ID: **SL-529-SA5D-SB-3.0-4.0** ***Collected:*** **9/11/2013 1:15:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.57	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Laboratory Control Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Upper Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH106

Method Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2660B370248	9/25/2013 2:48:00 AM	1,2,3,4,6,7,8-HPCDD	1.27 pg/L	EB-091113
		1,2,3,4,6,7,8-HPCDF	1.58 pg/L	
		1,2,3,4,7,8,9-HPCDF	1.12 pg/L	
		1,2,3,4,7,8-HxCDD	1.45 pg/L	
		1,2,3,4,7,8-HXCDF	1.70 pg/L	
		1,2,3,6,7,8-HXCDD	1.49 pg/L	
		1,2,3,6,7,8-HXCDF	1.55 pg/L	
		1,2,3,7,8,9-HXCDD	0.932 pg/L	
		1,2,3,7,8,9-HXCDF	1.03 pg/L	
		1,2,3,7,8-PECDD	1.71 pg/L	
		1,2,3,7,8-PECDF	1.48 pg/L	
		2,3,4,6,7,8-HXCDF	1.30 pg/L	
		2,3,4,7,8-PECDF	1.58 pg/L	
		OCDD	2.51 pg/L	
		OCDF	2.72 pg/L	

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
EB-091113(RES)	1,2,3,4,6,7,8-HPCDD	1.74 pg/L	1.74U pg/L
EB-091113(RES)	1,2,3,4,6,7,8-HPCDF	1.63 pg/L	1.63U pg/L
EB-091113(RES)	1,2,3,4,7,8,9-HPCDF	0.942 pg/L	0.942U pg/L
EB-091113(RES)	1,2,3,4,7,8-HxCDD	1.49 pg/L	1.49U pg/L
EB-091113(RES)	1,2,3,4,7,8-HXCDF	2.00 pg/L	2.00U pg/L
EB-091113(RES)	1,2,3,6,7,8-HXCDD	1.68 pg/L	1.68U pg/L
EB-091113(RES)	1,2,3,6,7,8-HXCDF	1.83 pg/L	1.83U pg/L
EB-091113(RES)	1,2,3,7,8,9-HXCDD	1.48 pg/L	1.48U pg/L
EB-091113(RES)	1,2,3,7,8,9-HXCDF	0.931 pg/L	0.931U pg/L
EB-091113(RES)	1,2,3,7,8-PECDD	2.30 pg/L	2.30U pg/L
EB-091113(RES)	1,2,3,7,8-PECDF	1.67 pg/L	1.67U pg/L
EB-091113(RES)	2,3,4,6,7,8-HXCDF	1.37 pg/L	1.37U pg/L
EB-091113(RES)	2,3,4,7,8-PECDF	1.79 pg/L	1.79U pg/L
EB-091113(RES)	OCDD	2.74 pg/L	2.74U pg/L
EB-091113(RES)	OCDF	2.98 pg/L	2.98U pg/L

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2610B370454	9/20/2013 4:54:00 AM	1,2,3,4,6,7,8-HPCDD	0.0535 ng/Kg	SL-506-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0418 ng/Kg	SL-519-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0583 ng/Kg	SL-520-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0859 ng/Kg	SL-520-SA5D-SB-4.0-5.0
		1,2,3,6,7,8-HXCDF	0.0456 ng/Kg	SL-520-SA5D-SB-8.0-9.0
		1,2,3,7,8,9-HXCDD	0.0579 ng/Kg	SL-521-SA5D-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0750 ng/Kg	SL-521-SA5D-SB-5.5-6.5
		1,2,3,7,8-PECDD	0.122 ng/Kg	SL-522-SA5D-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0876 ng/Kg	SL-522-SA5D-SB-6.0-7.0
		OCDD	0.197 ng/Kg	SL-523-SA5D-SB-0.0-0.5
		OCDF	0.197 ng/Kg	SL-529-SA5D-SB-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-506-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.171 ng/Kg	0.171U ng/Kg
SL-506-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0542 ng/Kg	0.0542U ng/Kg
SL-506-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0751 ng/Kg	0.0751U ng/Kg
SL-506-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0624 ng/Kg	0.0624U ng/Kg
SL-506-SA5D-SB-0.0-0.5(RES)	OCDD	0.920 ng/Kg	0.920U ng/Kg
SL-506-SA5D-SB-0.0-0.5(RES)	OCDF	0.149 ng/Kg	0.149U ng/Kg
SL-519-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0606 ng/Kg	0.0606U ng/Kg
SL-519-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.185 ng/Kg	0.185U ng/Kg
SL-519-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.345 ng/Kg	0.345U ng/Kg
SL-519-SA5D-SB-0.0-0.5(RES)	OCDF	0.508 ng/Kg	0.508U ng/Kg
SL-520-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.109 ng/Kg	0.109U ng/Kg
SL-520-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.278 ng/Kg	0.278U ng/Kg
SL-520-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.128 ng/Kg	0.128U ng/Kg
SL-520-SA5D-SB-0.0-0.5(RES)	OCDF	0.158 ng/Kg	0.158U ng/Kg
SL-520-SA5D-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.142 ng/Kg	0.142U ng/Kg
SL-520-SA5D-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0418 ng/Kg	0.0418U ng/Kg
SL-520-SA5D-SB-4.0-5.0(RES)	OCDD	0.674 ng/Kg	0.674U ng/Kg
SL-520-SA5D-SB-4.0-5.0(RES)	OCDF	0.284 ng/Kg	0.284U ng/Kg
SL-520-SA5D-SB-8.0-9.0(RES)	1,2,3,4,6,7,8-HPCDF	0.156 ng/Kg	0.156U ng/Kg
SL-520-SA5D-SB-8.0-9.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0914 ng/Kg	0.0914U ng/Kg
SL-520-SA5D-SB-8.0-9.0(RES)	OCDF	0.432 ng/Kg	0.432U ng/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.101 ng/Kg	0.101U ng/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.198 ng/Kg	0.198U ng/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.327 ng/Kg	0.327U ng/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	OCDF	0.288 ng/Kg	0.288U ng/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	1,2,3,4,6,7,8-HPCDD	0.265 ng/Kg	0.265U ng/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0497 ng/Kg	0.0497U ng/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	1,2,3,6,7,8-HXCDF	0.0476 ng/Kg	0.0476U ng/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	1,2,3,7,8,9-HXCDF	0.124 ng/Kg	0.124U ng/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	1,2,3,7,8-PECDF	0.104 ng/Kg	0.104U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0487 ng/Kg	0.0487U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0703 ng/Kg	0.0703U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0665 ng/Kg	0.0665U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0998 ng/Kg	0.0998U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.195 ng/Kg	0.195U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.381 ng/Kg	0.381U ng/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	OCDF	0.153 ng/Kg	0.153U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0390 ng/Kg	0.0390U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	1,2,3,6,7,8-HXCDF	0.0729 ng/Kg	0.0729U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-522-SA5D-SB-6.0-7.0(RES)	1,2,3,7,8,9-HXCDD	0.265 ng/Kg	0.265U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	1,2,3,7,8,9-HXCDF	0.0731 ng/Kg	0.0731U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	1,2,3,7,8-PECDD	0.168 ng/Kg	0.168U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	1,2,3,7,8-PECDF	0.141 ng/Kg	0.141U ng/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	OCDD	0.328 ng/Kg	0.328U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.121 ng/Kg	0.121U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0342 ng/Kg	0.0342U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0464 ng/Kg	0.0464U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0874 ng/Kg	0.0874U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	OCDD	0.525 ng/Kg	0.525U ng/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	OCDF	0.107 ng/Kg	0.107U ng/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0533 ng/Kg	0.0533U ng/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0509 ng/Kg	0.0509U ng/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.375 ng/Kg	0.375U ng/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.117 ng/Kg	0.117U ng/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	OCDF	0.733 ng/Kg	0.733U ng/Kg

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26135AB221650	9/19/2013 4:50:00 PM	COPPER	0.0044 mg/L	EB-091113

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
EB-091113(REA2)	COPPER	0.0040 mg/L	0.0040U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P25637BB221459	9/17/2013 2:59:00 PM	CALCIUM TIN	5.14 mg/Kg 1.20 mg/Kg	SL-506-SA5D-SB-0.0-0.5 SL-506-SA5D-SB-4.0-5.0 SL-519-SA5D-SB-0.0-0.5 SL-519-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-0.0-0.5 SL-520-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-8.0-9.0 SL-521-SA5D-SB-0.0-0.5 SL-521-SA5D-SB-5.5-6.5 SL-522-SA5D-SB-0.0-0.5 SL-522-SA5D-SB-6.0-7.0 SL-523-SA5D-SB-0.0-0.5 SL-529-SA5D-SB-0.0-0.5 SL-529-SA5D-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
SL-506-SA5D-SB-0.0-0.5(RES)	TIN	3.60 mg/Kg	3.60U mg/Kg
SL-506-SA5D-SB-4.0-5.0(RES)	TIN	3.84 mg/Kg	3.84U mg/Kg
SL-519-SA5D-SB-0.0-0.5(RES)	TIN	3.49 mg/Kg	3.49U mg/Kg
SL-519-SA5D-SB-4.0-5.0(RES)	TIN	4.04 mg/Kg	4.04U mg/Kg
SL-520-SA5D-SB-0.0-0.5(RES)	TIN	3.69 mg/Kg	3.69U mg/Kg
SL-520-SA5D-SB-4.0-5.0(RES)	TIN	3.91 mg/Kg	3.91U mg/Kg
SL-520-SA5D-SB-8.0-9.0(RES)	TIN	3.20 mg/Kg	3.20U mg/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	TIN	3.64 mg/Kg	3.64U mg/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	TIN	3.45 mg/Kg	3.45U mg/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	TIN	3.22 mg/Kg	3.22U mg/Kg
SL-522-SA5D-SB-6.0-7.0(RES)	TIN	4.23 mg/Kg	4.23U mg/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	TIN	3.62 mg/Kg	3.62U mg/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	TIN	3.22 mg/Kg	3.22U mg/Kg
SL-529-SA5D-SB-3.0-4.0(RES)	TIN	3.70 mg/Kg	3.70U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-091113(REA2)	9/11/2013 3:00:00 PM	COPPER MANGANESE MOLYBDENUM	0.004 mg/L 0.0019 mg/L 0.0087 mg/L	SL-506-SA5D-SB-0.0-0.5 SL-506-SA5D-SB-4.0-5.0 SL-519-SA5D-SB-0.0-0.5 SL-519-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-0.0-0.5 SL-520-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-8.0-9.0 SL-521-SA5D-SB-0.0-0.5 SL-521-SA5D-SB-5.5-6.5 SL-522-SA5D-SB-0.0-0.5 SL-522-SA5D-SB-6.0-7.0 SL-523-SA5D-SB-0.0-0.5 SL-529-SA5D-SB-0.0-0.5 SL-529-SA5D-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
SL-519-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.280 mg/Kg	0.280U mg/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.366 mg/Kg	0.366U mg/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.365 mg/Kg	0.365U mg/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.292 mg/Kg	0.292U mg/Kg
SL-529-SA5D-SB-3.0-4.0(RES)	MOLYBDENUM	0.200 mg/Kg	0.200U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-506-SA5D-SB-0.0-0.5 SL-506-SA5D-SB-4.0-5.0 SL-519-SA5D-SB-0.0-0.5 SL-519-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-0.0-0.5 SL-520-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-8.0-9.0 SL-521-SA5D-SB-0.0-0.5 SL-521-SA5D-SB-5.5-6.5 SL-522-SA5D-SB-0.0-0.5 SL-522-SA5D-SB-6.0-7.0 SL-523-SA5D-SB-0.0-0.5 SL-529-SA5D-SB-0.0-0.5 SL-529-SA5D-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
SL-519-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.280 mg/Kg	0.280U mg/Kg
SL-521-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.366 mg/Kg	0.366U mg/Kg
SL-522-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.365 mg/Kg	0.365U mg/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.292 mg/Kg	0.292U mg/Kg
SL-529-SA5D-SB-3.0-4.0(RES)	MOLYBDENUM	0.200 mg/Kg	0.200U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(RES)	4/11/2013 3:00:00 PM	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate NAPHTHALENE	0.019 ug/L 0.024 ug/L 0.082 ug/L 0.18 ug/L 0.17 ug/L 0.17 ug/L	SL-506-SA5D-SB-0.0-0.5 SL-506-SA5D-SB-4.0-5.0 SL-519-SA5D-SB-0.0-0.5 SL-519-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-0.0-0.5 SL-520-SA5D-SB-4.0-5.0 SL-520-SA5D-SB-8.0-9.0 SL-521-SA5D-SB-0.0-0.5 SL-521-SA5D-SB-5.5-6.5 SL-522-SA5D-SB-0.0-0.5 SL-522-SA5D-SB-6.0-7.0 SL-523-SA5D-SB-0.0-0.5 SL-529-SA5D-SB-0.0-0.5 SL-529-SA5D-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
SL-506-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.84 ug/Kg	1.8U ug/Kg
SL-521-SA5D-SB-5.5-6.5(RES)	NAPHTHALENE	0.83 ug/Kg	1.8U ug/Kg
SL-523-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.82 ug/Kg	1.7U ug/Kg
SL-529-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	0.85 ug/Kg	1.8U ug/Kg

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Surrogate Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **AQ**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB-091113	DECACHLOROBIPHENYL	34	45.00-120.00	All Target Analytes	J (all detects) UJ (all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-519-SA5D-SB-0.0-0.5MS **SL-519-SA5D-SB-0.0-0.5MSD** (SL-519-SA5D-SB-0.0-0.5)	EFH (C12-C14)	125	-	49.00-123.00	-	EFH (C12-C14)	J (all detects)
	EFH (C15-C20)	223	194	49.00-123.00	-	EFH (C15-C20)	
	EFH (C21-C30)	176	154	49.00-123.00	-	EFH (C21-C30)	
	EFH (C30-C40)	225	184	49.00-123.00	-	EFH (C30-C40)	
SL-519-SA5D-SB-0.0-0.5MS **SL-519-SA5D-SB-0.0-0.5MSD** (SL-519-SA5D-SB-0.0-0.5)	EFH (C8-C11)	141	20	49.00-123.00	59 (20.00)	EFH (C8-C11)	J(all detects) UJ(all non-detects)

Method: 8270D SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-519-SA5D-SB-0.0-0.5MS **SL-519-SA5D-SB-0.0-0.5MSD** (SL-519-SA5D-SB-0.0-0.5)	1-METHYLNAPHTHALENE	-	-	50.00-131.00	46 (30.00)	1-METHYLNAPHTHALENE	J(all detects)
	2-METHYLNAPHTHALENE	-	-	35.00-152.00	46 (30.00)	2-METHYLNAPHTHALENE	
	ACENAPHTHENE	-	-	48.00-127.00	44 (30.00)	ACENAPHTHENE	
	ACENAPHTHYLENE	-	-	49.00-121.00	45 (30.00)	ACENAPHTHYLENE	
	ANTHRACENE	-	-	52.00-126.00	41 (30.00)	ANTHRACENE	
	BENZO(A)ANTHRACENE	-	-	44.00-143.00	43 (30.00)	BENZO(A)ANTHRACENE	
	BENZO(A)PYRENE	-	-	44.00-140.00	43 (30.00)	BENZO(A)PYRENE	
	BENZO(B)FLUORANTHENE	-	-	26.00-142.00	39 (30.00)	BENZO(B)FLUORANTHENE	
	BENZO(G,H,I)PERYLENE	-	-	33.00-141.00	42 (30.00)	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	-	-	54.00-142.00	45 (30.00)	BENZO(K)FLUORANTHENE	
	BIS(2-ETHYLHEXYL)PHTHALAT	-	-	39.00-167.00	44 (30.00)	BIS(2-ETHYLHEXYL)PHTHALA	
	Butylbenzylphthalate	-	-	49.00-151.00	41 (30.00)	Butylbenzylphthalate	
	CHRYSENE	-	-	29.00-148.00	39 (30.00)	CHRYSENE	
	DIBENZO(A,H)ANTHRACENE	-	-	20.00-137.00	43 (30.00)	DIBENZO(A,H)ANTHRACENE	
	Diethylphthalate	-	-	43.00-145.00	46 (30.00)	Diethylphthalate	
	Dimethylphthalate	-	-	58.00-129.00	45 (30.00)	Dimethylphthalate	
	Di-n-butylphthalate	-	-	52.00-147.00	41 (30.00)	Di-n-butylphthalate	
	Di-n-octylphthalate	-	-	52.00-162.00	43 (30.00)	Di-n-octylphthalate	
	FLUORANTHENE	-	-	40.00-148.00	39 (30.00)	FLUORANTHENE	
	FLUORENE	-	-	51.00-137.00	44 (30.00)	FLUORENE	
	INDENO(1,2,3-CD)PYRENE	-	-	17.00-136.00	42 (30.00)	INDENO(1,2,3-CD)PYRENE	
	NAPHTHALENE	-	-	31.00-148.00	46 (30.00)	NAPHTHALENE	
	N-NITROSODIMETHYLAMINE	186	-	48.00-113.00	56 (30.00)	N-NITROSODIMETHYLAMINE	
	PHENANTHRENE	-	-	29.00-142.00	43 (30.00)	PHENANTHRENE	
	PYRENE	-	-	26.00-143.00	41 (30.00)	PYRENE	
SL-519-SA5D-SB-0.0-0.5MSD (SL-519-SA5D-SB-0.0-0.5)	BENZO(E)PYRENE	-	61	70.00-130.00	41 (30.00)	BENZO(E)PYRENE	J(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8270D SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P7WMLCSQ261255	Butylbenzylphthalate	21	37	40.00-138.00	54 (30.00)	Butylbenzylphthalate	J(all detects)
P7WMLCSY261322	Diethylphthalate	51	-	64.00-128.00	33 (30.00)	Diethylphthalate	UJ(all non-detects)
(EB-091113)	Dimethylphthalate	10	-	23.00-139.00	79 (30.00)	Dimethylphthalate	

Method: 8270D SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P6LDLCSQ260424	N-NITROSODIMETHYLAMINE	196	-	71.00-124.00	-	N-NITROSODIMETHYLAMINE	
(SL-506-SA5D-SB-0.0-0.5							
SL-506-SA5D-SB-4.0-5.0							
SL-519-SA5D-SB-0.0-0.5							
SL-519-SA5D-SB-4.0-5.0							
SL-520-SA5D-SB-0.0-0.5							
SL-520-SA5D-SB-4.0-5.0							
SL-520-SA5D-SB-8.0-9.0							J (all detects)
SL-521-SA5D-SB-0.0-0.5							
SL-521-SA5D-SB-5.5-6.5							
SL-522-SA5D-SB-0.0-0.5							
SL-522-SA5D-SB-6.0-7.0							
SL-523-SA5D-SB-0.0-0.5							
SL-529-SA5D-SB-0.0-0.5							
SL-529-SA5D-SB-3.0-4.0)							

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-091113	1,2,3,4,6,7,8-HPCDD	JQ	1.74	9.62	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	1.63	9.62	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	J	0.942	9.62	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JQ	1.49	9.62	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JQ	2.00	9.62	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JQ	1.68	9.62	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JQ	1.83	9.62	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JQ	1.48	9.62	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JQ	0.931	9.62	PQL	pg/L	
	1,2,3,7,8-PECDD	JQ	2.30	9.62	PQL	pg/L	
	1,2,3,7,8-PECDF	JQ	1.67	9.62	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JQ	1.37	9.62	PQL	pg/L	
	2,3,4,7,8-PECDF	JQ	1.79	9.62	PQL	pg/L	
	2,3,7,8-TCDD	JQ	0.813	1.92	PQL	pg/L	
	OCDD	J	2.74	19.2	PQL	pg/L	
	OCDF	J	2.98	19.2	PQL	pg/L	

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-091113	COPPER	J	0.0040	0.0200	PQL	mg/L	J (all detects)
	MANGANESE	J	0.0019	0.0100	PQL	mg/L	
	MOLYBDENUM	J	0.0087	0.0200	PQL	mg/L	

Method: 8270D SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-091113	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.21	1.0	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.24	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.20	1.0	PQL	ug/L	
	NAPHTHALENE	J	0.038	0.051	PQL	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.171	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0542	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0751	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0624	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.0546	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.253	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.307	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.665	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.563	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.0702	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0605	5.28	PQL	ng/Kg	
	OCDD	JB	0.920	10.6	PQL	ng/Kg	
	OCDF	JB	0.149	10.6	PQL	ng/Kg	
SL-519-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	1.03	5.32	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.212	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.0548	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.342	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0606	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.506	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.727	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.185	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.345	5.32	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.0469	5.32	PQL	ng/Kg	
	OCDF	JB	0.508	10.6	PQL	ng/Kg	
SL-520-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.465	5.55	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.109	5.55	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0571	5.55	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0786	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.278	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.413	5.55	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.128	5.55	PQL	ng/Kg	
	OCDD	JBQ	4.19	11.1	PQL	ng/Kg	
	OCDF	JBQ	0.158	11.1	PQL	ng/Kg	
SL-520-SA5D-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.142	5.69	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0418	5.69	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0597	5.69	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.172	1.14	PQL	ng/Kg	
	OCDD	JBQ	0.674	11.4	PQL	ng/Kg	
	OCDF	JBQ	0.284	11.4	PQL	ng/Kg	
SL-520-SA5D-SB-8.0-9.0	1,2,3,4,6,7,8-HPCDD	JBQ	1.15	5.53	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.156	5.53	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0914	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0716	5.53	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0660	5.53	PQL	ng/Kg	
	OCDF	JB	0.432	11.1	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-521-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.860	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.110	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0691	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.725	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.101	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.04	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.84	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.198	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.327	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0719	5.41	PQL	ng/Kg	
	OCDF	JBQ	0.288	10.8	PQL	ng/Kg	
SL-521-SA5D-SB-5.5-6.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.265	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0497	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0601	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0476	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.124	5.33	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.104	5.33	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0879	5.33	PQL	ng/Kg	
	OCDD	JB	2.46	10.7	PQL	ng/Kg	
SL-522-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.419	5.40	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0487	5.40	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0703	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0665	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.108	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.317	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0998	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.680	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.11	5.40	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.195	5.40	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.381	5.40	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.0928	5.40	PQL	ng/Kg	
	2,3,4,7,8-PECDF	J	0.172	5.40	PQL	ng/Kg	
	OCDD	JB	4.89	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.153	10.8	PQL	ng/Kg	
SL-522-SA5D-SB-6.0-7.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.471	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0390	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0967	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.150	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0729	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.265	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0731	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.168	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.141	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	J	0.0865	5.46	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.254	1.09	PQL	ng/Kg	
	OCDD	JBQ	0.328	10.9	PQL	ng/Kg	
SL-523-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.121	4.94	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0342	4.94	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0464	4.94	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0733	4.94	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0874	4.94	PQL	ng/Kg	
	OCDD	JBQ	0.525	9.89	PQL	ng/Kg	
	OCDF	JBQ	0.107	9.89	PQL	ng/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-529-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.96	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.281	5.06	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0533	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0689	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.283	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0509	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.335	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.375	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.117	5.06	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.109	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0575	5.06	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.141	1.01	PQL	ng/Kg	
	OCDF	JB	0.733	10.1	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-0.0-0.5	ANTIMONY	J	0.910	4.43	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	1.00	1.11	PQL	mg/Kg	
	CADMIUM	J	0.617	1.11	PQL	mg/Kg	
	TIN	J	3.60	11.1	PQL	mg/Kg	
	Zirconium	J	1.78	5.54	PQL	mg/Kg	
SL-506-SA5D-SB-4.0-5.0	ANTIMONY	J	1.26	4.54	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	1.06	1.14	PQL	mg/Kg	
	CADMIUM	J	0.325	1.14	PQL	mg/Kg	
	TIN	J	3.84	11.4	PQL	mg/Kg	
	Zirconium	J	4.15	5.68	PQL	mg/Kg	
SL-519-SA5D-SB-0.0-0.5	ANTIMONY	J	1.04	4.28	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.938	1.07	PQL	mg/Kg	
	CADMIUM	J	0.628	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	0.280	2.14	PQL	mg/Kg	
	SODIUM	J	87.6	107	PQL	mg/Kg	
	TIN	J	3.49	10.7	PQL	mg/Kg	
	Zirconium	J	4.49	5.35	PQL	mg/Kg	
SL-519-SA5D-SB-4.0-5.0	ANTIMONY	J	0.850	4.43	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	1.03	1.11	PQL	mg/Kg	
	CADMIUM	J	0.417	1.11	PQL	mg/Kg	
	TIN	J	4.04	11.1	PQL	mg/Kg	
	Zirconium	J	3.54	5.54	PQL	mg/Kg	
SL-520-SA5D-SB-0.0-0.5	ANTIMONY	J	1.16	4.43	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	1.04	1.11	PQL	mg/Kg	
	CADMIUM	J	0.495	1.11	PQL	mg/Kg	
	SODIUM	J	102	111	PQL	mg/Kg	
	TIN	J	3.69	11.1	PQL	mg/Kg	
	Zirconium	J	4.08	5.54	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-520-SA5D-SB-4.0-5.0	ANTIMONY	J	1.21	4.70	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.958	1.18	PQL	mg/Kg	
	CADMIUM	J	0.600	1.18	PQL	mg/Kg	
	TIN	J	3.91	11.8	PQL	mg/Kg	
	Zirconium	J	3.92	5.88	PQL	mg/Kg	
SL-520-SA5D-SB-8.0-9.0	ARSENIC	J	3.59	4.50	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.546	1.12	PQL	mg/Kg	
	BORON	J	8.62	11.2	PQL	mg/Kg	
	CADMIUM	J	0.470	1.12	PQL	mg/Kg	
	TIN	J	3.20	11.2	PQL	mg/Kg	
	Zirconium	J	2.48	5.62	PQL	mg/Kg	
SL-521-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.858	1.07	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.559	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	0.366	2.15	PQL	mg/Kg	
	SODIUM	J	96.1	107	PQL	mg/Kg	
	TIN	J	3.64	10.7	PQL	mg/Kg	
	Zirconium	J	2.99	5.37	PQL	mg/Kg	
SL-521-SA5D-SB-5.5-6.5	ARSENIC	J	3.89	4.23	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.447	1.06	PQL	mg/Kg	
	BORON	J	7.52	10.6	PQL	mg/Kg	
	CADMIUM	J	0.318	1.06	PQL	mg/Kg	
	SODIUM	J	85.4	106	PQL	mg/Kg	
	TIN	J	3.45	10.6	PQL	mg/Kg	
SL-522-SA5D-SB-0.0-0.5	ARSENIC	J	3.86	4.28	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.756	1.07	PQL	mg/Kg	
	CADMIUM	J	0.521	1.07	PQL	mg/Kg	
	MOLYBDENUM	J	0.365	2.14	PQL	mg/Kg	
	TIN	J	3.22	10.7	PQL	mg/Kg	
SL-522-SA5D-SB-6.0-7.0	ANTIMONY	J	1.04	4.30	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.476	1.08	PQL	mg/Kg	
	TIN	J	4.23	10.8	PQL	mg/Kg	
SL-523-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.455	1.04	PQL	mg/Kg	J (all detects)
	BORON	J	6.99	10.4	PQL	mg/Kg	
	CADMIUM	J	0.268	1.04	PQL	mg/Kg	
	TIN	J	3.62	10.4	PQL	mg/Kg	
	Zirconium	J	1.49	5.18	PQL	mg/Kg	
SL-529-SA5D-SB-0.0-0.5	ANTIMONY	J	0.825	4.19	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.713	1.05	PQL	mg/Kg	
	BORON	J	9.15	10.5	PQL	mg/Kg	
	CADMIUM	J	0.398	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.292	2.09	PQL	mg/Kg	
	SODIUM	J	104	105	PQL	mg/Kg	
	TIN	J	3.22	10.5	PQL	mg/Kg	
	Zirconium	J	2.32	5.23	PQL	mg/Kg	
SL-529-SA5D-SB-3.0-4.0	ANTIMONY	J	1.21	4.17	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.693	1.04	PQL	mg/Kg	
	BORON	J	8.48	10.4	PQL	mg/Kg	
	CADMIUM	J	0.286	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.200	2.09	PQL	mg/Kg	
	TIN	J	3.70	10.4	PQL	mg/Kg	
	Zirconium	J	1.56	5.21	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.196 0.0511	0.443 0.221	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-506-SA5D-SB-4.0-5.0	SILVER	J	0.0670	0.227	PQL	mg/Kg	J (all detects)
SL-519-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.243 0.0463	0.428 0.214	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-519-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.127 0.0493	0.443 0.222	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-520-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.274 0.0488	0.443 0.221	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-520-SA5D-SB-4.0-5.0	SILVER	J	0.0489	0.235	PQL	mg/Kg	J (all detects)
SL-520-SA5D-SB-8.0-9.0	SILVER	J	0.0388	0.225	PQL	mg/Kg	J (all detects)
SL-521-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.208 0.0373	0.430 0.215	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-522-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.204 0.0324	0.428 0.214	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-522-SA5D-SB-6.0-7.0	SELENIUM SILVER	J J	0.219 0.157	0.430 0.215	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-529-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.152 0.0281	0.419 0.209	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-529-SA5D-SB-3.0-4.0	SELENIUM	J	0.142	0.417	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-4.0-5.0	MERCURY	J	0.0157	0.0184	PQL	mg/Kg	J (all detects)
SL-522-SA5D-SB-0.0-0.5	MERCURY	J	0.0112	0.0175	PQL	mg/Kg	J (all detects)
SL-522-SA5D-SB-6.0-7.0	MERCURY	J	0.0110	0.0180	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40)	J J	3.7 7.6	5.5 11	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-519-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40) EFH (C8-C11)	J J J	5.1 9.8 2.2	5.4 11 5.4	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-520-SA5D-SB-0.0-0.5	EFH (C8-C11)	J	2.9	5.6	PQL	mg/Kg	J (all detects)
SL-521-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.2	5.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH106 **Laboratory: LL**

EDD Filename: PH106 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-521-SA5D-SB-5.5-6.5	EFH (C8-C11)	J	3.4	5.4	PQL	mg/Kg	J (all detects)
SL-522-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.2	5.3	PQL	mg/Kg	J (all detects)
	EFH (C21-C30)	J	5.1	5.3	PQL	mg/Kg	
	EFH (C30-C40)	J	10	11	PQL	mg/Kg	
SL-522-SA5D-SB-6.0-7.0	EFH (C8-C11)	J	3.2	5.5	PQL	mg/Kg	J (all detects)
SL-529-SA5D-SB-0.0-0.5	EFH (C21-C30)	J	4.7	5.3	PQL	mg/Kg	J (all detects)

Method: 8270D SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-506-SA5D-SB-0.0-0.5	CHRYSENE	J	0.46	1.8	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.84	1.8	PQL	ug/Kg	
SL-506-SA5D-SB-4.0-5.0	NAPHTHALENE	J	0.99	1.9	PQL	ug/Kg	J (all detects)
SL-519-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.4	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.7	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.4	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.94	1.8	PQL	ug/Kg	
	PYRENE	J	0.98	1.8	PQL	ug/Kg	
SL-520-SA5D-SB-0.0-0.5	NAPHTHALENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
SL-520-SA5D-SB-4.0-5.0	NAPHTHALENE	J	1.0	2.0	PQL	ug/Kg	J (all detects)
SL-520-SA5D-SB-8.0-9.0	ANTHRACENE	J	0.38	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.6	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.4	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.85	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	
SL-521-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	0.73	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.5	1.8	PQL	ug/Kg	
SL-521-SA5D-SB-5.5-6.5	NAPHTHALENE	J	0.83	1.8	PQL	ug/Kg	J (all detects)
SL-522-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.5	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	0.82	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.0	1.8	PQL	ug/Kg	
	PYRENE	J	0.83	1.8	PQL	ug/Kg	
SL-523-SA5D-SB-0.0-0.5	NAPHTHALENE	J	0.82	1.7	PQL	ug/Kg	J (all detects)
SL-529-SA5D-SB-0.0-0.5	CHRYSENE	J	0.61	1.8	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.85	1.8	PQL	ug/Kg	
SL-529-SA5D-SB-3.0-4.0	CHRYSENE	J	0.57	1.8	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	1.0	1.8	PQL	ug/Kg	

LDC #: 30695I4

SDG #: PH106

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/11/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (see PH104)
VII.	Duplicate Sample Analysis	N	Dup ↓
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	—	See PH104
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=1 FB= FB-041113 (PH029)

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:

1	EB-091113	11	SL-506-SA5D-SB-0.0-0.5	21		31	
2	SL-519-SA5D-SB-0.0-0.5	12	SL-506-SA5D-SB-4.0-5.0	22		32	
3	SL-519-SA5D-SB-4.0-5.0	13	SL-523-SA5D-SB-0.0-0.5	23		33	
4	SL-520-SA5D-SB-0.0-0.5	14	SL-529-SA5D-SB-0.0-0.5	24		34	
5	SL-520-SA5D-SB-4.0-5.0	15	SL-529-SA5D-SB-3.0-4.0	25		35	
6	SL-520-SA5D-SB-8.0-9.0	16		26		36	
7	SL-521-SA5D-SB-0.0-0.5	17		27		37	
8	SL-521-SA5D-SB-5.5-6.5	18		28		38	
9	SL-522-SA5D-SB-0.0-0.5	19		29		39	
10	SL-522-SA5D-SB-6.0-7.0	20		30		40	

Notes:

LDC #: 30695I4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	1										
Cu			4.2	21	4.0										
Mo			3.7	18.5	8.7										

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 #: 30695I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: CL
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	2	7	9	14	15							
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.280	~~0.37~~ 0.3606	0.365	0.292	0.200							

Sampling date: 8/28/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB-091113 (SDG: PH106)	Action Limit	2	7	9	14	15						
Cu	0.0040	2											
Mn	0.0019	0.95											
Mo	0.0087	4.35	See FB	See FB	See FB	See FB	See FB						

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".

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH107

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 11, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 12, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, 7470A and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Hexavalent Chromium by EPA Method 7199
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the following exceptions:

SDG/ Method	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PH107/ 6010C	ICB/CCB	Copper Molybdenum	4.2 ug/L 3.7 ug/L	EB-091213

Sample concentrations were compared to concentrations detected in the initial and continuing blanks. The sample concentrations were not detected or were significantly greater than the concentrations found in the associated blanks with the following exceptions:

SDG/Method	Sample	Compound	Reported Concentration	Modified Final Concentration
PH107/ 6010C	EB-091213	Copper Molybdenum	4.5 ug/L 3.2 ug/L	4.5U ug/L 3.2U ug/L

V. 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 exception of one sample for SVOCs. The associated sample result was qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosure I.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of two MS/MSD pairs for herbicides, metals, TPH as extractables and fluoride. The dinoseb result in sample SL-853-SA5D-SB-0.0-0.5 was qualified as rejected (R) due to MS/MSD %Rs grossly outside QC limits (i.e., ≤ 0%). The remainder of the associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of one LCS/LCSD pair for SVOCs. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

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-553-SA5D-SB-0.0-0.5	Cobalt Strontium	12 (≤10) 12 (≤10)	All soil samples in SDG PH107	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH107	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for SVOCs, PCBs, metals, herbicides, perchlorate, TPH as extractables, dioxins, hexavalent chromium and fluoride. All RPDs were within QC limits with the exception of several SVOCs and dioxins. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

Two equipment blanks (one from PH106) were collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The equipment blanks had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

Two field blanks (from SDG PH029 and PH032) were collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The field blanks had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

One herbicide result was rejected due to MS/MSD %Rs grossly outside of QC limits. This result is not useable for all purposes.

The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. The remainder of the data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3050B	6010C	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3050B	6020A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3060A	7199	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3546	8015M	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3546	8082A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3546	8270D SIM	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	3550B	8151A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	METHOD	1613B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	METHOD	300.0	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	METHOD	6850	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5	7196426	N	METHOD	7471B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3050B	6010C	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3050B	6020A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3546	8015M	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3546	8082A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3546	8270D SIM	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	3550B	8151A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	METHOD	1613B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	METHOD	300.0	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	METHOD	6850	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196427	MS	METHOD	7471B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3050B	6010C	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3050B	6020A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3546	8015M	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3546	8082A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3546	8270D 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
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	3550B	8151A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	METHOD	1613B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	METHOD	6850	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MSD	7196428	MSD	METHOD	7471B	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196429	MS	3060A	7199	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5MS	7196430	MS	3060A	7199	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5DUP	7196432	DUP	3050B	6010C	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5DUP	7196432	DUP	3050B	6020A	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5DUP	7196432	DUP	3060A	7199	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5DUP	7196432	DUP	METHOD	300.0	III
12-Sep-2013	SL-553-SA5D-SB-0.0-0.5DUP	7196432	DUP	METHOD	7471B	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3050B	6010C	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3050B	6020A	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3060A	7199	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3546	8015M	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3546	8082A	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	3546	8270D SIM	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	Gen Prep	8151A	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	METHOD	1613B	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	METHOD	300.0	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	METHOD	6850	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5	7196433	FD	METHOD	7471B	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5MSD	P196433M241803A	MSD	Gen Prep	8151A	III
12-Sep-2013	SL-853-SA5D-SB-0.0-0.5MS	P196433R241737A	MS	Gen Prep	8151A	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3050B	6010C	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3050B	6020A	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
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3060A	7199	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3546	8015M	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3546	8082A	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3546	8270D SIM	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	3550B	8151A	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	5035A	8015M	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	METHOD	300.0	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	METHOD	6850	III
12-Sep-2013	SL-553-SA5D-SB-4.5-5.5	7196434	N	METHOD	7471B	III
12-Sep-2013	TB-091213	7196425	TB	5030B	8015M	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3050B	6010C	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3050B	6020A	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3546	8015M	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3546	8082A	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	3546	8270D SIM	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	METHOD	1613B	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	METHOD	300.0	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	METHOD	6850	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5	7196435	N	METHOD	7471B	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5MSD	P196435M241433A	MSD	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-0.0-0.5MS	P196435R241417A	MS	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3050B	6010C	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3050B	6020A	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3546	8015M	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3546	8081B	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
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3546	8082A	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	3546	8270D SIM	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	5035A	8015M	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	METHOD	300.0	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	METHOD	6850	III
12-Sep-2013	SL-551-SA5D-SB-4.0-5.0	7196436	N	METHOD	7471B	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3050B	6010C	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3050B	6020A	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3546	8015M	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3546	8082A	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	3546	8270D SIM	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	5035A	8015M	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	METHOD	300.0	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	METHOD	6850	III
12-Sep-2013	SL-551-SA5D-SB-9.0-10.0	7196437	N	METHOD	7471B	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3050B	6010C	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3050B	6020A	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3546	8015M	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3546	8082A	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	3546	8270D SIM	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	5035A	8015M	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	METHOD	300.0	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	METHOD	6850	III
12-Sep-2013	SL-551-SA5D-SB-14.0-15.0	7196438	N	METHOD	7471B	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
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3050B	6010C	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3050B	6020A	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3546	8015M	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3546	8081B	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3546	8082A	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	3546	8270D SIM	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	5035A	8015M	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	METHOD	300.0	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	METHOD	6850	III
12-Sep-2013	SL-551-SA5D-SB-17.5.-18.5	7196439	N	METHOD	7471B	III
12-Sep-2013	SL-592-SA5D-SB-0.0-0.5	7196442	N	METHOD	300.0	III
12-Sep-2013	SL-592-SA5D-SB-0.0-0.5DUP	P196442D271520B	DUP	METHOD	300.0	III
12-Sep-2013	SL-592-SA5D-SB-0.0-0.5MS	P196442R271537B	MS	METHOD	300.0	III
12-Sep-2013	SL-592-SA5D-SB-4.0-5.0	7196443	N	METHOD	300.0	III
12-Sep-2013	SL-592-SA5D-SB-10.5-11.5	7196444	N	METHOD	300.0	III
12-Sep-2013	SL-591-SA5D-SB-0.0-0.5	7196440	N	METHOD	300.0	III
12-Sep-2013	SL-591-SA5D-SB-6.5-7.5	7196441	N	METHOD	300.0	III
12-Sep-2013	EB-091213	7196445	EB	3005A	6010C	III
12-Sep-2013	EB-091213	7196445	EB	3510C	8015M	III
12-Sep-2013	EB-091213	7196445	EB	3510C	8082A	III
12-Sep-2013	EB-091213	7196445	EB	3510C	8270D SIM	III
12-Sep-2013	EB-091213	7196445	EB	Gen Prep	300.0	III
12-Sep-2013	EB-091213	7196445	EB	Gen Prep	6850	III
12-Sep-2013	EB-091213	7196445	EB	Gen Prep	7199	III
12-Sep-2013	EB-091213	7196445	EB	M3010A	6020A	III
12-Sep-2013	EB-091213	7196445	EB	METHOD	1613B	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
12-Sep-2013	EB-091213	7196445	EB	METHOD	7470A	III
12-Sep-2013	EB-091213	7196445	EB	METHOD	8151A	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 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	0.68	J	0.42	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-551-SA5D-SB-14.0-15.0** ***Collected:*** **9/12/2013 9:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.7		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-17.5.-18.5** ***Collected:*** **9/12/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.2		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 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
FLUORIDE	1.8		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.80	J	0.40	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.42	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-591-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.41	MDL	1.0	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-591-SA5D-SB-6.5-7.5 **Collected: 9/12/2013 12:40:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.6		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-592-SA5D-SB-0.0-0.5 **Collected: 9/12/2013 12:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.54	J	0.42	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: SL-592-SA5D-SB-10.5-11.5 **Collected: 9/12/2013 12:10:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	15.8		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-592-SA5D-SB-4.0-5.0 **Collected: 9/12/2013 12:05:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.2		0.44	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-853-SA5D-SB-0.0-0.5 **Collected: 9/12/2013 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	0.86	J	0.40	MDL	1.0	PQL	mg/Kg	J	Z, Q

Method Category: METALS

Method: 6010C **Matrix: AQ**

Sample ID: EB-091213 **Collected: 9/12/2013 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
COPPER	0.0045	J	0.0027	MDL	0.0200	PQL	mg/L	U	B, B
MOLYBDENUM	0.0032	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 9:05:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.10	U	0.758	MDL	4.10	PQL	mg/Kg	UJ	Q
ARSENIC	3.90	J	0.717	MDL	4.10	PQL	mg/Kg	J	Z
BERYLLIUM	0.767	J	0.0686	MDL	1.02	PQL	mg/Kg	J	Z
BORON	1.03	J	0.861	MDL	10.2	PQL	mg/Kg	J	Z
CADMIUM	0.216	J	0.0779	MDL	1.02	PQL	mg/Kg	J	Z
COBALT	7.95		0.101	MDL	1.02	PQL	mg/Kg	J	A
MOLYBDENUM	0.209	J	0.174	MDL	2.05	PQL	mg/Kg	U	F, F
SODIUM	92.2	J	17.1	MDL	102	PQL	mg/Kg	J	Z
TIN	2.96	J	0.225	MDL	10.2	PQL	mg/Kg	U	B

Sample ID: **SL-551-SA5D-SB-14.0-15.0** ***Collected:*** **9/12/2013 9:35:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.52	U	0.835	MDL	4.52	PQL	mg/Kg	UJ	Q
CADMIUM	0.117	J	0.0858	MDL	1.13	PQL	mg/Kg	J	Z
COBALT	7.84		0.112	MDL	1.13	PQL	mg/Kg	J	A
MOLYBDENUM	0.524	J	0.192	MDL	2.26	PQL	mg/Kg	U	F, F
TIN	4.01	J	0.248	MDL	11.3	PQL	mg/Kg	U	B

Sample ID: **SL-551-SA5D-SB-17.5.-18.5** ***Collected:*** **9/12/2013 9:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.25	U	0.786	MDL	4.25	PQL	mg/Kg	UJ	Q
BERYLLIUM	1.00	J	0.0712	MDL	1.06	PQL	mg/Kg	J	Z
CADMIUM	0.171	J	0.0807	MDL	1.06	PQL	mg/Kg	J	Z
COBALT	11.6		0.105	MDL	1.06	PQL	mg/Kg	J	A
MOLYBDENUM	0.383	J	0.181	MDL	2.12	PQL	mg/Kg	U	F, F
TIN	3.99	J	0.234	MDL	10.6	PQL	mg/Kg	U	B

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 9:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.31	U	0.797	MDL	4.31	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.789	J	0.0722	MDL	1.08	PQL	mg/Kg	J	Z
BORON	1.15	J	0.905	MDL	10.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 9:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.183	J	0.0819	MDL	1.08	PQL	mg/Kg	J	Z
COBALT	8.35		0.107	MDL	1.08	PQL	mg/Kg	J	A
MOLYBDENUM	0.222	J	0.183	MDL	2.16	PQL	mg/Kg	U	F, F
TIN	3.09	J	0.237	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.22	U	0.780	MDL	4.22	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.826	J	0.0706	MDL	1.05	PQL	mg/Kg	J	Z
CADMIUM	0.135	J	0.0801	MDL	1.05	PQL	mg/Kg	J	Z
COBALT	9.83		0.104	MDL	1.05	PQL	mg/Kg	J	A
MOLYBDENUM	0.385	J	0.179	MDL	2.11	PQL	mg/Kg	U	F, F
TIN	3.01	J	0.232	MDL	10.5	PQL	mg/Kg	U	B

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.02	U	0.743	MDL	4.02	PQL	mg/Kg	UJ	Q
ARSENIC	3.46	J	0.703	MDL	4.02	PQL	mg/Kg	J	Z
BERYLLIUM	0.634	J	0.0673	MDL	1.00	PQL	mg/Kg	J	Z
BORON	3.72	J	0.843	MDL	10.0	PQL	mg/Kg	J	Z
CADMIUM	0.320	J	0.0763	MDL	1.00	PQL	mg/Kg	J	Z
COBALT	6.45		0.0994	MDL	1.00	PQL	mg/Kg	J	A
MOLYBDENUM	0.360	J	0.171	MDL	2.01	PQL	mg/Kg	U	F, F
SODIUM	78.9	J	16.8	MDL	100	PQL	mg/Kg	J	Z
TIN	2.65	J	0.221	MDL	10.0	PQL	mg/Kg	U	B

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.15	U	0.768	MDL	4.15	PQL	mg/Kg	UJ	Q
ARSENIC	3.85	J	0.726	MDL	4.15	PQL	mg/Kg	J	Z
BERYLLIUM	0.757	J	0.0695	MDL	1.04	PQL	mg/Kg	J	Z
BORON	1.35	J	0.871	MDL	10.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-553-SA5D-SB-4.5-5.5 *Collected:* 9/12/2013 7:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.241	J	0.0788	MDL	1.04	PQL	mg/Kg	J	Z
COBALT	7.05		0.103	MDL	1.04	PQL	mg/Kg	J	A
MOLYBDENUM	0.364	J	0.176	MDL	2.07	PQL	mg/Kg	U	F, F
TIN	2.96	J	0.228	MDL	10.4	PQL	mg/Kg	U	B

Sample ID: SL-853-SA5D-SB-0.0-0.5 *Collected:* 9/12/2013 7:35:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.94	U	0.729	MDL	3.94	PQL	mg/Kg	UJ	Q
ARSENIC	3.83	J	0.689	MDL	3.94	PQL	mg/Kg	J	Z
BERYLLIUM	0.662	J	0.0660	MDL	0.985	PQL	mg/Kg	J	Z
BORON	3.06	J	0.827	MDL	9.85	PQL	mg/Kg	J	Z
CADMIUM	0.363	J	0.0748	MDL	0.985	PQL	mg/Kg	J	Z
COBALT	7.28		0.0975	MDL	0.985	PQL	mg/Kg	J	A
MOLYBDENUM	0.374	J	0.167	MDL	1.97	PQL	mg/Kg	U	F, F
SODIUM	83.4	J	16.4	MDL	98.5	PQL	mg/Kg	J	Z
TIN	2.80	J	0.217	MDL	9.85	PQL	mg/Kg	U	B

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-551-SA5D-SB-0.0-0.5 *Collected:* 9/12/2013 9:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	28.3		0.0697	MDL	0.410	PQL	mg/Kg	J	Q, A
THALLIUM	0.359		0.0307	MDL	0.205	PQL	mg/Kg	J	Q

Sample ID: SL-551-SA5D-SB-0.0-0.5 *Collected:* 9/12/2013 9:05:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.206	J	0.102	MDL	0.410	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-14.0-15.0** ***Collected:*** **9/12/2013 9:35:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0421	J	0.0294	MDL	0.226	PQL	mg/Kg	J	Z, Q
STRONTIUM	57.9		0.0768	MDL	0.452	PQL	mg/Kg	J	Q, A
THALLIUM	0.588		0.0339	MDL	0.226	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-14.0-15.0** ***Collected:*** **9/12/2013 9:35:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.227	J	0.113	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: **SL-551-SA5D-SB-17.5.-18.5** ***Collected:*** **9/12/2013 9:45:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0336	J	0.0276	MDL	0.212	PQL	mg/Kg	J	Z, Q
STRONTIUM	28.1		0.0722	MDL	0.425	PQL	mg/Kg	J	Q, A
THALLIUM	0.556		0.0319	MDL	0.212	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-17.5.-18.5** ***Collected:*** **9/12/2013 9:45:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.125	J	0.106	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 9:15:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	31.1		0.0733	MDL	0.431	PQL	mg/Kg	J	Q, A
THALLIUM	0.383		0.0323	MDL	0.216	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 9:15:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.142	J	0.108	MDL	0.431	PQL	mg/Kg	J	Z

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0290	J	0.0274	MDL	0.211	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	28.6		0.0717	MDL	0.422	PQL	mg/Kg	J	Q, A
THALLIUM	0.390		0.0316	MDL	0.211	PQL	mg/Kg	J	Q

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.112	J	0.105	MDL	0.422	PQL	mg/Kg	J	Z

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0272	J	0.0261	MDL	0.201	PQL	mg/Kg	J	Z, Q
STRONTIUM	26.7		0.0683	MDL	0.402	PQL	mg/Kg	J	Q, A
THALLIUM	0.277		0.0301	MDL	0.201	PQL	mg/Kg	J	Q

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.232	J	0.100	MDL	0.402	PQL	mg/Kg	J	Z

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
STRONTIUM	26.4		0.0705	MDL	0.415	PQL	mg/Kg	J	Q, A
THALLIUM	0.325		0.0311	MDL	0.207	PQL	mg/Kg	J	Q

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.189	J	0.104	MDL	0.415	PQL	mg/Kg	J	Z

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:35:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0309	J	0.0256	MDL	0.197	PQL	mg/Kg	J	Z, Q
STRONTIUM	34.9		0.0670	MDL	0.394	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:35:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.391		0.0295	MDL	0.197	PQL	mg/Kg	J	Q

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:35:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.284	J	0.0985	MDL	0.394	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **7199** ***Matrix:*** **SO**

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.20	J	0.14	MDL	0.41	PQL	mg/Kg	J	Z

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.34	J	0.15	MDL	0.42	PQL	mg/Kg	J	Z

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 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
HEXAVALENT CHROMIUM	0.24	J	0.14	MDL	0.41	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 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
MERCURY	0.0112	J	0.010	MDL	0.0166	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-551-SA5D-SB-9.0-10.0 *Collected:* 9/12/2013 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0138	J	0.0107	MDL	0.0178	PQL	mg/Kg	J	Z

Sample ID: SL-553-SA5D-SB-4.5-5.5 *Collected:* 9/12/2013 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0119	J	0.0104	MDL	0.0173	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-091213 *Collected:* 9/12/2013 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
1,2,3,4,6,7,8-HPCDD	1.20	JQ	0.210	MDL	9.71	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.957	JQ	0.105	MDL	9.71	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	1.11	JQ	0.113	MDL	9.71	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.821	J	0.182	MDL	9.71	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	1.13	JQ	0.161	MDL	9.71	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.991	J	0.191	MDL	9.71	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.613	J	0.159	MDL	9.71	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	1.03	J	0.179	MDL	9.71	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	1.29	J	0.152	MDL	9.71	PQL	pg/L	U	B
1,2,3,7,8-PECDD	1.14	J	0.292	MDL	9.71	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.812	JQ	0.171	MDL	9.71	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	1.03	JQ	0.151	MDL	9.71	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.639	JQ	0.155	MDL	9.71	PQL	pg/L	U	B
OCDD	1.79	J	0.223	MDL	19.4	PQL	pg/L	U	B
OCDF	2.16	JQ	0.241	MDL	19.4	PQL	pg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 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
1,2,3,4,6,7,8-HPCDF	0.0749	JB	0.0250	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0716	JBQ	0.0381	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0425	JB	0.0422	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0687	JQ	0.0425	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.158	JQ	0.0442	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0806	JB	0.0402	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.248	JB	0.0449	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.358	JB	0.0437	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.117	JBQ	0.0633	MDL	5.06	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0571	JQ	0.0559	MDL	5.06	PQL	ng/Kg	J	Z
OCDD	1.11	JB	0.0494	MDL	10.1	PQL	ng/Kg	J	Z
OCDF	0.171	JB	0.0708	MDL	10.1	PQL	ng/Kg	U	B

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.59	JB	0.0415	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.178	JBQ	0.0682	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.190	JB	0.0650	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.251	J	0.0640	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.581	J	0.0695	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.163	JBQ	0.0563	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.585	JBQ	0.0687	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.471	JBQ	0.0694	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.195	JBQ	0.0839	MDL	5.03	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.367	JB	0.0595	MDL	5.03	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.207	J	0.0582	MDL	5.03	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	0.195	JQ	0.0603	MDL	5.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	1.01	U	0.116	MDL	1.01	PQL	ng/Kg	UJ	FD
OCDD	150	B	0.0674	MDL	10.1	PQL	ng/Kg	J	FD
OCDF	4.59	JB	0.0839	MDL	10.1	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 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
1,2,3,4,6,7,8-HPCDF	1.28	JB	0.0330	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.181	JBQ	0.0597	MDL	4.89	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.197	JBQ	0.0673	MDL	4.89	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.352	JQ	0.0650	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.577	JQ	0.0687	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.271	JB	0.0598	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.649	JB	0.0697	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.559	JB	0.0796	MDL	4.89	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.154	JBQ	0.0844	MDL	4.89	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.398	JB	0.0635	MDL	4.89	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.380	JQ	0.0615	MDL	4.89	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	0.223	JQ	0.0619	MDL	4.89	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.127	J	0.125	MDL	0.977	PQL	ng/Kg	J	Z, FD
OCDD	86.0	B	0.0700	MDL	9.77	PQL	ng/Kg	J	FD
OCDF	3.29	JB	0.0862	MDL	9.77	PQL	ng/Kg	J	Z

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.5	J	2.0	MDL	5.1	PQL	mg/Kg	J	Z
EFH (C21-C30)	13		2.0	MDL	5.1	PQL	mg/Kg	J	Q, Q

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	4.4	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z
EFH (C30-C40)	8.2	J	4.2	MDL	11	PQL	mg/Kg	J	Z

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **24.61**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	0.2	J	0.2	MDL	1.0	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-853-SA5D-SB-0.0-0.5 *Collected:* 9/12/2013 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
EFH (C15-C20)	2.1	J	2.0	MDL	5.1	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8151A **Matrix:** SO

Sample ID: SL-853-SA5D-SB-0.0-0.5 *Collected:* 9/12/2013 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
2,4,5-TP (Silvex)	1.7	U	0.76	MDL	1.7	PQL	ug/Kg	UJ	Q
2,4-DB	17	U	6.9	MDL	17	PQL	ug/Kg	UJ	Q
DINOSEB	24	U	9.1	MDL	24	PQL	ug/Kg	R	Q

Method Category: SVOA
Method: 8270D SIM **Matrix:** AQ

Sample ID: EB-091213 *Collected:* 9/12/2013 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
1-METHYLNAPHTHALENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S

Sample ID: EB-091213 *Collected:* 9/12/2013 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
ACENAPHTHENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
ACENAPHTHYLENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
ANTHRACENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(A)ANTHRACENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(A)PYRENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(B)FLUORANTHENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(E)PYRENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(G,H,I)PERYLENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BENZO(K)FLUORANTHENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
BIS(2-ETHYLHEXYL)PHTHALATE	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	S

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **AQ**

Sample ID: **EB-091213** ***Collected:*** **9/12/2013 3:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Butylbenzylphthalate	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	L, E, S
CHRYSENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
DIBENZO(A,H)ANTHRACENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
Diethylphthalate	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	L, E, S
Dimethylphthalate	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	L, E, S
Di-n-butylphthalate	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	S
Di-n-octylphthalate	4.1	U	0.20	MDL	4.1	PQL	ug/L	UJ	S
FLUORANTHENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
FLUORENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
INDENO(1,2,3-CD)PYRENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
NAPHTHALENE	0.20	U	0.12	MDL	0.20	PQL	ug/L	UJ	S
N-NITROSODIMETHYLAMINE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S
PHENANTHRENE	0.20	U	0.12	MDL	0.20	PQL	ug/L	UJ	S
PYRENE	0.20	U	0.041	MDL	0.20	PQL	ug/L	UJ	S

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 9:05:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.0	J	0.69	MDL	1.7	PQL	ug/Kg	U	B

Sample ID: **SL-551-SA5D-SB-14.0-15.0** ***Collected:*** **9/12/2013 9:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	U	B

Sample ID: **SL-551-SA5D-SB-17.5.-18.5** ***Collected:*** **9/12/2013 9:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	2.2		0.72	MDL	1.8	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-551-SA5D-SB-4.0-5.0** ***Collected:*** **9/12/2013 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
NAPHTHALENE	1.2	J	0.71	MDL	1.8	PQL	ug/Kg	U	B

Sample ID: **SL-551-SA5D-SB-9.0-10.0** ***Collected:*** **9/12/2013 9:25:00** ***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	1.1	J	0.72	MDL	1.8	PQL	ug/Kg	U	B

Sample ID: **SL-553-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	18	U	6.0	MDL	18	PQL	ug/Kg	UJ	FD
INDENO(1,2,3-CD)PYRENE	0.90	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.67	MDL	1.7	PQL	ug/Kg	U	B

Sample ID: **SL-553-SA5D-SB-4.5-5.5** ***Collected:*** **9/12/2013 7:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.1	J	0.70	MDL	1.7	PQL	ug/Kg	U	B

Sample ID: **SL-853-SA5D-SB-0.0-0.5** ***Collected:*** **9/12/2013 7:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.1	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.1	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.0	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.77	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	17	J	6.1	MDL	18	PQL	ug/Kg	J	Z, FD
INDENO(1,2,3-CD)PYRENE	0.72	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.67	MDL	1.7	PQL	ug/Kg	U	B
PHENANTHRENE	1.4	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH107

Method Blank Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2660B370248	9/25/2013 2:48:00 AM	1,2,3,4,6,7,8-HPCDD	1.27 pg/L	EB-091213
		1,2,3,4,6,7,8-HPCDF	1.58 pg/L	
		1,2,3,4,7,8,9-HPCDF	1.12 pg/L	
		1,2,3,4,7,8-HxCDD	1.45 pg/L	
		1,2,3,4,7,8-HXCDF	1.70 pg/L	
		1,2,3,6,7,8-HXCDD	1.49 pg/L	
		1,2,3,6,7,8-HXCDF	1.55 pg/L	
		1,2,3,7,8,9-HXCDD	0.932 pg/L	
		1,2,3,7,8,9-HXCDF	1.03 pg/L	
		1,2,3,7,8-PECDD	1.71 pg/L	
		1,2,3,7,8-PECDF	1.48 pg/L	
		2,3,4,6,7,8-HXCDF	1.30 pg/L	
		2,3,4,7,8-PECDF	1.58 pg/L	
		OCDD	2.51 pg/L	
		OCDF	2.72 pg/L	

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
EB-091213(RES)	1,2,3,4,6,7,8-HPCDD	1.20 pg/L	1.20U pg/L
EB-091213(RES)	1,2,3,4,6,7,8-HPCDF	0.957 pg/L	0.957U pg/L
EB-091213(RES)	1,2,3,4,7,8,9-HPCDF	1.11 pg/L	1.11U pg/L
EB-091213(RES)	1,2,3,4,7,8-HxCDD	0.821 pg/L	0.821U pg/L
EB-091213(RES)	1,2,3,4,7,8-HXCDF	1.13 pg/L	1.13U pg/L
EB-091213(RES)	1,2,3,6,7,8-HXCDD	0.991 pg/L	0.991U pg/L
EB-091213(RES)	1,2,3,6,7,8-HXCDF	0.613 pg/L	0.613U pg/L
EB-091213(RES)	1,2,3,7,8,9-HXCDD	1.03 pg/L	1.03U pg/L
EB-091213(RES)	1,2,3,7,8,9-HXCDF	1.29 pg/L	1.29U pg/L
EB-091213(RES)	1,2,3,7,8-PECDD	1.14 pg/L	1.14U pg/L
EB-091213(RES)	1,2,3,7,8-PECDF	0.812 pg/L	0.812U pg/L
EB-091213(RES)	2,3,4,6,7,8-HXCDF	1.03 pg/L	1.03U pg/L
EB-091213(RES)	2,3,4,7,8-PECDF	0.639 pg/L	0.639U pg/L
EB-091213(RES)	OCDD	1.79 pg/L	1.79U pg/L
EB-091213(RES)	OCDF	2.16 pg/L	2.16U pg/L

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2610B370454	9/20/2013 4:54:00 AM	1,2,3,4,6,7,8-HPCDD	0.0535 ng/Kg	SL-551-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0418 ng/Kg	SL-553-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0583 ng/Kg	SL-853-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0859 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0456 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0579 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0750 ng/Kg	
		1,2,3,7,8-PECDD	0.122 ng/Kg	
		1,2,3,7,8-PECDF	0.0876 ng/Kg	
		OCDD	0.197 ng/Kg	
		OCDF	0.197 ng/Kg	

Method Blank Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-551-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0749 ng/Kg	0.0749U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0716 ng/Kg	0.0716U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0425 ng/Kg	0.0425U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0806 ng/Kg	0.0806U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.248 ng/Kg	0.248U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.358 ng/Kg	0.358U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.117 ng/Kg	0.117U ng/Kg
SL-551-SA5D-SB-0.0-0.5(RES)	OCDF	0.171 ng/Kg	0.171U ng/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.178 ng/Kg	0.178U ng/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.190 ng/Kg	0.190U ng/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.163 ng/Kg	0.163U ng/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.195 ng/Kg	0.195U ng/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.367 ng/Kg	0.367U ng/Kg
SL-853-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.181 ng/Kg	0.181U ng/Kg
SL-853-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.197 ng/Kg	0.197U ng/Kg
SL-853-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.154 ng/Kg	0.154U ng/Kg
SL-853-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.398 ng/Kg	0.398U ng/Kg

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26135AB221650	9/19/2013 4:50:00 PM	COPPER	0.0044 mg/L	EB-091213

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
EB-091213(RES)	COPPER	0.0045 mg/L	0.0045U mg/L

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26237AB222024	9/21/2013 8:24:00 PM	CALCIUM TIN	10.3 mg/Kg 1.36 mg/Kg	SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-0.0-0.5 SL-553-SA5D-SB-4.5-5.5 SL-853-SA5D-SB-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-551-SA5D-SB-0.0-0.5(REA)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-551-SA5D-SB-14.0-15.0(REA)	TIN	4.01 mg/Kg	4.01U mg/Kg
SL-551-SA5D-SB-17.5.-18.5(REA)	TIN	3.99 mg/Kg	3.99U mg/Kg
SL-551-SA5D-SB-4.0-5.0(REA)	TIN	3.09 mg/Kg	3.09U mg/Kg
SL-551-SA5D-SB-9.0-10.0(REA)	TIN	3.01 mg/Kg	3.01U mg/Kg
SL-553-SA5D-SB-0.0-0.5(REA)	TIN	2.65 mg/Kg	2.65U mg/Kg
SL-553-SA5D-SB-4.5-5.5(REA)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-853-SA5D-SB-0.0-0.5(REA)	TIN	2.80 mg/Kg	2.80U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLC26B260219	9/25/2013 2:19:00 AM	NAPHTHALENE	0.92 ug/Kg	SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-0.0-0.5 SL-553-SA5D-SB-4.5-5.5 SL-853-SA5D-SB-0.0-0.5

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-551-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	1.0 ug/Kg	1.7U ug/Kg
SL-551-SA5D-SB-14.0-15.0(RES)	NAPHTHALENE	1.3 ug/Kg	1.9U ug/Kg
SL-551-SA5D-SB-17.5.-18.5(RES)	NAPHTHALENE	2.2 ug/Kg	2.2U ug/Kg
SL-551-SA5D-SB-4.0-5.0(RES)	NAPHTHALENE	1.2 ug/Kg	1.8U ug/Kg
SL-551-SA5D-SB-9.0-10.0(RES)	NAPHTHALENE	1.1 ug/Kg	1.8U ug/Kg
SL-553-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	1.5 ug/Kg	1.7U ug/Kg
SL-553-SA5D-SB-4.5-5.5(RES)	NAPHTHALENE	1.1 ug/Kg	1.7U ug/Kg
SL-853-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	1.5 ug/Kg	1.7U ug/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB-091113(REA2)	9/11/2013 3:00:00 PM	COPPER MANGANESE MOLYBDENUM	0.004 mg/L 0.0019 mg/L 0.0087 mg/L	SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-4.5-5.5 SL-591-SA5D-SB-0.0-0.5 SL-591-SA5D-SB-6.5-7.5 SL-592-SA5D-SB-0.0-0.5 SL-592-SA5D-SB-10.5-11.5 SL-592-SA5D-SB-4.0-5.0
EB-091213(RES)	9/12/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0045 mg/L 0.0032 mg/L	SL-553-SA5D-SB-0.0-0.5 SL-853-SA5D-SB-0.0-0.5

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-551-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.209 mg/Kg	0.209U mg/Kg
SL-551-SA5D-SB-14.0-15.0(REA)	MOLYBDENUM	0.524 mg/Kg	0.524U mg/Kg
SL-551-SA5D-SB-17.5.-18.5(REA)	MOLYBDENUM	0.383 mg/Kg	0.383U mg/Kg
SL-551-SA5D-SB-4.0-5.0(REA)	MOLYBDENUM	0.222 mg/Kg	0.222U mg/Kg
SL-551-SA5D-SB-9.0-10.0(REA)	MOLYBDENUM	0.385 mg/Kg	0.385U mg/Kg
SL-553-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.360 mg/Kg	0.360U mg/Kg
SL-553-SA5D-SB-4.5-5.5(REA)	MOLYBDENUM	0.364 mg/Kg	0.364U mg/Kg
SL-853-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.374 mg/Kg	0.374U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041113(REA2)	4/11/2013 3:00:00 PM	COPPER MOLYBDENUM	0.0036 mg/L 0.0036 mg/L	SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-4.5-5.5
FB-041613(REA2/TOT)	4/16/2013 3:15:00 PM	MOLYBDENUM TIN	0.0132 mg/L 0.0029 mg/L	SL-553-SA5D-SB-0.0-0.5 SL-591-SA5D-SB-0.0-0.5 SL-591-SA5D-SB-6.5-7.5 SL-592-SA5D-SB-0.0-0.5 SL-592-SA5D-SB-10.5-11.5 SL-592-SA5D-SB-4.0-5.0 SL-853-SA5D-SB-0.0-0.5

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-551-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.209 mg/Kg	0.209U mg/Kg
SL-551-SA5D-SB-14.0-15.0(REA)	MOLYBDENUM	0.524 mg/Kg	0.524U mg/Kg
SL-551-SA5D-SB-17.5.-18.5(REA)	MOLYBDENUM	0.383 mg/Kg	0.383U mg/Kg
SL-551-SA5D-SB-4.0-5.0(REA)	MOLYBDENUM	0.222 mg/Kg	0.222U mg/Kg
SL-551-SA5D-SB-9.0-10.0(REA)	MOLYBDENUM	0.385 mg/Kg	0.385U mg/Kg
SL-553-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.360 mg/Kg	0.360U mg/Kg
SL-553-SA5D-SB-4.5-5.5(REA)	MOLYBDENUM	0.364 mg/Kg	0.364U mg/Kg
SL-853-SA5D-SB-0.0-0.5(REA)	MOLYBDENUM	0.374 mg/Kg	0.374U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **AQ**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB-091213	1-Methylnaphthalene-d10	25	51.00-136.00	All Base Target Analytes	J(all detects) UJ(all non-detects)
	Benzo(a)pyrene-d12	24	62.00-141.00		
	Fluoranthene-d10	23	44.00-137.00		

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MSD (SL-553-SA5D-SB-0.0-0.5)	DALAPON	-	-	19.00-109.00	67 (50.00)	DALAPON	J (all detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MS SL-553-SA5D-SB-0.0-0.5MSD (SL-553-SA5D-SB-0.0-0.5)	EFH (C30-C40)	-85	261	49.00-123.00	38 (20.00)	EFH (C30-C40)	No Qual, >4x
SL-553-SA5D-SB-0.0-0.5MS SL-553-SA5D-SB-0.0-0.5MSD (SL-553-SA5D-SB-0.0-0.5)	EFH (C21-C30)	32	-	49.00-123.00	22 (20.00)	EFH (C21-C30)	J(all detects) UJ(all non-detects)

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-853-SA5D-SB-0.0-0.5MS SL-853-SA5D-SB-0.0-0.5MSD (SL-853-SA5D-SB-0.0-0.5)	DINOSEB	0	0	10.00-52.00	-	DINOSEB	J(all detects) R(all non-detects)
SL-853-SA5D-SB-0.0-0.5MSD (SL-853-SA5D-SB-0.0-0.5)	2,4,5-TP (Silvex) 2,4-DB	- -	9 8	10.00-142.00 10.00-179.00	163 (35.00) 171 (50.00)	2,4,5-TP (Silvex) 2,4-DB	J(all detects) UJ(all non-detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MS (TOT) SL-553-SA5D-SB-0.0-0.5MSD (TOT) (SL-551-SA5D-SB-0.0-0.5 SL -551-SA5D-SB-14.0-15.0 SL -551-SA5D-SB-17.5.-18.5 SL -551-SA5D-SB-4.0-5.0 SL -551-SA5D-SB-9.0-10.0 SL -553-SA5D-SB-0.0-0.5 SL -553-SA5D-SB-4.5-5.5 SL -853-SA5D-SB-0.0-0.5)	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM TITANIUM	2099 205 658 229 142 426	2459 229 1662 334 166 501	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 IRON MAGNESIUM POTASSIUM TITANIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MS (TOT) **SL-553-SA5D-SB-0.0-0.5MSD (TOT)** (SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-0.0-0.5 SL-553-SA5D-SB-4.5-5.5 SL-853-SA5D-SB-0.0-0.5)	ANTIMONY	41	43	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MS (TOT) **SL-553-SA5D-SB-0.0-0.5MSD (TOT)** (SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-0.0-0.5 SL-553-SA5D-SB-4.5-5.5 SL-853-SA5D-SB-0.0-0.5)	SILVER STRONTIUM THALLIUM	- 134 -	126 182 131	75.00-125.00 75.00-125.00 75.00-125.00	- - -	SILVER STRONTIUM THALLIUM	J(all detects)

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-553-SA5D-SB-0.0-0.5MS (SL-551-SA5D-SB-0.0-0.5 SL-551-SA5D-SB-14.0-15.0 SL-551-SA5D-SB-17.5.-18.5 SL-551-SA5D-SB-4.0-5.0 SL-551-SA5D-SB-9.0-10.0 SL-553-SA5D-SB-0.0-0.5 SL-553-SA5D-SB-4.5-5.5 SL-591-SA5D-SB-0.0-0.5 SL-591-SA5D-SB-6.5-7.5 SL-853-SA5D-SB-0.0-0.5)	FLUORIDE	33	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-592-SA5D-SB-0.0-0.5MS (SL-592-SA5D-SB-0.0-0.5 SL-592-SA5D-SB-10.5-11.5 SL-592-SA5D-SB-4.0-5.0)	FLUORIDE	12	-	80.00-120.00	-	FLUORIDE	J(all detects) R(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-553-SA5D-SB-0.0-0.5DUP (TOT) (SL-553-SA5D-SB-0.0-0.5 SL -553-SA5D-SB-4.5-5.5 SL -853-SA5D-SB-0.0-0.5)	HEXAVALENT CHROMIUM	97	20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **AQ**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P7WMLCSQ261255	Butylbenzylphthalate	21	37	40.00-138.00	54 (30.00)	Butylbenzylphthalate	J (all detects)
P7WMLCSY261322	Diethylphthalate	51	-	64.00-128.00	33 (30.00)	Diethylphthalate	UJ (all non-detects)
(EB-091213)	Dimethylphthalate	10	-	23.00-139.00	79 (30.00)	Dimethylphthalate	

Field Duplicate RPD Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-553-SA5D-SB-0.0-0.5	SL-853-SA5D-SB-0.0-0.5			
MOISTURE	1.4	1.4	0		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-553-SA5D-SB-0.0-0.5	SL-853-SA5D-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	9.20	6.28	38	50.00	No Qualifiers Applied
1,2,3,4,6,7,8-HPCDF	1.59	1.28	22	50.00	
1,2,3,4,7,8,9-HPCDF	0.178	0.181	2	50.00	
1,2,3,4,7,8-HxCDD	0.190	0.197	4	50.00	
1,2,3,4,7,8-HXCDF	0.251	0.352	33	50.00	
1,2,3,6,7,8-HXCDD	0.581	0.577	1	50.00	
1,2,3,6,7,8-HXCDF	0.163	0.271	50	50.00	
1,2,3,7,8,9-HXCDD	0.585	0.649	10	50.00	
1,2,3,7,8,9-HXCDF	0.471	0.559	17	50.00	
1,2,3,7,8-PECDD	0.195	0.154	23	50.00	
1,2,3,7,8-PECDF	0.367	0.398	8	50.00	
2,3,4,7,8-PECDF	0.195	0.223	13	50.00	
OCDF	4.59	3.29	33	50.00	
2,3,4,6,7,8-HXCDF	0.207	0.380	59	50.00	J(all detects) UJ(all non-detects)
2,3,7,8-TCDF	1.01 U	0.127	200	50.00	
OCDD	150	86.0	54	50.00	

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-553-SA5D-SB-0.0-0.5	SL-853-SA5D-SB-0.0-0.5			
FLUORIDE	0.80	0.86	7	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg) SL-553-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-853-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	15900	16800	6	50.00	No Qualifiers Applied
ARSENIC	3.46	3.83	10	50.00	
BARIUM	82.1	87.3	6	50.00	
BERYLLIUM	0.634	0.662	4	50.00	
BORON	3.72	3.06	19	50.00	
CADMIUM	0.320	0.363	13	50.00	
CALCIUM	4450	4570	3	50.00	
CHROMIUM	29.1	30.3	4	50.00	
COBALT	6.45	7.28	12	50.00	
COPPER	10.7	12.5	16	50.00	
IRON	24500	27000	10	50.00	
LEAD	10.1	11.8	16	50.00	
LITHIUM	21.6	24.3	12	50.00	
MAGNESIUM	5370	5840	8	50.00	
MANGANESE	358	386	8	50.00	
MOLYBDENUM	0.360	0.374	4	50.00	
NICKEL	11.6	12.7	9	50.00	
PHOSPHORUS	586	579	1	50.00	
POTASSIUM	4690	4940	5	50.00	
SODIUM	78.9	83.4	6	50.00	
TIN	2.65	2.80	6	50.00	
TITANIUM	1040	1090	5	50.00	
VANADIUM	51.4	53.6	4	50.00	
ZINC	60.3	67.0	11	50.00	
Zirconium	6.10	6.53	7	50.00	

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-553-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-853-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
SELENIUM	0.232	0.284	20	50.00	No Qualifiers Applied
SILVER	0.0272	0.0309	13	50.00	
STRONTIUM	26.7	34.9	27	50.00	
THALLIUM	0.277	0.391	34	50.00	

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-553-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-853-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	0.20	0.24	18	50.00	No Qualifiers Applied

Method: 7471B
Matrix: SO

Analyte	Concentration (mg/Kg) SL-553-SA5D-SB-0.0-0.5 (TOT)	Concentration (mg/Kg) SL-853-SA5D-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0205	0.0215	5	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PrepPH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-553-SA5D-SB-0.0-0.5	Concentration (mg/Kg) SL-853-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
EFH (C15-C20)	2.5	2.1	17	50.00	No Qualifiers Applied
EFH (C21-C30)	13	11	17	50.00	
EFH (C30-C40)	41	32	25	50.00	

Method: 8270D SIM
Matrix: SO

Analyte	Concentration (ug/Kg) SL-553-SA5D-SB-0.0-0.5	Concentration (ug/Kg) SL-853-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
BENZO(A)ANTHRACENE	1.6	1.1	37	50.00	No Qualifiers Applied
BENZO(A)PYRENE	1.6	1.1	37	50.00	
BENZO(B)FLUORANTHENE	2.4	2.3	4	50.00	
BENZO(G,H,I)PERYLENE	1.2	1.0	18	50.00	
BENZO(K)FLUORANTHENE	1.2	0.77	44	50.00	
CHRYSENE	2.7	2.2	20	50.00	
FLUORANTHENE	3.2	2.3	33	50.00	
INDENO(1,2,3-CD)PYRENE	0.90	0.72	22	50.00	
NAPHTHALENE	1.5	1.5	0	50.00	
PHENANTHRENE	2.0	1.4	35	50.00	
PYRENE	3.2	2.2	37	50.00	
BIS(2-ETHYLHEXYL)PHTHALATE	18 U	17	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit) SL-553-SA5D-SB-0.0-0.5	Concentration (pH unit) SL-853-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
PH	7.11	7.66	7	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-091213	1,2,3,4,6,7,8-HPCDD	JQ	1.20	9.71	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JQ	0.957	9.71	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JQ	1.11	9.71	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	J	0.821	9.71	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JQ	1.13	9.71	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	J	0.991	9.71	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	J	0.613	9.71	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	J	1.03	9.71	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	J	1.29	9.71	PQL	pg/L	
	1,2,3,7,8-PECDD	J	1.14	9.71	PQL	pg/L	
	1,2,3,7,8-PECDF	JQ	0.812	9.71	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JQ	1.03	9.71	PQL	pg/L	
	2,3,4,7,8-PECDF	JQ	0.639	9.71	PQL	pg/L	
	OCDD	J	1.79	19.4	PQL	pg/L	
	OCDF	JQ	2.16	19.4	PQL	pg/L	

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-091213	COPPER	J	0.0045	0.0200	PQL	mg/L	J (all detects)
	MOLYBDENUM	J	0.0032	0.0200	PQL	mg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.0749	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0716	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0425	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0687	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.158	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0806	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.248	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.358	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.117	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.0571	5.06	PQL	ng/Kg	
	OCDD	JB	1.11	10.1	PQL	ng/Kg	
	OCDF	JB	0.171	10.1	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-553-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.59	5.03	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.178	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.190	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.251	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.581	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.163	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.585	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.471	5.03	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.195	5.03	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.367	5.03	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	J	0.207	5.03	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.195	5.03	PQL	ng/Kg	
	OCDF	JB	4.59	10.1	PQL	ng/Kg	
SL-853-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.28	4.89	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.181	4.89	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.197	4.89	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.352	4.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.577	4.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.271	4.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.649	4.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.559	4.89	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.154	4.89	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.398	4.89	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.380	4.89	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.223	4.89	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.127	0.977	PQL	ng/Kg	
	OCDF	JB	3.29	9.77	PQL	ng/Kg	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-0.0-0.5	FLUORIDE	J	0.68	1.0	PQL	mg/Kg	J (all detects)
SL-553-SA5D-SB-0.0-0.5	FLUORIDE	J	0.80	1.0	PQL	mg/Kg	J (all detects)
SL-592-SA5D-SB-0.0-0.5	FLUORIDE	J	0.54	1.0	PQL	mg/Kg	J (all detects)
SL-853-SA5D-SB-0.0-0.5	FLUORIDE	J	0.86	1.0	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-0.0-0.5	ARSENIC	J	3.90	4.10	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.767	1.02	PQL	mg/Kg	
	BORON	J	1.03	10.2	PQL	mg/Kg	
	CADMIUM	J	0.216	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.209	2.05	PQL	mg/Kg	
	SODIUM	J	92.2	102	PQL	mg/Kg	
	TIN	J	2.96	10.2	PQL	mg/Kg	
SL-551-SA5D-SB-14.0-15.0	CADMIUM	J	0.117	1.13	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.524	2.26	PQL	mg/Kg	
	TIN	J	4.01	11.3	PQL	mg/Kg	
SL-551-SA5D-SB-17.5.-18.5	BERYLLIUM	J	1.00	1.06	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.171	1.06	PQL	mg/Kg	
	MOLYBDENUM	J	0.383	2.12	PQL	mg/Kg	
	TIN	J	3.99	10.6	PQL	mg/Kg	
SL-551-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.789	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	1.15	10.8	PQL	mg/Kg	
	CADMIUM	J	0.183	1.08	PQL	mg/Kg	
	MOLYBDENUM	J	0.222	2.16	PQL	mg/Kg	
	TIN	J	3.09	10.8	PQL	mg/Kg	
SL-551-SA5D-SB-9.0-10.0	BERYLLIUM	J	0.826	1.05	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.135	1.05	PQL	mg/Kg	
	MOLYBDENUM	J	0.385	2.11	PQL	mg/Kg	
	TIN	J	3.01	10.5	PQL	mg/Kg	
SL-553-SA5D-SB-0.0-0.5	ARSENIC	J	3.46	4.02	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.634	1.00	PQL	mg/Kg	
	BORON	J	3.72	10.0	PQL	mg/Kg	
	CADMIUM	J	0.320	1.00	PQL	mg/Kg	
	MOLYBDENUM	J	0.360	2.01	PQL	mg/Kg	
	SODIUM	J	78.9	100	PQL	mg/Kg	
	TIN	J	2.65	10.0	PQL	mg/Kg	
SL-553-SA5D-SB-4.5-5.5	ARSENIC	J	3.85	4.15	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.757	1.04	PQL	mg/Kg	
	BORON	J	1.35	10.4	PQL	mg/Kg	
	CADMIUM	J	0.241	1.04	PQL	mg/Kg	
	MOLYBDENUM	J	0.364	2.07	PQL	mg/Kg	
	TIN	J	2.96	10.4	PQL	mg/Kg	
SL-853-SA5D-SB-0.0-0.5	ARSENIC	J	3.83	3.94	PQL	mg/Kg	J (all detects)
	BERYLLIUM	J	0.662	0.985	PQL	mg/Kg	
	BORON	J	3.06	9.85	PQL	mg/Kg	
	CADMIUM	J	0.363	0.985	PQL	mg/Kg	
	MOLYBDENUM	J	0.374	1.97	PQL	mg/Kg	
	SODIUM	J	83.4	98.5	PQL	mg/Kg	
	TIN	J	2.80	9.85	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-0.0-0.5	SELENIUM	J	0.206	0.410	PQL	mg/Kg	J (all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-14.0-15.0	SELENIUM SILVER	J J	0.227 0.0421	0.452 0.226	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-551-SA5D-SB-17.5.-18.5	SELENIUM SILVER	J J	0.125 0.0336	0.425 0.212	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-551-SA5D-SB-4.0-5.0	SELENIUM	J	0.142	0.431	PQL	mg/Kg	J (all detects)
SL-551-SA5D-SB-9.0-10.0	SELENIUM SILVER	J J	0.112 0.0290	0.422 0.211	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-553-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.232 0.0272	0.402 0.201	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-553-SA5D-SB-4.5-5.5	SELENIUM	J	0.189	0.415	PQL	mg/Kg	J (all detects)
SL-853-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.284 0.0309	0.394 0.197	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-553-SA5D-SB-0.0-0.5	HEXAVALENT CHROMIUM	J	0.20	0.41	PQL	mg/Kg	J (all detects)
SL-553-SA5D-SB-4.5-5.5	HEXAVALENT CHROMIUM	J	0.34	0.42	PQL	mg/Kg	J (all detects)
SL-853-SA5D-SB-0.0-0.5	HEXAVALENT CHROMIUM	J	0.24	0.41	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-551-SA5D-SB-0.0-0.5	MERCURY	J	0.0112	0.0166	PQL	mg/Kg	J (all detects)
SL-551-SA5D-SB-9.0-10.0	MERCURY	J	0.0138	0.0178	PQL	mg/Kg	J (all detects)
SL-553-SA5D-SB-4.5-5.5	MERCURY	J	0.0119	0.0173	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-553-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.5	5.1	PQL	mg/Kg	J (all detects)
SL-553-SA5D-SB-4.5-5.5	EFH (C21-C30) EFH (C30-C40) GASOLINE RANGE ORGANICS (C5-C12)	J J J	4.4 8.2 0.2	5.3 11 1.0	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-853-SA5D-SB-0.0-0.5	EFH (C15-C20)	J	2.1	5.1	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH107 **Laboratory: LL**

EDD Filename: PH107 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-551-SA5D-SB-0.0-0.5	NAPHTHALENE	J	1.0	1.7	PQL	ug/Kg	J (all detects)
SL-551-SA5D-SB-14.0-15.0	NAPHTHALENE	J	1.3	1.9	PQL	ug/Kg	J (all detects)
SL-551-SA5D-SB-4.0-5.0	NAPHTHALENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
SL-551-SA5D-SB-9.0-10.0	NAPHTHALENE	J	1.1	1.8	PQL	ug/Kg	J (all detects)
SL-553-SA5D-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	1.6	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.6	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.2	1.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.90	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.5	1.7	PQL	ug/Kg	
SL-553-SA5D-SB-4.5-5.5	NAPHTHALENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
SL-853-SA5D-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.1	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.0	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.77	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	17	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.72	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	1.5	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.7	PQL	ug/Kg	

LDC #: 30695J4

SDG #: PH107

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: QR

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/12/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	NA	Dup
VIII.	Laboratory Control Samples (LCS)	NA	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(1,2)
XV	Field Blanks	SW	EB=9, EB-091113 FB= FB-041113

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate (PH106); TB = Trip blank; EB = Equipment blank; FB = FB-041613 (PH029) (PH032)

Validated Samples:

1	SL-553-SA5D-SB-0.0-0.5	11	SL-553-SA5D-SB-0.0-0.5MSD	21		31	
2	SL-853-SA5D-SB-0.0-0.5	12	SL-553-SA5D-SB-0.0-0.5DUP	22		32	
3	SL-553-SA5D-SB-4.5-5.5	13		23		33	
4	SL-551-SA5D-SB-0.0-0.5	14		24		34	
5	SL-551-SA5D-SB-4.0-5.0	15		25		35	
6	SL-551-SA5D-SB-9.0-10.0	16		26		36	
7	SL-551-SA5D-SB-14.0-15.0	17		27		37	
8	SL-551-SA5D-SB-17.5-18.5	18		28		38	
9	EB-091213	19		29		39	
10	SL-553-SA5D-SB-0.0-0.5MS	20		30		40	

Notes:

LDC #: 30695J4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	9										
Cu			4.2	21	4.5										
Mo			3.7	18.5	3.2										

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 #: 30695J4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: ~~All~~ 3-8

Analyte	Blank ID	Sample Identification												
	FB-041113 (SDG: PH029)	Action Limit	1	~~2~~	3	4	5	6	7	8				
Cu	0.0036	1.8												
Mo	0.0036	1.8	0.36	0.37	0.36	0.21	0.22	0.38	0.52	0.38				

Sampling date: 9/11/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 3-8

Analyte	Blank ID	Sample Identification											
	EB-091113 (SDG: PH106)	Action Limit	3	4	5	6	7	8					
Cu	0.0040	2											
Mn	0.0019	0.95											
Mo	0.0087	4.35	See FB	See FB	See FB	See FB	See FB	See FB					

Sampling date: 9/12/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 1, 2

Analyte	Blank ID	Sample Identification											
	EB-091213 (SDG: PH107)	Action Limit	1	2									
Cu	0.0045	2.25											
Mo	0.0032	1.6	See FB	See FB									

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 #: 30695J4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/16/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 1, 2

Analyte	Blank ID	Sample Identification												
	FB-041613 (SDG: PH032)	Action Limit	1	2										
Sn	0.0029	1.45												
Mo	0.0132	6.6	0.364	0.374										

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".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH107
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7196426BKG Matrix Spike Lab Sample ID: 7196427MS Matrix Spike Duplicate Lab Sample ID: 7196428MSD
Batch Id(s): P26237A, P26238A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		15647.5644		19803.8713		20516.1347		198.0198	198.0198	MG/KG	2099		2459		4			20	P
Antimony		0.7327	U	20.4446		21.4010		49.5050	49.5050	MG/KG	41	N	43	N	5		75 - 125	20	P
Arsenic		3.4149	B	17.5257		17.9465		14.8515	14.8515	MG/KG	95		98		2		75 - 125	20	P
Barium		80.9653		271.9069		276.0683		198.0198	198.0198	MG/KG	96		99		2		75 - 125	20	P
Beryllium		0.6248	B	5.5069		5.5842		4.9505	4.9505	MG/KG	99		100		1		75 - 125	20	P
Boron		3.6653	B	194.1782		196.1000		198.0198	198.0198	MG/KG	96		97		1		75 - 125	20	P
Cadmium		0.3158	B	4.8574		4.9059		4.9505	4.9505	MG/KG	92		93		1		75 - 125	20	P
Calcium		4388.8446		5202.5960		5296.0931		396.0396	396.0396	MG/KG	205		229		2			20	P
Chromium		28.6564		50.3960		51.0446		19.8020	19.8020	MG/KG	110		113		1		75 - 125	20	P
Cobalt		6.3564		50.9762		51.1188		49.5050	49.5050	MG/KG	90		90		0		75 - 125	20	P
Copper		10.5931		35.2842		35.7733		24.7525	24.7525	MG/KG	100		102		1		75 - 125	20	P
Iron		24140.2683		24791.4594		25785.6535		99.0099	99.0099	MG/KG	658		1662		4			20	P
Lead		9.9525		23.5446		23.1535		14.8515	14.8515	MG/KG	92		89		2		75 - 125	20	P
Lithium		21.2921		119.4356		121.3000		99.0099	99.0099	MG/KG	99		101		2		75 - 125	20	P
Magnesium		5295.9059		5750.1970		5957.1881		198.0198	198.0198	MG/KG	229		334		4			20	P
Manganese		353.4139		393.9030		400.8079		49.5050	49.5050	MG/KG	82		96		2			20	P
Mercury		0.0202		0.1955		0.1932		0.1629	0.1636	MG/KG	108		106		1		65 - 135	20	CV
Molybdenum		0.3554	B	181.9564		183.8079		198.0198	198.0198	MG/KG	92		93		1		75 - 125	20	P
Nickel		11.3960		57.9842		58.1297		49.5050	49.5050	MG/KG	94		94		0		75 - 125	20	P
Phosphorus		578.0782		666.0158		683.5505		99.0099	99.0099	MG/KG	89		107		3			20	P
Potassium		4620.6782		6024.2416		6259.7376		990.0990	990.0990	MG/KG	142		166		4			20	P
Selenium	78	0.2289	B	2.2455		2.3228		1.9802	1.9802	MG/KG	102		106		3		75 - 125	20	MS
Silver	107	0.0269	B	11.4257		12.5168		9.9010	9.9010	MG/KG	115		126	N	9		75 - 125	20	MS
Sodium		77.8178	B	1027.8891		1045.5960		990.0990	990.0990	MG/KG	96		98		2		75 - 125	20	P
Strontium	88	26.2772		36.9109		40.6931		7.9208	7.9208	MG/KG	134	N	182	N	10		75 - 125	20	MS
Thallium	203	0.2735		0.7168		0.7935		0.3960	0.3960	MG/KG	112		131	N	10		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH107
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7196426BKG Matrix Spike Lab Sample ID: 7196427MS Matrix Spike Duplicate Lab Sample ID: 7196428MSD
Batch Id(s): P26237A, P26238A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Tin		2.6129	B	341.9624		343.8158		396.0396	396.0396	MG/KG	86		86		1		75 - 125	20	P
Titanium		1028.9000		1450.9941		1525.2931		99.0099	99.0099	MG/KG	426		501		5			20	P
Vanadium		50.6545		101.4426		104.1990		49.5050	49.5050	MG/KG	103		108		3		75 - 125	20	P
Zinc		59.4109		107.4228		109.3535		49.5050	49.5050	MG/KG	97		101		2		75 - 125	20	P
Zirconium		6.0109		97.1347		97.9178		99.0099	99.0099	MG/KG	92		93		1		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: PH107
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7196426BKG Serial Dilution Lab Sample ID: 7196426L
Batch ID(s): P26237A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		158040.4000		168424.1500		7		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		34.4900	B	35.0000	U	100		P
Barium		817.7500		885.3500		8		P
Beryllium		6.3100	B	7.0500	B	12		P
Boron		37.0200	B	56.7500	B	53		P
Cadmium		3.1900	B	5.3000	B	66		P
Calcium		44327.3300		48033.7000		8		P
Chromium		289.4300		307.4000		6		P
Cobalt		64.2000		71.8500		12	E	P
Copper		106.9900		142.4000		33		P
Iron		243816.7100		244399.5000		0		P
Lead		100.5200		113.0500	B	12		P
Lithium		215.0500		236.3000		10		P
Magnesium		53488.6500		57207.8500		7		P
Manganese		3569.4800		3884.6000		9		P
Molybdenum		3.5900	B	8.5000	U	100		P
Nickel		115.1000		125.1500		9		P
Phosphorus		5838.5900		6067.7000		4		P
Potassium		46668.8500		49111.3500		5		P
Selenium	78	1.1560	B	2.5000	U	100		MS
Silver	107	0.1356	B	0.6500	U	100		MS
Sodium		785.9600	B	835.0000	U	100		P
Strontium	88	132.7000		117.2000		12	E	MS
Thallium	203	1.3810		1.2945	B	6		MS
Tin		26.3900	B	29.5000	B	12		P
Titanium		10391.8900		11235.6000		8		P
Vanadium		511.6100		548.1500		7		P
Zinc		600.0500		627.6500		5		P
Zirconium		60.7100		63.1000	B	4		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

3/05 A (A)

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH108

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 11, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 16, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081B
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks and field blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for metals in SDG PH109. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I in SDG PH109.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the exception of one DUP for metals in SDG PH109. The associated sample results were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I in SDG PH109.

IX. 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.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory in SDG PH109. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-504-SA5D-SB-4.0-5.0 (from SDG PH109)	Aluminum Barium Chromium Cobalt Magnesium Manganese Nickel	11 (≤10) 11 (≤10) 12(≤10) 17(≤10) 11(≤10) 11(≤10) 17(≤10)	All soil samples in SDG PH108	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH108	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH110) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables, dioxins and fluoride. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were

qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH032) was collected and analyzed for SVOCs, pesticides, PCBs, metals, TPH as gasoline, TPH as extractables, dioxins and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Sep-2013	TB-091613	7200145	TB	5030B	8015M	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3050B	6010C	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3050B	6020A	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3546	8015M	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3546	8081B	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3546	8082A	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	3546	8270D SIM	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	METHOD	1613B	III
16-Sep-2013	SL-505-SA5D-SB-0.0-0.5	7200146	N	METHOD	7471B	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3050B	6010C	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3050B	6020A	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3546	8015M	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3546	8081B	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3546	8082A	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	3546	8270D SIM	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	5035A	8015M	III
16-Sep-2013	SL-505-SA5D-SB-4.0-5.0	7200147	N	METHOD	7471B	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3050B	6010C	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3050B	6020A	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3546	8015M	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3546	8081B	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3546	8082A	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	3546	8270D SIM	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	5035A	8015M	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	METHOD	300.0	III
16-Sep-2013	SL-505-SA5D-SB-9.0-10.0	7200148	N	METHOD	7471B	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
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3050B	6010C	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3050B	6020A	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3546	8015M	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3546	8081B	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3546	8082A	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	3546	8270D SIM	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	5035A	8015M	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	METHOD	300.0	III
16-Sep-2013	SL-505-SA5D-SB-14.0-15.0	7200149	N	METHOD	7471B	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3050B	6010C	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3050B	6020A	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3546	8015M	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3546	8081B	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3546	8082A	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	3546	8270D SIM	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	5035A	8015M	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	METHOD	300.0	III
16-Sep-2013	SL-505-SA5D-SB-19.0-20.0	7200150	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	30900		7.40	MDL	81.8	PQL	mg/Kg	J	E

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	24700		7.37	MDL	40.9	PQL	mg/Kg	J	A
ANTIMONY	4.09	U	0.757	MDL	4.09	PQL	mg/Kg	UJ	Q
BARIUM	121		0.0337	MDL	1.02	PQL	mg/Kg	J	A
BERYLLIUM	0.880	J	0.0685	MDL	1.02	PQL	mg/Kg	J	Z
CADMIUM	0.175	J	0.0777	MDL	1.02	PQL	mg/Kg	J	Z
CALCIUM	10400		3.41	MDL	20.4	PQL	mg/Kg	J	E, E
CHROMIUM	37.4		0.164	MDL	3.07	PQL	mg/Kg	J	A
COBALT	9.64		0.101	MDL	1.02	PQL	mg/Kg	J	A
MAGNESIUM	6300		1.71	MDL	10.2	PQL	mg/Kg	J	A
MANGANESE	477		0.0849	MDL	1.02	PQL	mg/Kg	J	A
MOLYBDENUM	0.477	J	0.174	MDL	2.04	PQL	mg/Kg	U	F, F
NICKEL	19.8		0.133	MDL	2.04	PQL	mg/Kg	J	A
POTASSIUM	5560		8.53	MDL	102	PQL	mg/Kg	J	Q
TIN	2.85	J	0.225	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	4.22	J	0.859	MDL	5.11	PQL	mg/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-14.0-15.0** ***Collected:*** **9/16/2013 10:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	21900		7.84	MDL	43.5	PQL	mg/Kg	J	A
ANTIMONY	4.35	U	0.804	MDL	4.35	PQL	mg/Kg	UJ	Q
BARIUM	91.6		0.0359	MDL	1.09	PQL	mg/Kg	J	A
BERYLLIUM	0.784	J	0.0728	MDL	1.09	PQL	mg/Kg	J	Z
BORON	7.03	J	0.913	MDL	10.9	PQL	mg/Kg	J	Z
CALCIUM	8130		3.63	MDL	21.7	PQL	mg/Kg	J	E, E
CHROMIUM	30.9		0.174	MDL	3.26	PQL	mg/Kg	J	A
COBALT	6.72		0.108	MDL	1.09	PQL	mg/Kg	J	A
IRON	27800		3.93	MDL	43.5	PQL	mg/Kg	J	E
MAGNESIUM	5680		1.82	MDL	10.9	PQL	mg/Kg	J	A
MANGANESE	315		0.0902	MDL	1.09	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-14.0-15.0** ***Collected:*** **9/16/2013 10:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	16.9		0.141	MDL	2.17	PQL	mg/Kg	J	A
POTASSIUM	3290		9.06	MDL	109	PQL	mg/Kg	J	Q
TIN	3.12	J	0.239	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.68	J	0.913	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-19.0-20.0** ***Collected:*** **9/16/2013 11:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	31100		7.82	MDL	86.4	PQL	mg/Kg	J	E

Sample ID: **SL-505-SA5D-SB-19.0-20.0** ***Collected:*** **9/16/2013 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
ALUMINUM	23800		7.79	MDL	43.2	PQL	mg/Kg	J	A
ANTIMONY	4.32	U	0.799	MDL	4.32	PQL	mg/Kg	UJ	Q
BARIUM	106		0.0356	MDL	1.08	PQL	mg/Kg	J	A
BERYLLIUM	0.876	J	0.0724	MDL	1.08	PQL	mg/Kg	J	Z
BORON	7.33	J	0.907	MDL	10.8	PQL	mg/Kg	J	Z
CALCIUM	15200		3.61	MDL	21.6	PQL	mg/Kg	J	E, E
CHROMIUM	32.7		0.173	MDL	3.24	PQL	mg/Kg	J	A
COBALT	10.4		0.107	MDL	1.08	PQL	mg/Kg	J	A
MAGNESIUM	6140		1.80	MDL	10.8	PQL	mg/Kg	J	A
MANGANESE	627		0.0896	MDL	1.08	PQL	mg/Kg	J	A
MOLYBDENUM	0.220	J	0.184	MDL	2.16	PQL	mg/Kg	U	F, F
NICKEL	25.0		0.140	MDL	2.16	PQL	mg/Kg	J	A
POTASSIUM	3360		9.01	MDL	108	PQL	mg/Kg	J	Q
TIN	3.33	J	0.238	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.02	J	0.907	MDL	5.40	PQL	mg/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	33200		7.87	MDL	86.9	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	28600		7.84	MDL	43.5	PQL	mg/Kg	J	A
ANTIMONY	4.35	U	0.804	MDL	4.35	PQL	mg/Kg	UJ	Q
BARIUM	136		0.0359	MDL	1.09	PQL	mg/Kg	J	A
BERYLLIUM	0.946	J	0.0728	MDL	1.09	PQL	mg/Kg	J	Z
CALCIUM	9050		3.63	MDL	21.7	PQL	mg/Kg	J	E, E
CHROMIUM	39.8		0.174	MDL	3.26	PQL	mg/Kg	J	A
COBALT	9.46		0.108	MDL	1.09	PQL	mg/Kg	J	A
MAGNESIUM	7040		1.82	MDL	10.9	PQL	mg/Kg	J	A
MANGANESE	470		0.0902	MDL	1.09	PQL	mg/Kg	J	A
MOLYBDENUM	0.283	J	0.185	MDL	2.17	PQL	mg/Kg	U	F, F
NICKEL	21.7		0.141	MDL	2.17	PQL	mg/Kg	J	A
POTASSIUM	5000		9.06	MDL	109	PQL	mg/Kg	J	Q
TIN	3.06	J	0.239	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.72	J	0.913	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-9.0-10.0** ***Collected:*** **9/16/2013 9:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	33000		8.09	MDL	89.4	PQL	mg/Kg	J	E

Sample ID: **SL-505-SA5D-SB-9.0-10.0** ***Collected:*** **9/16/2013 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
ALUMINUM	29600		8.06	MDL	44.7	PQL	mg/Kg	J	A
ANTIMONY	4.47	U	0.827	MDL	4.47	PQL	mg/Kg	UJ	Q
BARIUM	132		0.0369	MDL	1.12	PQL	mg/Kg	J	A
BERYLLIUM	0.973	J	0.0749	MDL	1.12	PQL	mg/Kg	J	Z
BORON	9.81	J	0.939	MDL	11.2	PQL	mg/Kg	J	Z
CALCIUM	17600		3.73	MDL	22.3	PQL	mg/Kg	J	E, E
CHROMIUM	35.8		0.179	MDL	3.35	PQL	mg/Kg	J	A
COBALT	10.9		0.111	MDL	1.12	PQL	mg/Kg	J	A
MAGNESIUM	6820		1.87	MDL	11.2	PQL	mg/Kg	J	A
MANGANESE	455		0.0928	MDL	1.12	PQL	mg/Kg	J	A
MOLYBDENUM	0.194	J	0.190	MDL	2.23	PQL	mg/Kg	U	F, F
NICKEL	23.4		0.145	MDL	2.23	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-9.0-10.0** ***Collected:*** **9/16/2013 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
POTASSIUM	4020		9.32	MDL	112	PQL	mg/Kg	J	Q
TIN	3.16	J	0.246	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.68	J	0.939	MDL	5.59	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.285	J	0.102	MDL	0.409	PQL	mg/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0615	J	0.0266	MDL	0.204	PQL	mg/Kg	J	Z, Q
THALLIUM	0.414		0.0307	MDL	0.204	PQL	mg/Kg	J	Q

Sample ID: **SL-505-SA5D-SB-14.0-15.0** ***Collected:*** **9/16/2013 10:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0543	J	0.0283	MDL	0.217	PQL	mg/Kg	J	Z, Q
THALLIUM	0.342		0.0326	MDL	0.217	PQL	mg/Kg	J	Q

Sample ID: **SL-505-SA5D-SB-19.0-20.0** ***Collected:*** **9/16/2013 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0460	J	0.0281	MDL	0.216	PQL	mg/Kg	J	Z, Q
THALLIUM	0.392		0.0324	MDL	0.216	PQL	mg/Kg	J	Q

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.214	J	0.109	MDL	0.435	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS
Method: 6020A **Matrix:** SO

Sample ID: SL-505-SA5D-SB-4.0-5.0 *Collected:* 9/16/2013 8:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0571	J	0.0283	MDL	0.217	PQL	mg/Kg	J	Z, Q
THALLIUM	0.394		0.0326	MDL	0.217	PQL	mg/Kg	J	Q

Sample ID: SL-505-SA5D-SB-9.0-10.0 *Collected:* 9/16/2013 9:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0492	J	0.0291	MDL	0.223	PQL	mg/Kg	J	Z, Q
THALLIUM	0.416		0.0335	MDL	0.223	PQL	mg/Kg	J	Q

Method Category: METALS
Method: 7471B **Matrix:** SO

Sample ID: SL-505-SA5D-SB-0.0-0.5 *Collected:* 9/16/2013 8:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0147	J	0.0099	MDL	0.0165	PQL	mg/Kg	J	Z

Sample ID: SL-505-SA5D-SB-4.0-5.0 *Collected:* 9/16/2013 8:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0112	J	0.0107	MDL	0.0178	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 1613B **Matrix:** SO

Sample ID: SL-505-SA5D-SB-0.0-0.5 *Collected:* 9/16/2013 8:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.90	JB	0.0469	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.143	JBQ	0.0897	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.225	JBQ	0.0900	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.341	J	0.0735	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.863	J	0.0952	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.535	JB	0.0655	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.870	JB	0.0938	MDL	5.11	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	0.577	JBQ	0.0773	MDL	5.11	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.292	JQ	0.0641	MDL	5.11	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.351	JQ	0.0952	MDL	5.11	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.291	JQ	0.205	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	4.44	JB	0.174	MDL	10.2	PQL	ng/Kg	J	Z

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	4.0	J	2.2	MDL	5.5	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **8081B** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIELDRIN	0.38	J	0.34	MDL	1.8	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.23	J	0.18	MDL	0.87	PQL	ug/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	1.3	J	0.36	MDL	1.9	PQL	ug/Kg	J	Z
4,4'-DDT	1.8	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
BETA-BHC	1.4	J	1.1	MDL	2.1	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8082A** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	18	J	4.8	MDL	19	PQL	ug/Kg	J	Z

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-0.0-0.5** ***Collected:*** **9/16/2013 8:05:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.77	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(E)PYRENE	3.5	J	3.4	MDL	17	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	12	J	6.2	MDL	18	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.3	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
NAPHTHALENE	1.8		0.68	MDL	1.7	PQL	ug/Kg	U	B

Sample ID: **SL-505-SA5D-SB-14.0-15.0** ***Collected:*** **9/16/2013 10:05:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	18	J	6.6	MDL	20	PQL	ug/Kg	J	Z
NAPHTHALENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	U	B

Sample ID: **SL-505-SA5D-SB-19.0-20.0** ***Collected:*** **9/16/2013 11:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	U	B

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.73	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	0.75	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.84	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.81	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.96	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	6.5	MDL	20	PQL	ug/Kg	J	Z
NAPHTHALENE	1.8		0.72	MDL	1.8	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-505-SA5D-SB-4.0-5.0** ***Collected:*** **9/16/2013 8:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.6	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-505-SA5D-SB-9.0-10.0** ***Collected:*** **9/16/2013 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
CHRYSENE	1.7	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH108

Method Blank Outlier Report

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2610B370454	9/20/2013 4:54:00 AM	1,2,3,4,6,7,8-HPCDD	0.0535 ng/Kg	SL-505-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0418 ng/Kg	
		1,2,3,4,7,8,9-HPCDF	0.0583 ng/Kg	
		1,2,3,4,7,8-HxCDD	0.0859 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0456 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0579 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0750 ng/Kg	
		1,2,3,7,8-PECDD	0.122 ng/Kg	
		1,2,3,7,8-PECDF	0.0876 ng/Kg	
		OCDD	0.197 ng/Kg	
		OCDF	0.197 ng/Kg	

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-505-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.143 ng/Kg	0.143U ng/Kg
SL-505-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.225 ng/Kg	0.225U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26137BB220814	9/22/2013 8:14:00 AM	TIN	1.64 mg/Kg	SL-505-SA5D-SB-0.0-0.5
				SL-505-SA5D-SB-14.0-15.0
				SL-505-SA5D-SB-19.0-20.0
				SL-505-SA5D-SB-4.0-5.0
				SL-505-SA5D-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-505-SA5D-SB-0.0-0.5(RES)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-505-SA5D-SB-14.0-15.0(RES)	TIN	3.12 mg/Kg	3.12U mg/Kg
SL-505-SA5D-SB-19.0-20.0(RES)	TIN	3.33 mg/Kg	3.33U mg/Kg
SL-505-SA5D-SB-4.0-5.0(RES)	TIN	3.06 mg/Kg	3.06U mg/Kg
SL-505-SA5D-SB-9.0-10.0(RES)	TIN	3.16 mg/Kg	3.16U mg/Kg

Method: **8270D SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLC26B260219	9/25/2013 2:19:00 AM	NAPHTHALENE	0.92 ug/Kg	SL-505-SA5D-SB-0.0-0.5
				SL-505-SA5D-SB-14.0-15.0
				SL-505-SA5D-SB-19.0-20.0
				SL-505-SA5D-SB-4.0-5.0
				SL-505-SA5D-SB-9.0-10.0

Method Blank Outlier Report

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-505-SA5D-SB-0.0-0.5(RES)	NAPHTHALENE	1.8 ug/Kg	1.8U ug/Kg
SL-505-SA5D-SB-14.0-15.0(RES)	NAPHTHALENE	1.2 ug/Kg	1.8U ug/Kg
SL-505-SA5D-SB-19.0-20.0(RES)	NAPHTHALENE	1.2 ug/Kg	1.8U ug/Kg
SL-505-SA5D-SB-4.0-5.0(RES)	NAPHTHALENE	1.8 ug/Kg	1.8U ug/Kg
SL-505-SA5D-SB-9.0-10.0(RES)	NAPHTHALENE	1.2 ug/Kg	1.9U ug/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB2-091813(REA2)	9/18/2013 3:30:00 PM	CALCIUM MOLYBDENUM	0.055 mg/L 0.0025 mg/L	SL-505-SA5D-SB-0.0-0.5 SL-505-SA5D-SB-14.0-15.0 SL-505-SA5D-SB-19.0-20.0 SL-505-SA5D-SB-4.0-5.0 SL-505-SA5D-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-505-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.477 mg/Kg	0.477U mg/Kg
SL-505-SA5D-SB-19.0-20.0(RES)	MOLYBDENUM	0.220 mg/Kg	0.220U mg/Kg
SL-505-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.283 mg/Kg	0.283U mg/Kg
SL-505-SA5D-SB-9.0-10.0(RES)	MOLYBDENUM	0.194 mg/Kg	0.194U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041613(REA2/TOT)	4/16/2013 3:15:00 PM	MOLYBDENUM TIN	0.0132 mg/L 0.0029 mg/L	SL-505-SA5D-SB-0.0-0.5 SL-505-SA5D-SB-14.0-15.0 SL-505-SA5D-SB-19.0-20.0 SL-505-SA5D-SB-4.0-5.0 SL-505-SA5D-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-505-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.477 mg/Kg	0.477U mg/Kg
SL-505-SA5D-SB-19.0-20.0(RES)	MOLYBDENUM	0.220 mg/Kg	0.220U mg/Kg
SL-505-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.283 mg/Kg	0.283U mg/Kg
SL-505-SA5D-SB-9.0-10.0(RES)	MOLYBDENUM	0.194 mg/Kg	0.194U mg/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.90	5.11	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.143	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.225	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.341	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.863	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.535	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.870	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.577	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JQ	0.292	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JQ	0.351	5.11	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.291	1.02	PQL	ng/Kg	
	OCDF	JB	4.44	10.2	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.880	1.02	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.175	1.02	PQL	mg/Kg	
	MOLYBDENUM	J	0.477	2.04	PQL	mg/Kg	
	TIN	J	2.85	10.2	PQL	mg/Kg	
	Zirconium	J	4.22	5.11	PQL	mg/Kg	
SL-505-SA5D-SB-14.0-15.0	BERYLLIUM	J	0.784	1.09	PQL	mg/Kg	J (all detects)
	BORON	J	7.03	10.9	PQL	mg/Kg	
	TIN	J	3.12	10.9	PQL	mg/Kg	
	Zirconium	J	2.68	5.43	PQL	mg/Kg	
SL-505-SA5D-SB-19.0-20.0	BERYLLIUM	J	0.876	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	7.33	10.8	PQL	mg/Kg	
	MOLYBDENUM	J	0.220	2.16	PQL	mg/Kg	
	TIN	J	3.33	10.8	PQL	mg/Kg	
	Zirconium	J	3.02	5.40	PQL	mg/Kg	
SL-505-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.946	1.09	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.283	2.17	PQL	mg/Kg	
	TIN	J	3.06	10.9	PQL	mg/Kg	
	Zirconium	J	3.72	5.43	PQL	mg/Kg	
SL-505-SA5D-SB-9.0-10.0	BERYLLIUM	J	0.973	1.12	PQL	mg/Kg	J (all detects)
	BORON	J	9.81	11.2	PQL	mg/Kg	
	MOLYBDENUM	J	0.194	2.23	PQL	mg/Kg	
	TIN	J	3.16	11.2	PQL	mg/Kg	
	Zirconium	J	2.68	5.59	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-0.0-0.5	SELENIUM	J	0.285	0.409	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0615	0.204	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-14.0-15.0	SILVER	J	0.0543	0.217	PQL	mg/Kg	J (all detects)
SL-505-SA5D-SB-19.0-20.0	SILVER	J	0.0460	0.216	PQL	mg/Kg	J (all detects)
SL-505-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.214 0.0571	0.435 0.217	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-505-SA5D-SB-9.0-10.0	SILVER	J	0.0492	0.223	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-0.0-0.5	MERCURY	J	0.0147	0.0165	PQL	mg/Kg	J (all detects)
SL-505-SA5D-SB-4.0-5.0	MERCURY	J	0.0112	0.0178	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-4.0-5.0	EFH (C15-C20)	J	4.0	5.5	PQL	mg/Kg	J (all detects)

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-0.0-0.5	DIELDRIN HEPTACHLOR EPOXIDE	J J	0.38 0.23	1.8 0.87	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-505-SA5D-SB-4.0-5.0	4,4'-DDE 4,4'-DDT BETA-BHC	J J J	1.3 1.8 1.4	1.9 1.9 2.1	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Method: 8082A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-505-SA5D-SB-4.0-5.0	AROCLOR 1254	J	18	19	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH108 **Laboratory: LL**

EDD Filename: PH108 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-505-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.77	1.7	PQL	ug/Kg	J (all detects)
	BENZO(E)PYRENE	J	3.5	17	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	12	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.3	1.7	PQL	ug/Kg	
SL-505-SA5D-SB-14.0-15.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	20	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	1.2	1.8	PQL	ug/Kg	
SL-505-SA5D-SB-19.0-20.0	NAPHTHALENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
SL-505-SA5D-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	0.73	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	0.75	1.8	PQL	ug/Kg	
	BENZO(A)PYRENE	J	0.84	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.81	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.96	1.8	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	20	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.8	PQL	ug/Kg	
	PYRENE	J	1.6	1.8	PQL	ug/Kg	
SL-505-SA5D-SB-9.0-10.0	CHRYSENE	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	1.2	1.9	PQL	ug/Kg	

LDC #: 30695K4

SDG #: PH108

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: CR

2nd Reviewer: ✓

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/16/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (See PH109)
VII.	Duplicate Sample Analysis	N	Dup ↓
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	see PH109
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	~~EB= EB2-091813~~ (PH110) ~~FB= FB-041113~~ 041613 (PH029) 32

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-505-SA5D-SB-0.0-0.5	11		21		31	
2	SL-505-SA5D-SB-4.0-5.0	12		22		32	
3	SL-505-SA5D-SB-9.0-10.0	13		23		33	
4	SL-505-SA5D-SB-14.0-15.0	14		24		34	
5	SL-505-SA5D-SB-19.0-20.0	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 #: 30695K4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: \ of \
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/16/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification												
	FB-041613 (SDG: PH032)	Action Limit	1	2	3	5								
Sn	0.0029	1.45												
Mo	0.0132	6.6	0.477	0.283	0.194	0.220								

Sampling date: 9/18/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB2-091813 (SDG: PH110)	Action Limit	1	2	3	5							
Ca	0.055	27.5											
Mo	0.0025	1.25	See FB	See FB	See FB	See FB							

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".

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH109

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 11, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 17, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for SVOCs and metals. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the exception of one DUP for metals. The associated sample results were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

IX. 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.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

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-504-SA5D-SB-4.0-5.0	Aluminum Barium Chromium Cobalt Magnesium Manganese Nickel	11 (≤10) 11 (≤10) 12(≤10) 17(≤10) 11(≤10) 11(≤10) 17(≤10)	All soil samples in SDG PH109	J (all detects) UJ (all non-detects)	A

The associated sample results were qualified as detected estimated (J).

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH109	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for SVOCs, PCBs, metals, TPH as gasoline and TPH as extractables. All RPDs were within QC limits with the exception of several metals. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH110) was collected and analyzed for SVOCs, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH032) was collected and analyzed for SVOCs, PCBs, metals, TPH as gasoline, TPH as extractables and dioxins. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	3546	8270D SIM	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	METHOD	1613B	III
17-Sep-2013	SL-504-SA5D-SB-0.0-0.5	7201707	N	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	3546	8270D SIM	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	5035A	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0	7201708	N	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	3546	8270D SIM	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	5035A	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MS	7201709	MS	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	3546	8270D 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
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	5035A	8015M	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0MSD	7201710	MSD	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0DUP	7201711	DUP	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0DUP	7201711	DUP	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-4.0-5.0DUP	7201711	DUP	METHOD	7471B	III
17-Sep-2013	TB-091713	7201704	TB	5030B	8015M	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	3050B	6010C	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	3050B	6020A	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	3546	8015M	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	3546	8082A	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	3546	8270D SIM	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	5035A	8015M	III
17-Sep-2013	SL-804-SA5D-SB-4.0-5.0	7201712	FD	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	3546	8270D SIM	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	5035A	8015M	III
17-Sep-2013	SL-504-SA5D-SB-9.0-10.0	7201713	N	METHOD	7471B	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	3050B	6010C	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	3050B	6020A	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	3546	8015M	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	3546	8082A	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	3546	8270D SIM	III
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	5035A	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
17-Sep-2013	SL-504-SA5D-SB-16.0-17.0	7201714	N	METHOD	7471B	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	3050B	6010C	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	3050B	6020A	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	3546	8015M	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	3546	8082A	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	3546	8270D SIM	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	METHOD	1613B	III
17-Sep-2013	SL-503-SA5D-SB-0.0-0.5	7201705	N	METHOD	7471B	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	3050B	6010C	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	3050B	6020A	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	3546	8015M	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	3546	8082A	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	3546	8270D SIM	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	5035A	8015M	III
17-Sep-2013	SL-503-SA5D-SB-4.0-5.0	7201706	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	METHOD	1613B	III
17-Sep-2013	SL-501-SA5D-SB-0.0-0.5	7201715	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	3546	8082A	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
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	METHOD	1613B	III
17-Sep-2013	SL-501-SA5D-SB-4.0-5.0	7201716	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-9.0-10.0	7201717	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-14.0-15.0	7201718	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-19.0-20.0	7201719	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	3050B	6010C	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
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-24.0-25.0	7201720	N	METHOD	7471B	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	3050B	6010C	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	3050B	6020A	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	3546	8015M	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	3546	8082A	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	3546	8270D SIM	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	5035A	8015M	III
17-Sep-2013	SL-501-SA5D-SB-28.0-29.0	7201721	N	METHOD	7471B	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 12:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	35300		7.59	MDL	83.9	PQL	mg/Kg	J	E

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 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
ALUMINUM	31000		7.56	MDL	41.9	PQL	mg/Kg	J	A
ANTIMONY	4.19	U	0.776	MDL	4.19	PQL	mg/Kg	UJ	Q
BARIUM	142		0.0346	MDL	1.05	PQL	mg/Kg	J	A
BERYLLIUM	1.03	J	0.0703	MDL	1.05	PQL	mg/Kg	J	Z
CALCIUM	6660		3.50	MDL	21.0	PQL	mg/Kg	J	E, E
CHROMIUM	40.9		0.168	MDL	3.15	PQL	mg/Kg	J	A
COBALT	10.3		0.104	MDL	1.05	PQL	mg/Kg	J	A
MAGNESIUM	7210		1.75	MDL	10.5	PQL	mg/Kg	J	A
MANGANESE	507		0.0870	MDL	1.05	PQL	mg/Kg	J	A
MOLYBDENUM	0.208	J	0.178	MDL	2.10	PQL	mg/Kg	U	F, F
NICKEL	22.7		0.136	MDL	2.10	PQL	mg/Kg	J	A
POTASSIUM	5360		8.75	MDL	105	PQL	mg/Kg	J	Q
SODIUM	97.6	J	17.5	MDL	105	PQL	mg/Kg	J	Z
TIN	3.11	J	0.231	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	4.36	J	0.881	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-14.0-15.0** ***Collected:*** **9/17/2013 12:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	20300		7.68	MDL	42.6	PQL	mg/Kg	J	A
ANTIMONY	4.26	U	0.788	MDL	4.26	PQL	mg/Kg	UJ	Q
BARIUM	78.6		0.0351	MDL	1.06	PQL	mg/Kg	J	A
BERYLLIUM	0.703	J	0.0713	MDL	1.06	PQL	mg/Kg	J	Z
BORON	6.38	J	0.894	MDL	10.6	PQL	mg/Kg	J	Z
CALCIUM	15700		3.56	MDL	21.3	PQL	mg/Kg	J	E, E
CHROMIUM	25.5		0.170	MDL	3.19	PQL	mg/Kg	J	A
COBALT	4.93		0.105	MDL	1.06	PQL	mg/Kg	J	A
IRON	25500		3.85	MDL	42.6	PQL	mg/Kg	J	E
MAGNESIUM	5280		1.78	MDL	10.6	PQL	mg/Kg	J	A
MANGANESE	262		0.0884	MDL	1.06	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-14.0-15.0** ***Collected:*** **9/17/2013 12:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	14.1		0.138	MDL	2.13	PQL	mg/Kg	J	A
POTASSIUM	3460		8.88	MDL	106	PQL	mg/Kg	J	Q
TIN	3.05	J	0.234	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	2.81	J	0.894	MDL	5.32	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-19.0-20.0** ***Collected:*** **9/17/2013 12:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14100		7.92	MDL	44.0	PQL	mg/Kg	J	A
ANTIMONY	4.40	U	0.813	MDL	4.40	PQL	mg/Kg	UJ	Q
BARIUM	73.3		0.0363	MDL	1.10	PQL	mg/Kg	J	A
BERYLLIUM	0.512	J	0.0736	MDL	1.10	PQL	mg/Kg	J	Z
BORON	4.84	J	0.923	MDL	11.0	PQL	mg/Kg	J	Z
CALCIUM	5850		3.67	MDL	22.0	PQL	mg/Kg	J	E, E
CHROMIUM	18.3		0.176	MDL	3.30	PQL	mg/Kg	J	A
COBALT	5.98		0.109	MDL	1.10	PQL	mg/Kg	J	A
IRON	20400		3.98	MDL	44.0	PQL	mg/Kg	J	E
MAGNESIUM	4130		1.84	MDL	11.0	PQL	mg/Kg	J	A
MANGANESE	390		0.0912	MDL	1.10	PQL	mg/Kg	J	A
NICKEL	12.8		0.143	MDL	2.20	PQL	mg/Kg	J	A
POTASSIUM	2720		9.16	MDL	110	PQL	mg/Kg	J	Q
TIN	2.94	J	0.242	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.52	J	0.923	MDL	5.49	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-24.0-25.0** ***Collected:*** **9/17/2013 1:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12800		7.72	MDL	42.8	PQL	mg/Kg	J	A
ANTIMONY	4.28	U	0.792	MDL	4.28	PQL	mg/Kg	UJ	Q
BARIUM	64.6		0.0353	MDL	1.07	PQL	mg/Kg	J	A
BERYLLIUM	0.472	J	0.0717	MDL	1.07	PQL	mg/Kg	J	Z
BORON	4.04	J	0.899	MDL	10.7	PQL	mg/Kg	J	Z
CALCIUM	4210		3.58	MDL	21.4	PQL	mg/Kg	J	E, E
CHROMIUM	18.4		0.171	MDL	3.21	PQL	mg/Kg	J	A
COBALT	5.02		0.106	MDL	1.07	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-24.0-25.0** ***Collected:*** **9/17/2013 1:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	19400		3.87	MDL	42.8	PQL	mg/Kg	J	E
MAGNESIUM	4010		1.79	MDL	10.7	PQL	mg/Kg	J	A
MANGANESE	329		0.0888	MDL	1.07	PQL	mg/Kg	J	A
NICKEL	12.2		0.139	MDL	2.14	PQL	mg/Kg	J	A
POTASSIUM	2540		8.93	MDL	107	PQL	mg/Kg	J	Q
TIN	2.86	J	0.235	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	1.46	J	0.899	MDL	5.35	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-28.0-29.0** ***Collected:*** **9/17/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13600		7.62	MDL	42.3	PQL	mg/Kg	J	A
ANTIMONY	4.23	U	0.782	MDL	4.23	PQL	mg/Kg	UJ	Q
BARIUM	65.9		0.0349	MDL	1.06	PQL	mg/Kg	J	A
BERYLLIUM	0.546	J	0.0708	MDL	1.06	PQL	mg/Kg	J	Z
BORON	4.09	J	0.887	MDL	10.6	PQL	mg/Kg	J	Z
CALCIUM	5940		3.53	MDL	21.1	PQL	mg/Kg	J	E, E
CHROMIUM	19.0		0.169	MDL	3.17	PQL	mg/Kg	J	A
COBALT	3.86		0.105	MDL	1.06	PQL	mg/Kg	J	A
IRON	20800		3.82	MDL	42.3	PQL	mg/Kg	J	E
MAGNESIUM	4320		1.76	MDL	10.6	PQL	mg/Kg	J	A
MANGANESE	201		0.0877	MDL	1.06	PQL	mg/Kg	J	A
NICKEL	10.1		0.137	MDL	2.11	PQL	mg/Kg	J	A
POTASSIUM	2630		8.81	MDL	106	PQL	mg/Kg	J	Q
TIN	2.84	J	0.232	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	1.38	J	0.887	MDL	5.28	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 12:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	38100		8.26	MDL	91.3	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 12:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	31600		8.22	MDL	45.6	PQL	mg/Kg	J	A
ANTIMONY	4.56	U	0.844	MDL	4.56	PQL	mg/Kg	UJ	Q
BARIUM	138		0.0376	MDL	1.14	PQL	mg/Kg	J	A
BERYLLIUM	1.03	J	0.0764	MDL	1.14	PQL	mg/Kg	J	Z
CALCIUM	10600		3.81	MDL	22.8	PQL	mg/Kg	J	E, E
CHROMIUM	40.8		0.183	MDL	3.42	PQL	mg/Kg	J	A
COBALT	11.9		0.113	MDL	1.14	PQL	mg/Kg	J	A
MAGNESIUM	8340		1.90	MDL	11.4	PQL	mg/Kg	J	A
MANGANESE	532		0.0947	MDL	1.14	PQL	mg/Kg	J	A
NICKEL	25.0		0.148	MDL	2.28	PQL	mg/Kg	J	A
POTASSIUM	3970		9.51	MDL	114	PQL	mg/Kg	J	Q
TIN	3.46	J	0.251	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.70	J	0.958	MDL	5.70	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-9.0-10.0** ***Collected:*** **9/17/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	23600		7.90	MDL	43.8	PQL	mg/Kg	J	A
ANTIMONY	4.38	U	0.810	MDL	4.38	PQL	mg/Kg	UJ	Q
BARIUM	88.0		0.0361	MDL	1.10	PQL	mg/Kg	J	A
BERYLLIUM	0.862	J	0.0734	MDL	1.10	PQL	mg/Kg	J	Z
BORON	7.28	J	0.920	MDL	11.0	PQL	mg/Kg	J	Z
CALCIUM	16000		3.66	MDL	21.9	PQL	mg/Kg	J	E, E
CHROMIUM	28.2		0.175	MDL	3.29	PQL	mg/Kg	J	A
COBALT	8.82		0.108	MDL	1.10	PQL	mg/Kg	J	A
IRON	27800		3.96	MDL	43.8	PQL	mg/Kg	J	E
MAGNESIUM	5510		1.83	MDL	11.0	PQL	mg/Kg	J	A
MANGANESE	394		0.0909	MDL	1.10	PQL	mg/Kg	J	A
NICKEL	16.7		0.142	MDL	2.19	PQL	mg/Kg	J	A
POTASSIUM	3470		9.13	MDL	110	PQL	mg/Kg	J	Q
TIN	3.07	J	0.241	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	2.82	J	0.920	MDL	5.48	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	36300		7.78	MDL	86.0	PQL	mg/Kg	J	E

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	32700		7.75	MDL	43.0	PQL	mg/Kg	J	A
ANTIMONY	4.30	U	0.795	MDL	4.30	PQL	mg/Kg	UJ	Q
BARIUM	144		0.0355	MDL	1.07	PQL	mg/Kg	J	A
BERYLLIUM	1.04	J	0.0720	MDL	1.07	PQL	mg/Kg	J	Z
CALCIUM	6590		3.59	MDL	21.5	PQL	mg/Kg	J	E, E
CHROMIUM	40.8		0.172	MDL	3.22	PQL	mg/Kg	J	A
COBALT	10.7		0.106	MDL	1.07	PQL	mg/Kg	J	A
MAGNESIUM	7290		1.80	MDL	10.7	PQL	mg/Kg	J	A
MANGANESE	505		0.0892	MDL	1.07	PQL	mg/Kg	J	A
NICKEL	22.0		0.140	MDL	2.15	PQL	mg/Kg	J	A
POTASSIUM	4320		8.97	MDL	107	PQL	mg/Kg	J	Q
TIN	3.41	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	4.71	J	0.903	MDL	5.37	PQL	mg/Kg	J	Z

Sample ID: **SL-503-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 9:55:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	31000		8.37	MDL	92.5	PQL	mg/Kg	J	E

Sample ID: **SL-503-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	27700		8.34	MDL	46.2	PQL	mg/Kg	J	A
ANTIMONY	4.62	U	0.855	MDL	4.62	PQL	mg/Kg	UJ	Q
BARIUM	146		0.0382	MDL	1.16	PQL	mg/Kg	J	A
BERYLLIUM	0.942	J	0.0775	MDL	1.16	PQL	mg/Kg	J	Z
BORON	10.2	J	0.971	MDL	11.6	PQL	mg/Kg	J	Z
CADMIUM	0.210	J	0.0879	MDL	1.16	PQL	mg/Kg	J	Z
CALCIUM	5790		3.86	MDL	23.1	PQL	mg/Kg	J	E, E
CHROMIUM	33.1		0.185	MDL	3.47	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-503-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	10.2		0.114	MDL	1.16	PQL	mg/Kg	J	A
MAGNESIUM	6180		1.93	MDL	11.6	PQL	mg/Kg	J	A
MANGANESE	1000		0.0960	MDL	1.16	PQL	mg/Kg	J	A
NICKEL	27.1		0.150	MDL	2.31	PQL	mg/Kg	J	A
POTASSIUM	3610		9.64	MDL	116	PQL	mg/Kg	J	Q
TIN	2.89	J	0.254	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.63	J	0.971	MDL	5.78	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	41600		7.88	MDL	87.0	PQL	mg/Kg	J	E

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	30400		7.85	MDL	43.5	PQL	mg/Kg	J	A
ANTIMONY	4.35	U	0.805	MDL	4.35	PQL	mg/Kg	UJ	Q
BARIUM	133		0.0359	MDL	1.09	PQL	mg/Kg	J	A
BERYLLIUM	1.03	J	0.0729	MDL	1.09	PQL	mg/Kg	J	Z
CALCIUM	12500		3.63	MDL	21.8	PQL	mg/Kg	J	E, E
CHROMIUM	38.5		0.174	MDL	3.26	PQL	mg/Kg	J	A
COBALT	10.1		0.108	MDL	1.09	PQL	mg/Kg	J	A
MAGNESIUM	7110		1.82	MDL	10.9	PQL	mg/Kg	J	A
MANGANESE	505		0.0903	MDL	1.09	PQL	mg/Kg	J	A
MOLYBDENUM	0.239	J	0.185	MDL	2.18	PQL	mg/Kg	U	F, F
NICKEL	22.2		0.141	MDL	2.18	PQL	mg/Kg	J	A
POTASSIUM	4860		9.07	MDL	109	PQL	mg/Kg	J	Q
TIN	3.03	J	0.239	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.86	J	0.914	MDL	5.44	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-16.0-17.0** ***Collected:*** **9/17/2013 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
ALUMINUM	15200		7.53	MDL	41.8	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-504-SA5D-SB-16.0-17.0** ***Collected:*** **9/17/2013 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
ANTIMONY	4.18	U	0.773	MDL	4.18	PQL	mg/Kg	UJ	Q
BARIUM	68.0		0.0345	MDL	1.04	PQL	mg/Kg	J	A
BERYLLIUM	0.559	J	0.0699	MDL	1.04	PQL	mg/Kg	J	Z
BORON	4.74	J	0.877	MDL	10.4	PQL	mg/Kg	J	Z
CALCIUM	6510		3.49	MDL	20.9	PQL	mg/Kg	J	E, E
CHROMIUM	21.3		0.167	MDL	3.13	PQL	mg/Kg	J	A
COBALT	5.56		0.103	MDL	1.04	PQL	mg/Kg	J	A
IRON	22300		3.78	MDL	41.8	PQL	mg/Kg	J	E
MAGNESIUM	4460		1.74	MDL	10.4	PQL	mg/Kg	J	A
MANGANESE	303		0.0867	MDL	1.04	PQL	mg/Kg	J	A
NICKEL	13.9		0.136	MDL	2.09	PQL	mg/Kg	J	A
POTASSIUM	2630		8.71	MDL	104	PQL	mg/Kg	J	Q
TIN	2.97	J	0.230	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.27	J	0.877	MDL	5.22	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	32700		8.05	MDL	89.0	PQL	mg/Kg	J	E

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	32000		8.02	MDL	44.5	PQL	mg/Kg	J	A
ANTIMONY	4.45	U	0.823	MDL	4.45	PQL	mg/Kg	UJ	Q
BARIUM	111		0.0367	MDL	1.11	PQL	mg/Kg	J	A
BERYLLIUM	1.04	J	0.0745	MDL	1.11	PQL	mg/Kg	J	Z
BORON	8.90	J	0.934	MDL	11.1	PQL	mg/Kg	J	Z
CALCIUM	36200		3.71	MDL	22.2	PQL	mg/Kg	J	E, E, FD
CHROMIUM	35.6		0.178	MDL	3.34	PQL	mg/Kg	J	A
COBALT	8.09		0.110	MDL	1.11	PQL	mg/Kg	J	A
MAGNESIUM	6260		1.86	MDL	11.1	PQL	mg/Kg	J	A
MANGANESE	291		0.0923	MDL	1.11	PQL	mg/Kg	J	A
MOLYBDENUM	0.344	J	0.189	MDL	2.22	PQL	mg/Kg	UJ	FD, F, F
NICKEL	20.8		0.145	MDL	2.22	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2780		9.28	MDL	111	PQL	mg/Kg	J	Q
TIN	3.39	J	0.245	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.53	J	0.934	MDL	5.56	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-9.0-10.0** ***Collected:*** **9/17/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	23800		7.81	MDL	43.3	PQL	mg/Kg	J	A
ANTIMONY	4.33	U	0.802	MDL	4.33	PQL	mg/Kg	UJ	Q
BARIUM	97.5		0.0357	MDL	1.08	PQL	mg/Kg	J	A
BERYLLIUM	0.817	J	0.0726	MDL	1.08	PQL	mg/Kg	J	Z
BORON	6.57	J	0.910	MDL	10.8	PQL	mg/Kg	J	Z
CALCIUM	12200		3.62	MDL	21.7	PQL	mg/Kg	J	E, E
CHROMIUM	30.1		0.173	MDL	3.25	PQL	mg/Kg	J	A
COBALT	7.83		0.107	MDL	1.08	PQL	mg/Kg	J	A
IRON	28500		3.92	MDL	43.3	PQL	mg/Kg	J	E
MAGNESIUM	5730		1.81	MDL	10.8	PQL	mg/Kg	J	A
MANGANESE	382		0.0899	MDL	1.08	PQL	mg/Kg	J	A
NICKEL	17.9		0.141	MDL	2.17	PQL	mg/Kg	J	A
POTASSIUM	3130		9.03	MDL	108	PQL	mg/Kg	J	Q
TIN	3.26	J	0.238	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.19	J	0.910	MDL	5.42	PQL	mg/Kg	J	Z

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 8:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	65200		7.44	MDL	44.6	PQL	mg/Kg	J	E, E, FD

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 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
ALUMINUM	28600		8.03	MDL	44.6	PQL	mg/Kg	J	A
ANTIMONY	4.46	U	0.824	MDL	4.46	PQL	mg/Kg	UJ	Q
BARIUM	127		0.0368	MDL	1.11	PQL	mg/Kg	J	A
BERYLLIUM	0.862	J	0.0746	MDL	1.11	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 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
BORON	10.5	J	0.936	MDL	11.1	PQL	mg/Kg	J	Z
CHROMIUM	33.4		0.178	MDL	3.34	PQL	mg/Kg	J	A
COBALT	8.27		0.110	MDL	1.11	PQL	mg/Kg	J	A
IRON	29400		4.03	MDL	44.6	PQL	mg/Kg	J	E
MAGNESIUM	6460		1.86	MDL	11.1	PQL	mg/Kg	J	A
MANGANESE	368		0.0925	MDL	1.11	PQL	mg/Kg	J	A
MOLYBDENUM	2.23	U	0.189	MDL	2.23	PQL	mg/Kg	UJ	FD
NICKEL	16.8		0.145	MDL	2.23	PQL	mg/Kg	J	A
POTASSIUM	3190		9.29	MDL	111	PQL	mg/Kg	J	Q
TIN	2.78	J	0.245	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.33	J	0.936	MDL	5.57	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 12:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.292	J	0.105	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 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
SILVER	0.0600	J	0.0273	MDL	0.210	PQL	mg/Kg	J	Z, Q
THALLIUM	0.476		0.0315	MDL	0.210	PQL	mg/Kg	J	Q

Sample ID: **SL-501-SA5D-SB-14.0-15.0** ***Collected:*** **9/17/2013 12:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0442	J	0.0277	MDL	0.213	PQL	mg/Kg	J	Z, Q
THALLIUM	0.359		0.0319	MDL	0.213	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-19.0-20.0** ***Collected:*** **9/17/2013 12:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0321	J	0.0286	MDL	0.220	PQL	mg/Kg	J	Z, Q
THALLIUM	0.300		0.0330	MDL	0.220	PQL	mg/Kg	J	Q

Sample ID: **SL-501-SA5D-SB-24.0-25.0** ***Collected:*** **9/17/2013 1:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.290		0.0321	MDL	0.214	PQL	mg/Kg	J	Q

Sample ID: **SL-501-SA5D-SB-28.0-29.0** ***Collected:*** **9/17/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0661	J	0.0275	MDL	0.211	PQL	mg/Kg	J	Z, Q
THALLIUM	0.344		0.0317	MDL	0.211	PQL	mg/Kg	J	Q

Sample ID: **SL-501-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 12:25:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.154	J	0.114	MDL	0.456	PQL	mg/Kg	J	Z

Sample ID: **SL-501-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 12:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0541	J	0.0297	MDL	0.228	PQL	mg/Kg	J	Z, Q
THALLIUM	0.487		0.0342	MDL	0.228	PQL	mg/Kg	J	Q

Sample ID: **SL-501-SA5D-SB-9.0-10.0** ***Collected:*** **9/17/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0397	J	0.0285	MDL	0.219	PQL	mg/Kg	J	Z, Q
THALLIUM	0.422		0.0329	MDL	0.219	PQL	mg/Kg	J	Q

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.283	J	0.107	MDL	0.430	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0623	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z, Q
THALLIUM	0.477		0.0322	MDL	0.215	PQL	mg/Kg	J	Q

Sample ID: **SL-503-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0687	J	0.0301	MDL	0.231	PQL	mg/Kg	J	Z, Q
THALLIUM	0.425		0.0347	MDL	0.231	PQL	mg/Kg	J	Q

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.304	J	0.109	MDL	0.435	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0479	J	0.0283	MDL	0.218	PQL	mg/Kg	J	Z, Q
THALLIUM	0.397		0.0326	MDL	0.218	PQL	mg/Kg	J	Q

Sample ID: **SL-504-SA5D-SB-16.0-17.0** ***Collected:*** **9/17/2013 8:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0276	J	0.0271	MDL	0.209	PQL	mg/Kg	J	Z, Q
THALLIUM	0.301		0.0313	MDL	0.209	PQL	mg/Kg	J	Q

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.445	U	0.111	MDL	0.445	PQL	mg/Kg	UJ	FD

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0832	J	0.0289	MDL	0.222	PQL	mg/Kg	J	Z, Q
THALLIUM	0.333		0.0334	MDL	0.222	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-504-SA5D-SB-9.0-10.0** ***Collected:*** **9/17/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0433	J	0.0282	MDL	0.217	PQL	mg/Kg	J	Z, Q
THALLIUM	0.464		0.0325	MDL	0.217	PQL	mg/Kg	J	Q

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 8:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.127	J	0.111	MDL	0.446	PQL	mg/Kg	J	Z, FD

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 8:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0665	J	0.0290	MDL	0.223	PQL	mg/Kg	J	Z, Q
THALLIUM	0.467		0.0334	MDL	0.223	PQL	mg/Kg	J	Q

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-14.0-15.0** ***Collected:*** **9/17/2013 12:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0168	J	0.0109	MDL	0.0182	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0133	J	0.0113	MDL	0.0189	PQL	mg/Kg	J	Z, FD

Sample ID: **SL-804-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 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
MERCURY	0.0180	U	0.0108	MDL	0.0180	PQL	mg/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 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
1,2,3,4,6,7,8-HPCDD	0.858	JB	0.0338	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.171	JB	0.0120	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.102	JBQ	0.0231	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0670	JBQ	0.0310	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0857	JBQ	0.0278	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.418	JBQ	0.0334	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0791	JBQ	0.0233	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.687	JB	0.0306	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.887	JB	0.0286	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.114	JBQ	0.0363	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.353	JBQ	0.0226	MDL	5.44	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0871	JBQ	0.0270	MDL	5.44	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0823	JBQ	0.0241	MDL	5.44	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0649	J	0.0532	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	7.60	JB	0.0219	MDL	10.9	PQL	ng/Kg	J	Z
OCDF	0.504	JBQ	0.0462	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: **SL-501-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 12:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.530	JB	0.0380	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.170	JB	0.0115	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0788	JBQ	0.0205	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0730	JB	0.0260	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.134	JB	0.0256	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0550	JBQ	0.0226	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.169	JBQ	0.0245	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.232	JBQ	0.0263	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0580	JBQ	0.0318	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.111	JBQ	0.0219	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0726	JBQ	0.0249	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0684	JBQ	0.0218	MDL	5.61	PQL	ng/Kg	U	B
OCDD	5.87	JB	0.0241	MDL	11.2	PQL	ng/Kg	J	Z
OCDF	0.375	JB	0.0450	MDL	11.2	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.691	JB	0.0411	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.148	JB	0.0126	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.120	JBQ	0.0208	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0734	JBQ	0.0367	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.154	JB	0.0318	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.353	JB	0.0391	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.102	JB	0.0288	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.503	JB	0.0364	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.674	JBQ	0.0338	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.137	JBQ	0.0481	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.360	JB	0.0285	MDL	5.44	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0802	JBQ	0.0296	MDL	5.44	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.102	JB	0.0270	MDL	5.44	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0679	JBQ	0.0672	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0763	JQ	0.0602	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	5.01	JB	0.0299	MDL	10.9	PQL	ng/Kg	J	Z
OCDF	0.369	JB	0.0481	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.463	JB	0.0370	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.154	JBQ	0.0140	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.150	JBQ	0.0259	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.217	JBQ	0.0364	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.223	JBQ	0.0295	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.113	JB	0.0310	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.397	JB	0.0283	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.569	JBQ	0.0342	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.65	JB	0.0440	MDL	5.46	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0962	JB	0.0341	MDL	5.46	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.125	JBQ	0.0463	MDL	5.46	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.162	J	0.0919	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	4.64	JB	0.0215	MDL	10.9	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDF	0.344	JBQ	0.0501	MDL	10.9	PQL	ng/Kg	U	B

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 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 (C21-C30)	3.9	J	2.2	MDL	5.4	PQL	mg/Kg	J	Z
EFH (C30-C40)	6.5	J	4.3	MDL	11	PQL	mg/Kg	J	Z

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***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)	3.5	J	2.2	MDL	5.5	PQL	mg/Kg	J	Z
EFH (C30-C40)	6.7	J	4.4	MDL	11	PQL	mg/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	4.8	J	2.2	MDL	5.5	PQL	mg/Kg	J	Z
EFH (C30-C40)	5.8	J	4.4	MDL	11	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-501-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 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
CHRYSENE	0.97	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-503-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 9:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.62	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-503-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 9:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.78	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-0.0-0.5** ***Collected:*** **9/17/2013 7:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.76	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	0.91	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.76	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.81	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.92	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-504-SA5D-SB-4.0-5.0** ***Collected:*** **9/17/2013 7:50:00** ***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(E)PYRENE	19	U	3.8	MDL	19	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH109

Method Blank Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2680B370155	9/27/2013 1:55:00 AM	1,2,3,4,6,7,8-HPCDD	0.127 ng/Kg	SL-501-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0505 ng/Kg	SL-501-SA5D-SB-4.0-5.0
		1,2,3,4,7,8,9-HPCDF	0.0860 ng/Kg	SL-503-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0483 ng/Kg	SL-504-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0573 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0406 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0517 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0644 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0692 ng/Kg	
		1,2,3,7,8-PECDD	0.103 ng/Kg	
		1,2,3,7,8-PECDF	0.0673 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0444 ng/Kg	
		2,3,4,7,8-PECDF	0.0538 ng/Kg	
		2,3,7,8-TCDD	0.104 ng/Kg	
		OCDD	0.212 ng/Kg	
		OCDF	0.223 ng/Kg	

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-501-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.171 ng/Kg	0.171U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.102 ng/Kg	0.102U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0670 ng/Kg	0.0670U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0857 ng/Kg	0.0857U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0791 ng/Kg	0.0791U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.114 ng/Kg	0.114U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0871 ng/Kg	0.0871U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0823 ng/Kg	0.0823U ng/Kg
SL-501-SA5D-SB-0.0-0.5(RES)	OCDF	0.504 ng/Kg	0.504U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.530 ng/Kg	0.530U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.170 ng/Kg	0.170U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0788 ng/Kg	0.0788U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0730 ng/Kg	0.0730U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.134 ng/Kg	0.134U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0550 ng/Kg	0.0550U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.169 ng/Kg	0.169U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.232 ng/Kg	0.232U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0580 ng/Kg	0.0580U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.111 ng/Kg	0.111U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0726 ng/Kg	0.0726U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0684 ng/Kg	0.0684U ng/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	OCDF	0.375 ng/Kg	0.375U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.148 ng/Kg	0.148U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.120 ng/Kg	0.120U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0734 ng/Kg	0.0734U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.154 ng/Kg	0.154U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.102 ng/Kg	0.102U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.137 ng/Kg	0.137U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0802 ng/Kg	0.0802U ng/Kg

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-503-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.102 ng/Kg	0.102U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0679 ng/Kg	0.0679U ng/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	OCDF	0.369 ng/Kg	0.369U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.463 ng/Kg	0.463U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.154 ng/Kg	0.154U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.150 ng/Kg	0.150U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.217 ng/Kg	0.217U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.113 ng/Kg	0.113U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0962 ng/Kg	0.0962U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.125 ng/Kg	0.125U ng/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	OCDF	0.344 ng/Kg	0.344U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26137BB220814	9/22/2013 8:14:00 AM	TIN	1.64 mg/Kg	SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0

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-501-SA5D-SB-0.0-0.5(RES)	TIN	3.11 mg/Kg	3.11U mg/Kg
SL-501-SA5D-SB-14.0-15.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-501-SA5D-SB-19.0-20.0(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-501-SA5D-SB-24.0-25.0(RES)	TIN	2.86 mg/Kg	2.86U mg/Kg
SL-501-SA5D-SB-28.0-29.0(RES)	TIN	2.84 mg/Kg	2.84U mg/Kg
SL-501-SA5D-SB-4.0-5.0(RES)	TIN	3.46 mg/Kg	3.46U mg/Kg
SL-501-SA5D-SB-9.0-10.0(RES)	TIN	3.07 mg/Kg	3.07U mg/Kg
SL-503-SA5D-SB-0.0-0.5(RES)	TIN	3.41 mg/Kg	3.41U mg/Kg
SL-503-SA5D-SB-4.0-5.0(RES)	TIN	2.89 mg/Kg	2.89U mg/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	TIN	3.03 mg/Kg	3.03U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-504-SA5D-SB-16.0-17.0(RES)	TIN	2.97 mg/Kg	2.97U mg/Kg
SL-504-SA5D-SB-4.0-5.0(RES)	TIN	3.39 mg/Kg	3.39U mg/Kg
SL-504-SA5D-SB-9.0-10.0(RES)	TIN	3.26 mg/Kg	3.26U mg/Kg
SL-804-SA5D-SB-4.0-5.0(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-091813(REA2)	9/18/2013 3:00:00 PM	CALCIUM MOLYBDENUM	0.0464 mg/L 0.0083 mg/L	SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0

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-501-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.208 mg/Kg	0.208U mg/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.239 mg/Kg	0.239U mg/Kg
SL-504-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.344 mg/Kg	0.344U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041613(REA2/TOT)	4/16/2013 3:15:00 PM	MOLYBDENUM TIN	0.0132 mg/L 0.0029 mg/L	SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0

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-501-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.208 mg/Kg	0.208U mg/Kg
SL-504-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.239 mg/Kg	0.239U mg/Kg
SL-504-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.344 mg/Kg	0.344U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

***Method:* 6010C**
***Matrix:* SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-504-SA5D-SB-4.0-5.0MS (TOT) **SL-504-SA5D-SB-4.0-5.0MSD (TOT)** (SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0)	ALUMINUM MANGANESE POTASSIUM TITANIUM	- 181 - 146	3009 235 147 335	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM MANGANESE POTASSIUM TITANIUM	J (all detects) Al, Mn, Ti, No Qual, >4x
SL-504-SA5D-SB-4.0-5.0MS (TOT) **SL-504-SA5D-SB-4.0-5.0MSD (TOT)** (SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0)	CALCIUM IRON MAGNESIUM	12397 -5015 -142	-1955 1530 382	75.00-125.00 75.00-125.00 75.00-125.00	107 (20.00) 24 (20.00) -	CALCIUM IRON MAGNESIUM	J(all detects) UJ(all non-detects) Ca, Fe, No Qual %R >4x Mg, No Qual, >4x
SL-504-SA5D-SB-4.0-5.0MS (TOT) **SL-504-SA5D-SB-4.0-5.0MSD (TOT)** (SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0)	ANTIMONY	72	72	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-504-SA5D-SB-4.0-5.0MS (TOT)	SILVER	127	-	75.00-125.00	-	SILVER	
	STRONTIUM	300	280	75.00-125.00	-	STRONTIUM	
SL-504-SA5D-SB-4.0-5.0MSD (TOT)	THALLIUM	159	143	75.00-125.00	-	THALLIUM	
(SL-501-SA5D-SB-0.0-0.5 SL-501-SA5D-SB-14.0-15.0 SL-501-SA5D-SB-19.0-20.0 SL-501-SA5D-SB-24.0-25.0 SL-501-SA5D-SB-28.0-29.0 SL-501-SA5D-SB-4.0-5.0 SL-501-SA5D-SB-9.0-10.0 SL-503-SA5D-SB-0.0-0.5 SL-503-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-0.0-0.5 SL-504-SA5D-SB-16.0-17.0 SL-504-SA5D-SB-4.0-5.0 SL-504-SA5D-SB-9.0-10.0 SL-804-SA5D-SB-4.0-5.0)							J(all detects) Sr, No Qual, >4x

Method: 8270D SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-504-SA5D-SB-4.0-5.0MS (SL-504-SA5D-SB-4.0-5.0)	BENZO(E)PYRENE	69	-	70.00-130.00	-	BENZO(E)PYRENE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-504-SA5D-SB-4.0-5.0DUP (TOT)	ARSENIC	21	20.00	
(SL-501-SA5D-SB-0.0-0.5	CADMIUM	200	20.00	
SL -501-SA5D-SB-14.0-15.0	CALCIUM	41	20.00	
SL -501-SA5D-SB-19.0-20.0	MOLYBDENUM	200	20.00	
SL -501-SA5D-SB-24.0-25.0	Zirconium	36	20.00	J (all detects)
SL -501-SA5D-SB-28.0-29.0				UJ (all non-detects)
SL -501-SA5D-SB-4.0-5.0				
SL -501-SA5D-SB-9.0-10.0				As, Cd, Mo, Zr,
SL -503-SA5D-SB-0.0-0.5				No Qual,
SL -503-SA5D-SB-4.0-5.0				OK by Difference
SL -504-SA5D-SB-0.0-0.5				
SL -504-SA5D-SB-16.0-17.0				
SL -504-SA5D-SB-4.0-5.0				
SL -504-SA5D-SB-9.0-10.0				
SL -804-SA5D-SB-4.0-5.0)				

Field Duplicate RPD Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PrepPH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-504-SA5D-SB-4.0-5.0	SL-804-SA5D-SB-4.0-5.0			
MOISTURE	12.7	12.0	6		No Qualifiers Applied

Method: 6010C
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-504-SA5D-SB-4.0-5.0 (TOT)	SL-804-SA5D-SB-4.0-5.0 (TOT)			
ALUMINUM	32000	28600	11	50.00	No Qualifiers Applied
ARSENIC	7.48	7.15	5	50.00	
BARIUM	111	127	13	50.00	
BERYLLIUM	1.04	0.862	19	50.00	
BORON	8.90	10.5	16	50.00	
CHROMIUM	35.6	33.4	6	50.00	
COBALT	8.09	8.27	2	50.00	
COPPER	16.0	16.5	3	50.00	
IRON	32700	29400	11	50.00	
LEAD	9.51	9.49	0	50.00	
LITHIUM	26.7	25.9	3	50.00	
MAGNESIUM	6260	6460	3	50.00	
MANGANESE	291	368	23	50.00	
NICKEL	20.8	16.8	21	50.00	
PHOSPHORUS	176	271	43	50.00	
POTASSIUM	2780	3190	14	50.00	
SODIUM	700	610	14	50.00	
TIN	3.39	2.78	20	50.00	
TITANIUM	1260	1360	8	50.00	
VANADIUM	65.0	63.6	2	50.00	
ZINC	59.2	60.8	3	50.00	
Zirconium	3.53	3.33	6	50.00	
CALCIUM	36200	65200	57	50.00	J(all detects)
MOLYBDENUM	0.344	2.23 U	200	50.00	UJ(all non-detects)

Method: 6020A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-504-SA5D-SB-4.0-5.0 (TOT)	SL-804-SA5D-SB-4.0-5.0 (TOT)			
SILVER	0.0832	0.0665	22	50.00	No Qualifiers Applied
STRONTIUM	55.8	83.7	40	50.00	
THALLIUM	0.333	0.467	34	50.00	
SELENIUM	0.445 U	0.127	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-504-SA5D-SB-4.0-5.0 (TOT)	SL-804-SA5D-SB-4.0-5.0 (TOT)			
MERCURY	0.0133	0.0180 U	200	50.00	J(all detects) UJ(all non-detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PrepPH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-504-SA5D-SB-4.0-5.0	SL-804-SA5D-SB-4.0-5.0			
PH	8.17	8.38	3	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.858	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.171	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.102	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0670	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0857	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.418	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0791	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.687	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.887	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.114	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.353	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0871	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0823	5.44	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0649	1.09	PQL	ng/Kg	
	OCDD	JB	7.60	10.9	PQL	ng/Kg	
	OCDF	JBQ	0.504	10.9	PQL	ng/Kg	
SL-501-SA5D-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.530	5.61	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.170	5.61	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0788	5.61	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0730	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.134	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0550	5.61	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.169	5.61	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.232	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0580	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.111	5.61	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0726	5.61	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0684	5.61	PQL	ng/Kg	
	OCDD	JB	5.87	11.2	PQL	ng/Kg	
	OCDF	JB	0.375	11.2	PQL	ng/Kg	
SL-503-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.691	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.148	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.120	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0734	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.154	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.353	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.102	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.503	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.674	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.137	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.360	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0802	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.102	5.44	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0679	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0763	1.09	PQL	ng/Kg	
	OCDD	JB	5.01	10.9	PQL	ng/Kg	
	OCDF	JB	0.369	10.9	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-504-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.463	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.154	5.46	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.150	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.217	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.223	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.113	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.397	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.569	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	2.65	5.46	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0962	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.125	5.46	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.162	1.09	PQL	ng/Kg	
	OCDD	JB	4.64	10.9	PQL	ng/Kg	
	OCDF	JBQ	0.344	10.9	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-0.0-0.5	BERYLLIUM	J	1.03	1.05	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.208	2.10	PQL	mg/Kg	
	SODIUM	J	97.6	105	PQL	mg/Kg	
	TIN	J	3.11	10.5	PQL	mg/Kg	
	Zirconium	J	4.36	5.24	PQL	mg/Kg	
SL-501-SA5D-SB-14.0-15.0	BERYLLIUM	J	0.703	1.06	PQL	mg/Kg	J (all detects)
	BORON	J	6.38	10.6	PQL	mg/Kg	
	TIN	J	3.05	10.6	PQL	mg/Kg	
	Zirconium	J	2.81	5.32	PQL	mg/Kg	
SL-501-SA5D-SB-19.0-20.0	BERYLLIUM	J	0.512	1.10	PQL	mg/Kg	J (all detects)
	BORON	J	4.84	11.0	PQL	mg/Kg	
	TIN	J	2.94	11.0	PQL	mg/Kg	
	Zirconium	J	1.52	5.49	PQL	mg/Kg	
SL-501-SA5D-SB-24.0-25.0	BERYLLIUM	J	0.472	1.07	PQL	mg/Kg	J (all detects)
	BORON	J	4.04	10.7	PQL	mg/Kg	
	TIN	J	2.86	10.7	PQL	mg/Kg	
	Zirconium	J	1.46	5.35	PQL	mg/Kg	
SL-501-SA5D-SB-28.0-29.0	BERYLLIUM	J	0.546	1.06	PQL	mg/Kg	J (all detects)
	BORON	J	4.09	10.6	PQL	mg/Kg	
	TIN	J	2.84	10.6	PQL	mg/Kg	
	Zirconium	J	1.38	5.28	PQL	mg/Kg	
SL-501-SA5D-SB-4.0-5.0	BERYLLIUM	J	1.03	1.14	PQL	mg/Kg	J (all detects)
	TIN	J	3.46	11.4	PQL	mg/Kg	
	Zirconium	J	3.70	5.70	PQL	mg/Kg	
SL-501-SA5D-SB-9.0-10.0	BERYLLIUM	J	0.862	1.10	PQL	mg/Kg	J (all detects)
	BORON	J	7.28	11.0	PQL	mg/Kg	
	TIN	J	3.07	11.0	PQL	mg/Kg	
	Zirconium	J	2.82	5.48	PQL	mg/Kg	
SL-503-SA5D-SB-0.0-0.5	BERYLLIUM	J	1.04	1.07	PQL	mg/Kg	J (all detects)
	TIN	J	3.41	10.7	PQL	mg/Kg	
	Zirconium	J	4.71	5.37	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-503-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.942	1.16	PQL	mg/Kg	J (all detects)
	BORON	J	10.2	11.6	PQL	mg/Kg	
	CADMIUM	J	0.210	1.16	PQL	mg/Kg	
	TIN	J	2.89	11.6	PQL	mg/Kg	
	Zirconium	J	3.63	5.78	PQL	mg/Kg	
SL-504-SA5D-SB-0.0-0.5	BERYLLIUM	J	1.03	1.09	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.239	2.18	PQL	mg/Kg	
	TIN	J	3.03	10.9	PQL	mg/Kg	
	Zirconium	J	3.86	5.44	PQL	mg/Kg	
SL-504-SA5D-SB-16.0-17.0	BERYLLIUM	J	0.559	1.04	PQL	mg/Kg	J (all detects)
	BORON	J	4.74	10.4	PQL	mg/Kg	
	TIN	J	2.97	10.4	PQL	mg/Kg	
	Zirconium	J	2.27	5.22	PQL	mg/Kg	
SL-504-SA5D-SB-4.0-5.0	BERYLLIUM	J	1.04	1.11	PQL	mg/Kg	J (all detects)
	BORON	J	8.90	11.1	PQL	mg/Kg	
	MOLYBDENUM	J	0.344	2.22	PQL	mg/Kg	
	TIN	J	3.39	11.1	PQL	mg/Kg	
	Zirconium	J	3.53	5.56	PQL	mg/Kg	
SL-504-SA5D-SB-9.0-10.0	BERYLLIUM	J	0.817	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	6.57	10.8	PQL	mg/Kg	
	TIN	J	3.26	10.8	PQL	mg/Kg	
	Zirconium	J	3.19	5.42	PQL	mg/Kg	
SL-804-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.862	1.11	PQL	mg/Kg	J (all detects)
	BORON	J	10.5	11.1	PQL	mg/Kg	
	TIN	J	2.78	11.1	PQL	mg/Kg	
	Zirconium	J	3.33	5.57	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-0.0-0.5	SELENIUM	J	0.292	0.419	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0600	0.210	PQL	mg/Kg	
SL-501-SA5D-SB-14.0-15.0	SILVER	J	0.0442	0.213	PQL	mg/Kg	J (all detects)
SL-501-SA5D-SB-19.0-20.0	SILVER	J	0.0321	0.220	PQL	mg/Kg	J (all detects)
SL-501-SA5D-SB-28.0-29.0	SILVER	J	0.0661	0.211	PQL	mg/Kg	J (all detects)
SL-501-SA5D-SB-4.0-5.0	SELENIUM	J	0.154	0.456	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0541	0.228	PQL	mg/Kg	
SL-501-SA5D-SB-9.0-10.0	SILVER	J	0.0397	0.219	PQL	mg/Kg	J (all detects)
SL-503-SA5D-SB-0.0-0.5	SELENIUM	J	0.283	0.430	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0623	0.215	PQL	mg/Kg	
SL-503-SA5D-SB-4.0-5.0	SILVER	J	0.0687	0.231	PQL	mg/Kg	J (all detects)
SL-504-SA5D-SB-0.0-0.5	SELENIUM	J	0.304	0.435	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0479	0.218	PQL	mg/Kg	
SL-504-SA5D-SB-16.0-17.0	SILVER	J	0.0276	0.209	PQL	mg/Kg	J (all detects)

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH109 **Laboratory: LL**

EDD Filename: PH109 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-504-SA5D-SB-4.0-5.0	SILVER	J	0.0832	0.222	PQL	mg/Kg	J (all detects)
SL-504-SA5D-SB-9.0-10.0	SILVER	J	0.0433	0.217	PQL	mg/Kg	J (all detects)
SL-804-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.127 0.0665	0.446 0.223	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-14.0-15.0	MERCURY	J	0.0168	0.0182	PQL	mg/Kg	J (all detects)
SL-504-SA5D-SB-4.0-5.0	MERCURY	J	0.0133	0.0189	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40)	J J	3.9 6.5	5.4 11	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-503-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40)	J J	3.5 6.7	5.5 11	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-504-SA5D-SB-0.0-0.5	EFH (C21-C30) EFH (C30-C40)	J J	4.8 5.8	5.5 11	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 8270D SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5D-SB-0.0-0.5	CHRYSENE NAPHTHALENE	J J	0.97 1.0	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-503-SA5D-SB-0.0-0.5	CHRYSENE NAPHTHALENE	J J	0.62 1.0	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-503-SA5D-SB-4.0-5.0	NAPHTHALENE	J	0.78	1.9	PQL	ug/Kg	J (all detects)
SL-504-SA5D-SB-0.0-0.5	BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE NAPHTHALENE PYRENE	J J J J J	0.76 0.91 0.76 0.81 0.92	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)

LDC #: 30695L4

SDG #: PH109

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/17/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(4,5)
XV	Field Blanks	SW	EB= EB1-041813 (PH110) FB= FB-041113 (PH0029) 041613 32

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:

1	SL-503-SA5D-SB-0.0-0.5	11	SL-501-SA5D-SB-14.0-15.0	21		31	
2	SL-503-SA5D-SB-4.0-5.0	12	SL-501-SA5D-SB-19.0-20.0	22		32	
3	SL-504-SA5D-SB-0.0-0.5	13	SL-501-SA5D-SB-24.0-25.0	23		33	
4	SL-504-SA5D-SB-4.0-5.0	14	SL-501-SA5D-SB-28.0-29.0	24		34	
5	SL-804-SA5D-SB-4.0-5.0	15	SL-504-SA5D-SB-4.0-5.0MS	25		35	
6	SL-504-SA5D-SB-9.0-10.0	16	SL-504-SA5D-SB-4.0-5.0MSD	26		36	
7	SL-504-SA5D-SB-16.0-17.0	17	SL-504-SA5D-SB-4.0-5.0DUP	27		37	
8	SL-501-SA5D-SB-0.0-0.5	18		28		38	
9	SL-501-SA5D-SB-4.0-5.0	19		29		39	
10	SL-501-SA5D-SB-9.0-10.0	20		30		40	

Notes:

LDC #: 30695L4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/16/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification													
	FB-041613 (SDG: PH032)	Action Limit	3	4	8										
Sn	0.0029	1.45													
Mo	0.0132	~~0.24~~ 6.6 cm	0.239	0.344	0.208										

Sampling date: 9/18/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	EB1-091813 (SDG: PH110)	Action Limit	3, 4, 8										
Ca	0.0464	23.2											
Mo	0.0083	4.15	See FB										

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".

eurofins | Lancaster Laboratories

RPD out
qual J/UJ/A

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH109
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7201708BKG Matrix Spike Lab Sample ID: 7201709MS Matrix Spike Duplicate Lab Sample ID: 7201710MSD
Batch Id(s): P26137B, P26138B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		27948.0777		28109.9767		33791.5767		194.1748	194.1748	MG/KG	83		3009	*	18			20	P
Antimony		0.7184	U	35.1563		34.9398		48.5437	48.5437	MG/KG	72	N	72	N	1		75 - 125	20	P
Arsenic		6.5262		20.2680		20.4097		14.5631	14.5631	MG/KG	94		95		1		75 - 125	20	P
Barium		97.1728		267.5718		294.9845		194.1748	194.1748	MG/KG	88		102		10		75 - 125	20	P
Beryllium		0.9078	B	5.3786		5.7573		4.8544	4.8544	MG/KG	92		100		7		75 - 125	20	P
Boron		7.7728	B	190.3709		194.8505		194.1748	194.1748	MG/KG	94		96		2		75 - 125	20	P
Cadmium		0.0738	U	4.4252		4.2631		4.8544	4.8544	MG/KG	91		88		4		75 - 125	20	P
Calcium		31573.7058		79717.6777		23983.1738		388.3495	388.3495	MG/KG	12397		-1955		107			20	P
Chromium		31.0951		45.8350		53.3233		19.4175	19.4175	MG/KG	76		114		15		75 - 125	20	P
Cobalt		7.0631		48.9243		53.1330		48.5437	48.5437	MG/KG	86		95		8		75 - 125	20	P
Copper		13.9447		36.3748		40.2243		24.2718	24.2718	MG/KG	92		108		10		75 - 125	20	P
Iron		28579.8777		23710.9544		30065.5184		97.0874	97.0874	MG/KG	-5015		1530		24			20	P
Lead		8.3049		20.2379		22.1893		14.5631	14.5631	MG/KG	82		95		9		75 - 125	20	P
Lithium		23.3204		114.3728		121.8602		97.0874	97.0874	MG/KG	94		101		6		75 - 125	20	P
Magnesium		5466.0252		5189.6505		6208.0748		194.1748	194.1748	MG/KG	-142		382		18			20	P
Manganese		254.4466		342.2689		368.5505		48.5437	48.5437	MG/KG	181		235		7			20	P
Mercury		0.0116	B	0.1829		0.1818		0.1652	0.1580	MG/KG	104		108		1		65 - 135	20	CV
Molybdenum		0.3000	B	171.1680		176.4854		194.1748	194.1748	MG/KG	88		91		3		75 - 125	20	P
Nickel		18.1544		60.2816		64.9330		48.5437	48.5437	MG/KG	87		96		7		75 - 125	20	P
Phosphorus		153.4825		274.3466		264.5340		97.0874	97.0874	MG/KG	124		114		4		75 - 125	20	P
Potassium		2430.5155		3410.5932		3860.7252		970.8738	970.8738	MG/KG	101		147	N	12		75 - 125	20	P
Selenium	78	0.0971	U	2.1670		2.0272		1.9417	1.9417	MG/KG	112		104		7		75 - 125	20	MS
Silver	107	0.0726	B	12.4485		11.9553		9.7087	9.7087	MG/KG	127	N	122		4		75 - 125	20	MS
Sodium		610.7883		1422.4388		1551.4845		970.8738	970.8738	MG/KG	84		97		9		75 - 125	20	P
Strontium	88	48.6990		72.0194		70.4078		7.7670	7.7670	MG/KG	300		280		2			20	MS
Thallium	203	0.2909		0.9078		0.8450		0.3883	0.3883	MG/KG	159	N	143	N	7		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH109
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7201708BKG Matrix Spike Lab Sample ID: 7201709MS Matrix Spike Duplicate Lab Sample ID: 7201710MSD
Batch Id(s): P26137B, P26138B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Tin		2.9573	B	332.5796		347.3058		388.3495	388.3495	MG/KG	85		89		4		75 - 125	20	P
Titanium		1102.8641		1244.5165		1428.0816		97.0874	97.0874	MG/KG	146		335		14			20	P
Vanadium		56.7330		99.8039		111.0718		48.5437	48.5437	MG/KG	89		112		11		75 - 125	20	P
Zinc		51.6806		92.7058		101.6971		48.5437	48.5437	MG/KG	85		103		9		75 - 125	20	P
Zirconium		3.0835	B	93.9777		97.9505		97.0874	97.0874	MG/KG	94		98		4		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH109
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7201708BKG
Duplicate Lab Sample ID: 7201711DUP
Batch ID(s): P26137B, P26138B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			27948.0777		24971.9078		11		P
Antimony			0.7184	U	0.7184	U			P
Arsenic		3.9	6.5262		5.3019		21		P
Barium			97.1728		91.4068		6		P
Beryllium			0.9078	B	0.8641	B	5		P
Boron			7.7728	B	6.8602	B	12		P
Cadmium			0.0738	U	0.1427	B	200		P
Calcium			31573.7058		47636.1515		41	*	P
Chromium			31.0951		28.5854		8		P
Cobalt			7.0631		6.1524		14		P
Copper			13.9447		12.5291		11		P
Iron			28579.8777		25321.6612		12		P
Lead		2.9	8.3049		7.5214		10		P
Lithium			23.3204		21.3243		9		P
Magnesium			5466.0252		5132.4272		6		P
Manganese			254.4466		219.9757		15		P
Mercury			0.0116	B	0.0125	B	7		CV
Molybdenum			0.3000	B	0.1650	U	200		P
Nickel			18.1544		16.5068		10		P
Phosphorus			153.4825		162.1097		5		P
Potassium			2430.5155		2277.8854		6		P
Selenium	78		0.0971	U	0.0971	U			MS
Silver	107		0.0726	B	0.0653	B	11		MS
Sodium			610.7883		579.6524		5		P
Strontium	88		48.6990		57.5728		17		MS
Thallium	203	0.2	0.2909		0.3291		12		MS
Tin			2.9573	B	2.6029	B	13		P
Titanium			1102.8641		939.6214		16		P
Vanadium			56.7330		50.6893		11		P
Zinc			51.6806		49.6670		4		P
Zirconium			3.0835	B	4.4369	B	36		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: PH109
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7201708BKG Serial Dilution Lab Sample ID: 7201708L
Batch ID(s): P26137B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		287865.2000		319362.1000		11	E	P
Antimony		7.4000	U	37.0000	U			P
Arsenic		67.2200		65.8500	B	2		P
Barium		1000.8800		1109.4500		11	E	P
Beryllium		9.3500	B	10.3000	B	10		P
Boron		80.0600	B	113.5500	B	42		P
Cadmium		0.7600	U	3.8000	U			P
Calcium		325209.1700		356327.6500		10		P
Chromium		320.2800		357.5000		12	E	P
Cobalt		72.7500		85.2000		17	E	P
Copper		143.6300		151.1000		5		P
Iron		147186.3700		152264.9000		3		P
Lead		85.5400		98.5500	B	15		P
Lithium		240.2000		250.8000		4		P
Magnesium		56300.0600		62217.4500		11	E	P
Manganese		2620.8000		2898.8000		11	E	P
Molybdenum		3.0900	B	15.3000	B	395		P
Nickel		186.9900		218.9500		17	E	P
Phosphorus		1580.8700		1688.0000		7		P
Potassium		25034.3100		26730.2500		7		P
Selenium	78	0.5000	U	2.5000	U			MS
Silver	107	0.3740	B	0.6500	U	100		MS
Sodium		6291.1200		6829.6500		9		P
Strontium	88	250.8000		237.5500		5		MS
Thallium	203	1.4980		1.5315	B	2		MS
Tin		30.4600	B	29.1000	B	4		P
Titanium		11359.5000		12395.6000		9		P
Vanadium		584.3500		636.7000		9		P
Zinc		532.3100		570.0500		7		P
Zirconium		31.7600	B	55.5500	B	75		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

5/15/A (A)

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH110

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 11, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 18, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081A
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A, 7470A and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Hexavalent Chromium by EPA Method 7199
Fluoride by EPA Method 300.0

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory duplicates (DUP), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), ICP serial dilutions, method blanks, trip blanks, equipment blanks and field blanks. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs and ICP serial dilutions, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of several blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks with the following exceptions:

SDG/ Method	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PH110/ 6010C	ICB/CCB	Molybdenum	2.1 ug/L	EB1-091813 EB2-091813
PH110/ 6010C	ICB/CCB	Molybdenum	1.7 ug/L	SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-513-SA5D-SB-16.0-17.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0 SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0

Sample concentrations were compared to concentrations detected in the initial and continuing blanks. The sample concentrations were not detected or were significantly greater than the concentrations found in the associated blanks with the following exceptions:

SDG/Method	Sample	Compound	Reported Concentration	Modified Final Concentration
PH110/ 6010C	EB1-091813	Molybdenum	8.3 ug/L	8.3U ug/L

SDG/Method	Sample	Compound	Reported Concentration	Modified Final Concentration
PH110/ 6010C	EB2-091813	Molybdenum	2.5 ug/L	2.5U ug/L
PH110/ 6010C	SL-510-SA5D-SB-0.0-0.5	Molybdenum	0.329 mg/kg	0.329U mg/kg
PH110/ 6010C	SL-510-SA5D-SB-4.0-5.0	Molybdenum	0.216 mg/kg	0.216U mg/kg
PH110/ 6010C	SL-513-SA5D-SB-4.0-5.0	Molybdenum	0.435 mg/kg	0.435U mg/kg
PH110/ 6010C	SL-509-SA5D-SB-0.0-0.5	Molybdenum	0.232 mg/kg	0.232U mg/kg

V. 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 exception of several samples for PCBs and TPH as extractables. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of two MS/MSD pairs for metals, TPH as extractables and fluoride. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

Laboratory duplicates (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

IX. 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 with the exception of several LCS/LCSD pairs for SVOCs, PCBs and TPH as extractables. The associated sample results were qualified as non-detected estimated (UJ). The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH110	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

No field duplicates were identified in this SDG.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

Two equipment blanks were collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The equipment blanks had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to equipment blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the equipment blanks were not qualified. The equipment blank outlier reports are presented in Enclosure I.

One field blank (from SDG PH032) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins, hexavalent chromium and fluoride. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were qualified as non-detected (U) due to field blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the field blank were not qualified. The field blank outlier reports are presented in Enclosure I.

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3546	8015M	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3546	8082A	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3546	8270D SIM	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	3550B	8151A	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	METHOD	1613B	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	METHOD	300.0	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	METHOD	6850	III
18-Sep-2013	SL-513-SA5D-SB-0.0-0.5	7203251	N	METHOD	7471B	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3546	8015M	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3546	8082A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3546	8270D SIM	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	3550B	8151A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	5035A	8015M	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	METHOD	300.0	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	METHOD	6850	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0	7203252	N	METHOD	7471B	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0DUP	P203252D220723	DUP	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0DUP	P203252D220730A	DUP	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0DUP	P203252D220730B	DUP	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0DUP	P203252D271810A	DUP	METHOD	300.0	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MSD	P203252M220730	MSD	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MSD	P203252M220735A	MSD	3050B	6020A	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
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MSD	P203252M220735B	MSD	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MS	P203252R220726	MS	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MS	P203252R220733A	MS	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MS	P203252R220733B	MS	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-4.0-5.0MS	P203252R271827A	MS	METHOD	300.0	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3546	8015M	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3546	8082A	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3546	8270D SIM	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	3550B	8151A	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	5035A	8015M	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	METHOD	300.0	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	METHOD	6850	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0	7203253	N	METHOD	7471B	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0DU	P203253D220505	DUP	METHOD	7471B	III
18-Sep-2013	SL-513-SA5D-SB-9.0-10.0MS	P203253R220508	MS	METHOD	7471B	III
18-Sep-2013	TB-091813	7203248	TB	5030B	8015M	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3050B	6010C	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3050B	6020A	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3546	8015M	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3546	8082A	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3546	8270D SIM	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	3550B	8151A	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	5035A	8015M	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	METHOD	300.0	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
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	METHOD	6850	III
18-Sep-2013	SL-513-SA5D-SB-16.0-17.0	7203254	N	METHOD	7471B	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	3050B	6010C	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	3050B	6020A	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	3546	8015M	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	3546	8082A	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	3546	8270D SIM	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	METHOD	1613B	III
18-Sep-2013	SL-514-SA5D-SB-0.0-0.5	7203255	N	METHOD	7471B	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	3050B	6010C	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	3050B	6020A	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	3546	8015M	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	3546	8082A	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	3546	8270D SIM	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	5035A	8015M	III
18-Sep-2013	SL-514-SA5D-SB-4.0-5.0	7203256	N	METHOD	7471B	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3050B	6010C	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3050B	6020A	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3546	8015M	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3546	8081B	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3546	8082A	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	3546	8270D SIM	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	METHOD	1613B	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5	7203249	N	METHOD	7471B	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5MSD	P203249M260608	MSD	3546	8270D SIM	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5MSD	P203249M320128A	MSD	3546	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
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5MS	P203249R260536	MS	3546	8270D SIM	III
18-Sep-2013	SL-510-SA5D-SB-0.0-0.5MS	P203249R320107A	MS	3546	8015M	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3050B	6010C	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3050B	6020A	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3546	8015M	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3546	8081B	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3546	8082A	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	3546	8270D SIM	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	5035A	8015M	III
18-Sep-2013	SL-510-SA5D-SB-4.0-5.0	7203250	N	METHOD	7471B	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	3050B	6010C	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	3050B	6020A	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	3546	8015M	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	3546	8082A	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	3546	8270D SIM	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	METHOD	1613B	III
18-Sep-2013	SL-509-SA5D-SB-0.0-0.5	7203257	N	METHOD	7471B	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	3050B	6010C	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	3050B	6020A	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	3546	8015M	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	3546	8082A	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	3546	8270D SIM	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	5035A	8015M	III
18-Sep-2013	SL-509-SA5D-SB-4.0-5.0	7203258	N	METHOD	7471B	III
18-Sep-2013	EB1-091813	7203246	EB	3005A	6010C	III
18-Sep-2013	EB1-091813	7203246	EB	3510C	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
18-Sep-2013	EB1-091813	7203246	EB	3510C	8081B	III
18-Sep-2013	EB1-091813	7203246	EB	3510C	8082A	III
18-Sep-2013	EB1-091813	7203246	EB	3510C	8270D SIM	III
18-Sep-2013	EB1-091813	7203246	EB	5030B	8015M	III
18-Sep-2013	EB1-091813	7203246	EB	Gen Prep	300.0	III
18-Sep-2013	EB1-091813	7203246	EB	Gen Prep	6850	III
18-Sep-2013	EB1-091813	7203246	EB	Gen Prep	7199	III
18-Sep-2013	EB1-091813	7203246	EB	M3010A	6020A	III
18-Sep-2013	EB1-091813	7203246	EB	METHOD	1613B	III
18-Sep-2013	EB1-091813	7203246	EB	METHOD	7470A	III
18-Sep-2013	EB1-091813	7203246	EB	METHOD	8151A	III
18-Sep-2013	EB1-091813MSD	P203246M241747A	MSD	Gen Prep	6850	III
18-Sep-2013	EB1-091813MS	P203246R241734A	MS	Gen Prep	6850	III
18-Sep-2013	EB2-091813	7203247	EB	3005A	6010C	III
18-Sep-2013	EB2-091813	7203247	EB	3510C	8015M	III
18-Sep-2013	EB2-091813	7203247	EB	3510C	8081B	III
18-Sep-2013	EB2-091813	7203247	EB	3510C	8082A	III
18-Sep-2013	EB2-091813	7203247	EB	3510C	8270D SIM	III
18-Sep-2013	EB2-091813	7203247	EB	5030B	8015M	III
18-Sep-2013	EB2-091813	7203247	EB	Gen Prep	300.0	III
18-Sep-2013	EB2-091813	7203247	EB	Gen Prep	6850	III
18-Sep-2013	EB2-091813	7203247	EB	Gen Prep	7199	III
18-Sep-2013	EB2-091813	7203247	EB	M3010A	6020A	III
18-Sep-2013	EB2-091813	7203247	EB	METHOD	1613B	III
18-Sep-2013	EB2-091813	7203247	EB	METHOD	7470A	III
18-Sep-2013	EB2-091813	7203247	EB	METHOD	8151A	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-513-SA5D-SB-16.0-17.0** ***Collected:*** **9/18/2013 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
FLUORIDE	1.2		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: **SL-513-SA5D-SB-9.0-10.0** ***Collected:*** **9/18/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **EB1-091813** ***Collected:*** **9/18/2013 3:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0464	J	0.0334	MDL	0.400	PQL	mg/L	U	B
MOLYBDENUM	0.0083	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

Sample ID: **EB2-091813** ***Collected:*** **9/18/2013 3:30:00** ***Analysis Type:*** **REA2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0550	J	0.0334	MDL	0.400	PQL	mg/L	U	B
MOLYBDENUM	0.0025	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-513-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 7:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-513-SA5D-SB-16.0-17.0 *Collected:* 9/18/2013 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
FLUORIDE	1.2		0.43	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-513-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 7:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.47	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-513-SA5D-SB-9.0-10.0 *Collected:* 9/18/2013 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.45	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010C **Matrix: AQ**

Sample ID: EB1-091813 *Collected:* 9/18/2013 3:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0464	J	0.0334	MDL	0.400	PQL	mg/L	U	B
MOLYBDENUM	0.0083	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

Sample ID: EB2-091813 *Collected:* 9/18/2013 3:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0550	J	0.0334	MDL	0.400	PQL	mg/L	U	B
MOLYBDENUM	0.0025	J	0.0017	MDL	0.0200	PQL	mg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	33600		19.4	MDL	215	PQL	mg/Kg	J	E

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.30	U	0.795	MDL	4.30	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.946	J	0.0720	MDL	1.07	PQL	mg/Kg	J	Z
BORON	10.3	J	0.902	MDL	10.7	PQL	mg/Kg	J	Z
MOLYBDENUM	0.232	J	0.183	MDL	2.15	PQL	mg/Kg	U	B, F, F
PHOSPHORUS	332		3.10	MDL	10.7	PQL	mg/Kg	J	Q
SODIUM	89.8	J	17.9	MDL	107	PQL	mg/Kg	J	Z
TIN	2.76	J	0.236	MDL	10.7	PQL	mg/Kg	U	B
VANADIUM	65.9		0.140	MDL	1.07	PQL	mg/Kg	J	Q
Zirconium	3.79	J	0.902	MDL	5.37	PQL	mg/Kg	J	Z

Sample ID: **SL-509-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 1:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	38200		20.8	MDL	230	PQL	mg/Kg	J	E

Sample ID: **SL-509-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.60	U	0.851	MDL	4.60	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.981	J	0.0770	MDL	1.15	PQL	mg/Kg	J	Z
BORON	11.0	J	0.966	MDL	11.5	PQL	mg/Kg	J	Z
PHOSPHORUS	321		3.32	MDL	11.5	PQL	mg/Kg	J	Q
TIN	3.30	J	0.253	MDL	11.5	PQL	mg/Kg	U	B
VANADIUM	69.6		0.149	MDL	1.15	PQL	mg/Kg	J	Q
Zirconium	3.27	J	0.966	MDL	5.75	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 10:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	34100		19.8	MDL	218	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 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
ANTIMONY	4.37	U	0.808	MDL	4.37	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.964	J	0.0731	MDL	1.09	PQL	mg/Kg	J	Z
MOLYBDENUM	0.329	J	0.186	MDL	2.18	PQL	mg/Kg	U	B, F, F
PHOSPHORUS	433		3.15	MDL	10.9	PQL	mg/Kg	J	Q
SODIUM	85.1	J	18.2	MDL	109	PQL	mg/Kg	J	Z
TIN	3.12	J	0.240	MDL	10.9	PQL	mg/Kg	U	B
VANADIUM	69.4		0.142	MDL	1.09	PQL	mg/Kg	J	Q
Zirconium	4.32	J	0.917	MDL	5.46	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 10:10:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	35400		21.0	MDL	232	PQL	mg/Kg	J	E

Sample ID: **SL-510-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 10:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.64	U	0.858	MDL	4.64	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.955	J	0.0777	MDL	1.16	PQL	mg/Kg	J	Z
BORON	10.9	J	0.974	MDL	11.6	PQL	mg/Kg	J	Z
MOLYBDENUM	0.216	J	0.197	MDL	2.32	PQL	mg/Kg	U	B, F, F
PHOSPHORUS	347		3.35	MDL	11.6	PQL	mg/Kg	J	Q
TIN	3.25	J	0.255	MDL	11.6	PQL	mg/Kg	U	B
VANADIUM	67.2		0.151	MDL	1.16	PQL	mg/Kg	J	Q
Zirconium	3.15	J	0.974	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	35300		20.3	MDL	224	PQL	mg/Kg	J	E

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.49	U	0.830	MDL	4.49	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.983	J	0.0751	MDL	1.12	PQL	mg/Kg	J	Z
BORON	8.61	J	0.942	MDL	11.2	PQL	mg/Kg	J	Z
PHOSPHORUS	317		3.24	MDL	11.2	PQL	mg/Kg	J	Q
SODIUM	102	J	18.7	MDL	112	PQL	mg/Kg	J	Z
TIN	2.93	J	0.247	MDL	11.2	PQL	mg/Kg	U	B
VANADIUM	61.4		0.146	MDL	1.12	PQL	mg/Kg	J	Q
Zirconium	1.81	J	0.942	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-16.0-17.0** ***Collected:*** **9/18/2013 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
ANTIMONY	4.32	U	0.800	MDL	4.32	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.638	J	0.0724	MDL	1.08	PQL	mg/Kg	J	Z
BORON	3.44	J	0.908	MDL	10.8	PQL	mg/Kg	J	Z
IRON	21200		3.91	MDL	43.2	PQL	mg/Kg	J	E
PHOSPHORUS	448		3.12	MDL	10.8	PQL	mg/Kg	J	Q
SODIUM	92.5	J	18.1	MDL	108	PQL	mg/Kg	J	Z
TIN	2.69	J	0.238	MDL	10.8	PQL	mg/Kg	U	B
VANADIUM	34.8		0.141	MDL	1.08	PQL	mg/Kg	J	Q
Zirconium	1.10	J	0.908	MDL	5.41	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	37700		21.0	MDL	232	PQL	mg/Kg	J	E

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.65	U	0.860	MDL	4.65	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.953	J	0.0779	MDL	1.16	PQL	mg/Kg	J	Z
MOLYBDENUM	0.435	J	0.198	MDL	2.32	PQL	mg/Kg	U	B, F, F
PHOSPHORUS	346		3.36	MDL	11.6	PQL	mg/Kg	J	Q
SODIUM	106	J	19.4	MDL	116	PQL	mg/Kg	J	Z
TIN	3.44	J	0.256	MDL	11.6	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	71.7		0.151	MDL	1.16	PQL	mg/Kg	J	Q
Zirconium	3.52	J	0.976	MDL	5.81	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-9.0-10.0** ***Collected:*** **9/18/2013 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.41	U	0.816	MDL	4.41	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.556	J	0.0739	MDL	1.10	PQL	mg/Kg	J	Z
BORON	9.71	J	0.927	MDL	11.0	PQL	mg/Kg	J	Z
CADMIUM	0.289	J	0.0838	MDL	1.10	PQL	mg/Kg	J	Z
IRON	23600		3.99	MDL	44.1	PQL	mg/Kg	J	E
PHOSPHORUS	482		3.19	MDL	11.0	PQL	mg/Kg	J	Q
TIN	2.68	J	0.243	MDL	11.0	PQL	mg/Kg	U	B
VANADIUM	46.5		0.143	MDL	1.10	PQL	mg/Kg	J	Q
Zirconium	2.61	J	0.927	MDL	5.52	PQL	mg/Kg	J	Z

Sample ID: **SL-514-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 8:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	36600		20.3	MDL	224	PQL	mg/Kg	J	E

Sample ID: **SL-514-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.48	U	0.828	MDL	4.48	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.979	J	0.0750	MDL	1.12	PQL	mg/Kg	J	Z
BORON	9.56	J	0.940	MDL	11.2	PQL	mg/Kg	J	Z
PHOSPHORUS	300		3.23	MDL	11.2	PQL	mg/Kg	J	Q
TIN	3.14	J	0.246	MDL	11.2	PQL	mg/Kg	U	B
VANADIUM	68.9		0.145	MDL	1.12	PQL	mg/Kg	J	Q
Zirconium	4.19	J	0.940	MDL	5.60	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-514-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 9:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	32100		20.3	MDL	224	PQL	mg/Kg	J	E

Sample ID: **SL-514-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 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
ANTIMONY	4.48	U	0.829	MDL	4.48	PQL	mg/Kg	UJ	Q
BERYLLIUM	0.810	J	0.0751	MDL	1.12	PQL	mg/Kg	J	Z
BORON	10.6	J	0.941	MDL	11.2	PQL	mg/Kg	J	Z
CADMIUM	0.149	J	0.0852	MDL	1.12	PQL	mg/Kg	J	Z
PHOSPHORUS	474		3.24	MDL	11.2	PQL	mg/Kg	J	Q
TIN	2.98	J	0.247	MDL	11.2	PQL	mg/Kg	U	B
VANADIUM	59.3		0.146	MDL	1.12	PQL	mg/Kg	J	Q
Zirconium	3.34	J	0.941	MDL	5.60	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.268	J	0.107	MDL	0.430	PQL	mg/Kg	J	Z

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0515	J	0.0279	MDL	0.215	PQL	mg/Kg	J	Z

Sample ID: **SL-509-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 1:15:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.146	J	0.115	MDL	0.460	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-509-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0371	J	0.0299	MDL	0.230	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 10:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.298	J	0.109	MDL	0.437	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 10:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0452	J	0.0284	MDL	0.218	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 10:10:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.165	J	0.116	MDL	0.464	PQL	mg/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 10:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0380	J	0.0301	MDL	0.232	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.157	J	0.112	MDL	0.449	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0537	J	0.0292	MDL	0.224	PQL	mg/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.176	J	0.116	MDL	0.465	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-513-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 7:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0439	J	0.0302	MDL	0.232	PQL	mg/Kg	J	Z

Sample ID: SL-513-SA5D-SB-9.0-10.0 *Collected:* 9/18/2013 7:50:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.208	J	0.110	MDL	0.441	PQL	mg/Kg	J	Z

Sample ID: SL-514-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 8:50:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.187	J	0.112	MDL	0.448	PQL	mg/Kg	J	Z

Sample ID: SL-514-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 8:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0455	J	0.0291	MDL	0.224	PQL	mg/Kg	J	Z

Sample ID: SL-514-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 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
SILVER	0.0401	J	0.0291	MDL	0.224	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-509-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0129	J	0.0105	MDL	0.0174	PQL	mg/Kg	J	Z

Sample ID: SL-509-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0134	J	0.0109	MDL	0.0182	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-510-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 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
MERCURY	0.0114	J	0.0106	MDL	0.0176	PQL	mg/Kg	J	Z

Sample ID: SL-510-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 10:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0124	J	0.0110	MDL	0.0183	PQL	mg/Kg	J	Z

Sample ID: SL-513-SA5D-SB-16.0-17.0 *Collected:* 9/18/2013 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
MERCURY	0.0103	J	0.0102	MDL	0.0170	PQL	mg/Kg	J	Z

Sample ID: SL-513-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 7:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0149	J	0.0116	MDL	0.0193	PQL	mg/Kg	J	Z

Sample ID: SL-513-SA5D-SB-9.0-10.0 *Collected:* 9/18/2013 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0125	J	0.0112	MDL	0.0187	PQL	mg/Kg	J	Z

Sample ID: SL-514-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 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	0.0124	J	0.0108	MDL	0.0180	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-091813 *Collected:* 9/18/2013 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
1,2,3,4,6,7,8-HPCDD	0.924	JB	0.222	MDL	9.65	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.629	JB	0.0973	MDL	9.65	PQL	pg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **AQ**

Sample ID: **EB1-091813** ***Collected:*** **9/18/2013 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
1,2,3,4,7,8,9-HPCDF	0.472	JBQ	0.107	MDL	9.65	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.357	JBQ	0.185	MDL	9.65	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.392	JBQ	0.190	MDL	9.65	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.204	JBQ	0.191	MDL	9.65	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.628	JB	0.189	MDL	9.65	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.488	JBQ	0.184	MDL	9.65	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.608	JBQ	0.186	MDL	9.65	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.712	JBQ	0.178	MDL	9.65	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.400	JBQ	0.192	MDL	9.65	PQL	pg/L	U	B
OCDD	1.48	JBQ	0.210	MDL	19.3	PQL	pg/L	U	B
OCDF	1.66	JB	0.295	MDL	19.3	PQL	pg/L	U	B

Sample ID: **EB2-091813** ***Collected:*** **9/18/2013 3:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.798	JBQ	0.225	MDL	9.57	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.430	JB	0.0871	MDL	9.57	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.280	JBQ	0.0991	MDL	9.57	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.490	JB	0.164	MDL	9.57	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.317	JBQ	0.159	MDL	9.57	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.558	JB	0.162	MDL	9.57	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.760	JB	0.146	MDL	9.57	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.385	JBQ	0.270	MDL	9.57	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.513	JBQ	0.162	MDL	9.57	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.324	JBQ	0.158	MDL	9.57	PQL	pg/L	U	B
2,3,7,8-TCDD	0.511	JBQ	0.473	MDL	1.91	PQL	pg/L	U	B
OCDD	1.03	JB	0.185	MDL	19.1	PQL	pg/L	U	B
OCDF	0.949	JB	0.271	MDL	19.1	PQL	pg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.639	JBQ	0.0267	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.194	JB	0.0108	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0828	JBQ	0.0175	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0708	JBQ	0.0247	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.108	JB	0.0217	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.352	JB	0.0260	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0822	JB	0.0190	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.501	JB	0.0240	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.891	JB	0.0211	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.210	JBQ	0.0334	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.447	JB	0.0191	MDL	5.35	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0808	JBQ	0.0192	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.182	JBQ	0.0191	MDL	5.35	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0485	JB	0.0445	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.116	J	0.0415	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	4.32	JB	0.0168	MDL	10.7	PQL	ng/Kg	J	Z
OCDF	0.538	JB	0.0319	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 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
1,2,3,4,6,7,8-HPCDD	0.249	JB	0.0301	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0788	JBQ	0.0104	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.114	JB	0.0185	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0350	JBQ	0.0310	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.114	JB	0.0292	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.191	JBQ	0.0334	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0800	JBQ	0.0257	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.302	JBQ	0.0297	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.470	JB	0.0286	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0739	JBQ	0.0364	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.330	JB	0.0272	MDL	5.30	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0797	JBQ	0.0262	MDL	5.30	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.113	JBQ	0.0280	MDL	5.30	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 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
2,3,7,8-TCDD	0.0631	JBQ	0.0509	MDL	1.06	PQL	ng/Kg	U	B
OCDD	0.924	JB	0.0286	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.163	JB	0.0415	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.193	JBQ	0.0233	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0945	JBQ	0.00895	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.139	JBQ	0.0182	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.104	JBQ	0.0254	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.158	JB	0.0281	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.191	JBQ	0.0266	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.141	JB	0.0237	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.288	JBQ	0.0254	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.455	JBQ	0.0272	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.263	JBQ	0.0353	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.350	JBQ	0.0199	MDL	5.49	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.118	JB	0.0276	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.218	JB	0.0202	MDL	5.49	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0600	JBQ	0.0510	MDL	1.10	PQL	ng/Kg	U	B
OCDD	0.370	JB	0.0225	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.204	JB	0.0499	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: **SL-514-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 8:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.281	JB	0.0261	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.135	JB	0.00982	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0947	JBQ	0.0184	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.166	JBQ	0.0288	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.223	JBQ	0.0265	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.300	JB	0.0311	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.214	JB	0.0231	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.384	JB	0.0288	MDL	5.51	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-514-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 8:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	0.566	JB	0.0272	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.335	JBQ	0.0337	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.352	JB	0.0207	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.147	JB	0.0257	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.276	JBQ	0.0216	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0756	JBQ	0.0513	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0607	JQ	0.0443	MDL	1.10	PQL	ng/Kg	J	Z
OCDD	0.748	JB	0.0276	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.308	JBQ	0.0398	MDL	11.0	PQL	ng/Kg	U	B

Method Category: SVOA

Method: 6850 **Matrix: AQ**

Sample ID: EB2-091813 *Collected:* 9/18/2013 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.25	J	0.20	MDL	1.0	PQL	ug/L	J	Z

Method Category: SVOA

Method: 8015M **Matrix: AQ**

Sample ID: EB1-091813 *Collected:* 9/18/2013 3:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.49	U	0.098	MDL	0.49	PQL	mg/L	UJ	L

Sample ID: EB2-091813 *Collected:* 9/18/2013 3:30:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.47	U	0.095	MDL	0.47	PQL	mg/L	UJ	L

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-509-SA5D-SB-4.0-5.0 *Collected:* 9/18/2013 1:15:00 *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)	5.7	U	2.3	MDL	5.7	PQL	mg/Kg	UJ	S
EFH (C15-C20)	5.7	U	2.3	MDL	5.7	PQL	mg/Kg	UJ	S
EFH (C21-C30)	5.7	U	2.3	MDL	5.7	PQL	mg/Kg	UJ	S
EFH (C30-C40)	11	U	4.6	MDL	11	PQL	mg/Kg	UJ	S
EFH (C8-C11)	5.7	U	2.3	MDL	5.7	PQL	mg/Kg	UJ	S

Sample ID: SL-510-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 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)	12		4.4	MDL	11	PQL	mg/Kg	J	Q

Method Category: SVOA

Method: 8081B **Matrix: SO**

Sample ID: SL-510-SA5D-SB-0.0-0.5 *Collected:* 9/18/2013 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
4,4'-DDT	0.47	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8082A **Matrix: AQ**

Sample ID: EB1-091813 *Collected:* 9/18/2013 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
AROCLOR 1016	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1221	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1232	0.41	U	0.16	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1242	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1248	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1254	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
AROCLOR 1260	0.41	U	0.12	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 1262	0.41	U	0.16	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 1268	0.41	U	0.13	MDL	0.41	PQL	ug/L	UJ	S

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8082A** ***Matrix:*** **AQ**

Sample ID: **EB1-091813** ***Collected:*** **9/18/2013 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
Aroclor 5432	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 5442	0.41	U	0.082	MDL	0.41	PQL	ug/L	UJ	S
Aroclor 5460	0.41	U	0.091	MDL	0.41	PQL	ug/L	UJ	S

Sample ID: **EB2-091813** ***Collected:*** **9/18/2013 3:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1221	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1232	0.42	U	0.17	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1242	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1248	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1254	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
AROCLOR 1260	0.42	U	0.13	MDL	0.42	PQL	ug/L	UJ	S
Aroclor 1262	0.42	U	0.17	MDL	0.42	PQL	ug/L	UJ	S
Aroclor 1268	0.42	U	0.13	MDL	0.42	PQL	ug/L	UJ	S
Aroclor 5432	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
Aroclor 5442	0.42	U	0.083	MDL	0.42	PQL	ug/L	UJ	S
Aroclor 5460	0.42	U	0.092	MDL	0.42	PQL	ug/L	UJ	S

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **AQ**

Sample ID: **EB1-091813** ***Collected:*** **9/18/2013 3:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	0.30	J	0.050	MDL	1.0	PQL	ug/L	J	Z
Di-n-butylphthalate	0.20	J	0.050	MDL	1.0	PQL	ug/L	J	Z

Sample ID: **EB2-091813** ***Collected:*** **9/18/2013 3:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	0.30	J	0.050	MDL	1.0	PQL	ug/L	J	Z
Di-n-butylphthalate	0.19	J	0.050	MDL	1.0	PQL	ug/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-509-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 1:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.89	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.3	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.6	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.1	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.90	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-509-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 1:15:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.0	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.0	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 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
ANTHRACENE	0.80	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
FLUORENE	0.85	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	1.3	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-510-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 10:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.92	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.4	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-513-SA5D-SB-0.0-0.5** ***Collected:*** **9/18/2013 7:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.45	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	0.86	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-513-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 7:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: **SL-514-SA5D-SB-4.0-5.0** ***Collected:*** **9/18/2013 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
2-METHYLNAPHTHALENE	0.85	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.0	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PrepPH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Upper Estimation
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH110

Method Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2670B371524	9/26/2013 3:24:00 PM	1,2,3,4,6,7,8-HPCDD	0.963 pg/L	EB1-091813
		1,2,3,4,6,7,8-HPCDF	0.862 pg/L	EB2-091813
		1,2,3,4,7,8,9-HPCDF	0.625 pg/L	
		1,2,3,4,7,8-HxCDD	0.300 pg/L	
		1,2,3,4,7,8-HXCDF	0.389 pg/L	
		1,2,3,6,7,8-HXCDD	0.518 pg/L	
		1,2,3,6,7,8-HXCDF	0.407 pg/L	
		1,2,3,7,8,9-HXCDD	0.348 pg/L	
		1,2,3,7,8,9-HXCDF	0.534 pg/L	
		1,2,3,7,8-PECDD	0.685 pg/L	
		1,2,3,7,8-PECDF	0.645 pg/L	
		2,3,4,6,7,8-HXCDF	0.311 pg/L	
		2,3,4,7,8-PECDF	0.240 pg/L	
		2,3,7,8-TCDD	0.904 pg/L	
		OCDD	1.39 pg/L	
		OCDF	1.37 pg/L	

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
EB1-091813(RES)	1,2,3,4,6,7,8-HPCDD	0.924 pg/L	0.924U pg/L
EB1-091813(RES)	1,2,3,4,6,7,8-HPCDF	0.629 pg/L	0.629U pg/L
EB1-091813(RES)	1,2,3,4,7,8,9-HPCDF	0.472 pg/L	0.472U pg/L
EB1-091813(RES)	1,2,3,4,7,8-HxCDD	0.357 pg/L	0.357U pg/L
EB1-091813(RES)	1,2,3,4,7,8-HXCDF	0.392 pg/L	0.392U pg/L
EB1-091813(RES)	1,2,3,6,7,8-HXCDD	0.204 pg/L	0.204U pg/L
EB1-091813(RES)	1,2,3,6,7,8-HXCDF	0.628 pg/L	0.628U pg/L
EB1-091813(RES)	1,2,3,7,8,9-HXCDD	0.488 pg/L	0.488U pg/L
EB1-091813(RES)	1,2,3,7,8,9-HXCDF	0.608 pg/L	0.608U pg/L
EB1-091813(RES)	1,2,3,7,8-PECDF	0.712 pg/L	0.712U pg/L
EB1-091813(RES)	2,3,4,6,7,8-HXCDF	0.400 pg/L	0.400U pg/L
EB1-091813(RES)	OCDD	1.48 pg/L	1.48U pg/L
EB1-091813(RES)	OCDF	1.66 pg/L	1.66U pg/L
EB2-091813(RES)	1,2,3,4,6,7,8-HPCDD	0.798 pg/L	0.798U pg/L
EB2-091813(RES)	1,2,3,4,6,7,8-HPCDF	0.430 pg/L	0.430U pg/L
EB2-091813(RES)	1,2,3,4,7,8,9-HPCDF	0.280 pg/L	0.280U pg/L
EB2-091813(RES)	1,2,3,4,7,8-HXCDF	0.490 pg/L	0.490U pg/L
EB2-091813(RES)	1,2,3,6,7,8-HXCDD	0.317 pg/L	0.317U pg/L
EB2-091813(RES)	1,2,3,6,7,8-HXCDF	0.558 pg/L	0.558U pg/L
EB2-091813(RES)	1,2,3,7,8,9-HXCDF	0.760 pg/L	0.760U pg/L
EB2-091813(RES)	1,2,3,7,8-PECDD	0.385 pg/L	0.385U pg/L
EB2-091813(RES)	1,2,3,7,8-PECDF	0.513 pg/L	0.513U pg/L
EB2-091813(RES)	2,3,4,6,7,8-HXCDF	0.324 pg/L	0.324U pg/L
EB2-091813(RES)	2,3,7,8-TCDD	0.511 pg/L	0.511U pg/L
EB2-091813(RES)	OCDD	1.03 pg/L	1.03U pg/L
EB2-091813(RES)	OCDF	0.949 pg/L	0.949U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2680B370155	9/27/2013 1:55:00 AM	1,2,3,4,6,7,8-HPCDD	0.127 ng/Kg	SL-509-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0505 ng/Kg	SL-510-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0860 ng/Kg	SL-513-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0483 ng/Kg	SL-514-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0573 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0406 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0517 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0644 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0692 ng/Kg	
		1,2,3,7,8-PECDD	0.103 ng/Kg	
		1,2,3,7,8-PECDF	0.0673 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0444 ng/Kg	
		2,3,4,7,8-PECDF	0.0538 ng/Kg	
		2,3,7,8-TCDD	0.104 ng/Kg	
		OCDD	0.212 ng/Kg	
		OCDF	0.223 ng/Kg	

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-509-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.194 ng/Kg	0.194U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0828 ng/Kg	0.0828U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0708 ng/Kg	0.0708U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.108 ng/Kg	0.108U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0822 ng/Kg	0.0822U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.210 ng/Kg	0.210U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0808 ng/Kg	0.0808U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.182 ng/Kg	0.182U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0485 ng/Kg	0.0485U ng/Kg
SL-509-SA5D-SB-0.0-0.5(RES)	OCDF	0.538 ng/Kg	0.538U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.249 ng/Kg	0.249U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0788 ng/Kg	0.0788U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.114 ng/Kg	0.114U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0350 ng/Kg	0.0350U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.114 ng/Kg	0.114U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.191 ng/Kg	0.191U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0800 ng/Kg	0.0800U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.302 ng/Kg	0.302U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0739 ng/Kg	0.0739U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.330 ng/Kg	0.330U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0797 ng/Kg	0.0797U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.113 ng/Kg	0.113U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0631 ng/Kg	0.0631U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	OCDD	0.924 ng/Kg	0.924U ng/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	OCDF	0.163 ng/Kg	0.163U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.193 ng/Kg	0.193U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0945 ng/Kg	0.0945U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.139 ng/Kg	0.139U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.104 ng/Kg	0.104U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-513-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.158 ng/Kg	0.158U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.191 ng/Kg	0.191U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.141 ng/Kg	0.141U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.288 ng/Kg	0.288U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.263 ng/Kg	0.263U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.118 ng/Kg	0.118U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.218 ng/Kg	0.218U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0600 ng/Kg	0.0600U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	OCDD	0.370 ng/Kg	0.370U ng/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	OCDF	0.204 ng/Kg	0.204U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.281 ng/Kg	0.281U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.135 ng/Kg	0.135U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0947 ng/Kg	0.0947U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.166 ng/Kg	0.166U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.223 ng/Kg	0.223U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.214 ng/Kg	0.214U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.335 ng/Kg	0.335U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.147 ng/Kg	0.147U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0756 ng/Kg	0.0756U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	OCDD	0.748 ng/Kg	0.748U ng/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	OCDF	0.308 ng/Kg	0.308U ng/Kg

Method: **6010C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P27035BB221457	9/30/2013 2:57:00 PM	CALCIUM	0.0618 mg/L	EB1-091813 EB2-091813

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
EB1-091813(REA2)	CALCIUM	0.0464 mg/L	0.0464U mg/L
EB2-091813(REA2)	CALCIUM	0.0550 mg/L	0.0550U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26337AB222319	9/22/2013 11:19:00 PM	CALCIUM TIN ZINC	8.73 mg/Kg 1.49 mg/Kg 0.340 mg/Kg	SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0

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-509-SA5D-SB-0.0-0.5(RES)	TIN	2.76 mg/Kg	2.76U mg/Kg
SL-509-SA5D-SB-4.0-5.0(RES)	TIN	3.30 mg/Kg	3.30U mg/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	TIN	3.12 mg/Kg	3.12U mg/Kg
SL-510-SA5D-SB-4.0-5.0(RES)	TIN	3.25 mg/Kg	3.25U mg/Kg
SL-513-SA5D-SB-0.0-0.5(RES)	TIN	2.93 mg/Kg	2.93U mg/Kg
SL-513-SA5D-SB-16.0-17.0(RES)	TIN	2.69 mg/Kg	2.69U mg/Kg
SL-513-SA5D-SB-4.0-5.0(RES)	TIN	3.44 mg/Kg	3.44U mg/Kg
SL-513-SA5D-SB-9.0-10.0(RES)	TIN	2.68 mg/Kg	2.68U mg/Kg
SL-514-SA5D-SB-0.0-0.5(RES)	TIN	3.14 mg/Kg	3.14U mg/Kg
SL-514-SA5D-SB-4.0-5.0(RES)	TIN	2.98 mg/Kg	2.98U mg/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-091813(REA2)	9/18/2013 3:00:00 PM	CALCIUM MOLYBDENUM	0.0464 mg/L 0.0083 mg/L	SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0

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-509-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.232 mg/Kg	0.232U mg/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.329 mg/Kg	0.329U mg/Kg
SL-510-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.216 mg/Kg	0.216U mg/Kg
SL-513-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.435 mg/Kg	0.435U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-041613(REA2/TOT)	4/16/2013 3:15:00 PM	MOLYBDENUM TIN	0.0132 mg/L 0.0029 mg/L	SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0

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-509-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.232 mg/Kg	0.232U mg/Kg
SL-510-SA5D-SB-0.0-0.5(RES)	MOLYBDENUM	0.329 mg/Kg	0.329U mg/Kg
SL-510-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.216 mg/Kg	0.216U mg/Kg
SL-513-SA5D-SB-4.0-5.0(RES)	MOLYBDENUM	0.435 mg/Kg	0.435U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-509-SA5D-SB-4.0-5.0 (REA)	O-TERPHENYL	47	66.00-123.00	All Target Analytes	J(all detects) UJ(all non-detects)

Method: 8082A
Matrix: AQ

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB1-091813	DECACHLOROBIPHENYL	41	45.00-120.00	All Target Analytes	J (all detects) UJ (all non-detects)
EB2-091813	DECACHLOROBIPHENYL	38	45.00-120.00	All Target Analytes	J(all detects) UJ(all non-detects)

Method: 8082A
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-509-SA5D-SB-0.0-0.5	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	123 122	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-509-SA5D-SB-4.0-5.0	DECACHLOROBIPHENYL	122	45.00-120.00	All Target Analytes	J(all detects)
SL-510-SA5D-SB-4.0-5.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	131 125	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-513-SA5D-SB-0.0-0.5	DECACHLOROBIPHENYL	122	45.00-120.00	All Target Analytes	J(all detects)
SL-513-SA5D-SB-16.0-17.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	130 123	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-513-SA5D-SB-4.0-5.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	137 128	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-513-SA5D-SB-9.0-10.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	135 123	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-514-SA5D-SB-0.0-0.5	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	133 126	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)
SL-514-SA5D-SB-4.0-5.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	134 129	45.00-120.00 45.00-120.00	All Target Analytes	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-510-SA5D-SB-0.0-0.5MS **SL-510-SA5D-SB-0.0-0.5MSD** (SL-510-SA5D-SB-0.0-0.5)	EFH (C15-C20) EFH (C30-C40)	174 -	187 165	49.00-123.00 49.00-123.00	- -	EFH (C15-C20) EFH (C30-C40)	J (all detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-513-SA5D-SB-4.0-5.0MS (TOT) **SL-513-SA5D-SB-4.0-5.0MSD (TOT)** (SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0)	ALUMINUM CALCIUM MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM TITANIUM VANADIUM	3787 256 376 228 150 143 643 142	4234 264 537 169 - 153 655 -	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 MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM TITANIUM VANADIUM	J(all detects) Al, Ca, Mg, Mn, K, Ti, No Qual, >4x
SL-513-SA5D-SB-4.0-5.0MS (TOT) **SL-513-SA5D-SB-4.0-5.0MSD (TOT)** (SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0)	ANTIMONY IRON	63 13196	64 1049	75.00-125.00 75.00-125.00	- 31 (20.00)	ANTIMONY IRON	J(all detects) UJ(all non-detects) Fe, No Qual %R >4x

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-513-SA5D-SB-4.0-5.0MSD (TOT) (SL-509-SA5D-SB-0.0-0.5 SL-509-SA5D-SB-4.0-5.0 SL-510-SA5D-SB-0.0-0.5 SL-510-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-0.0-0.5 SL-513-SA5D-SB-16.0-17.0 SL-513-SA5D-SB-4.0-5.0 SL-513-SA5D-SB-9.0-10.0 SL-514-SA5D-SB-0.0-0.5 SL-514-SA5D-SB-4.0-5.0)	STRONTIUM	-	151	75.00-125.00	-	STRONTIUM	No Qual, >4x

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-513-SA5D-SB-4.0-5.0MS (SL-513-SA5D-SB-0.0-0.5 SL -513-SA5D-SB-16.0-17.0 SL -513-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-9.0-10.0)	FLUORIDE	43	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-513-SA5D-SB-4.0-5.0DUP (SL-513-SA5D-SB-0.0-0.5 SL -513-SA5D-SB-16.0-17.0 SL -513-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-9.0-10.0)	FLUORIDE	25	20.00	No Qual, OK by Difference

Method: 6010C
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-513-SA5D-SB-4.0-5.0DUP (TOT) (SL-509-SA5D-SB-0.0-0.5 SL -509-SA5D-SB-4.0-5.0 SL -510-SA5D-SB-0.0-0.5 SL -510-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-0.0-0.5 SL -513-SA5D-SB-16.0-17.0 SL -513-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-9.0-10.0 SL -514-SA5D-SB-0.0-0.5 SL -514-SA5D-SB-4.0-5.0)	MOLYBDENUM Zirconium	200 45	20.00 20.00	No Qual, OK by Difference

Method: 7471B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-513-SA5D-SB-9.0-10.0DUP (TOT) (SL-509-SA5D-SB-0.0-0.5 SL -509-SA5D-SB-4.0-5.0 SL -510-SA5D-SB-0.0-0.5 SL -510-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-0.0-0.5 SL -513-SA5D-SB-16.0-17.0 SL -513-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-9.0-10.0 SL -514-SA5D-SB-0.0-0.5 SL -514-SA5D-SB-4.0-5.0)	MERCURY	200	20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32677AY320522A (EB1-091813 EB2 -091813)	EFH (C30-C40)	-	69	70.00-130.00	-	EFH (C30-C40)	J (all detects) UJ (all non-detects)

Method: 8270D SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P6WCLCSY261333 (EB1-091813 EB2 -091813)	BENZO(A)ANTHRACENE	-	128	73.00-127.00	-	BENZO(A)ANTHRACENE	J(all detects)

Method: 8082A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32699AQ241313A P32699AY241254A (SL-509-SA5D-SB-0.0-0.5 SL -509-SA5D-SB-4.0-5.0 SL -510-SA5D-SB-0.0-0.5 SL -510-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-0.0-0.5 SL -513-SA5D-SB-16.0-17.0 SL -513-SA5D-SB-4.0-5.0 SL -513-SA5D-SB-9.0-10.0 SL -514-SA5D-SB-0.0-0.5 SL -514-SA5D-SB-4.0-5.0)	Aroclor 5442	96	94	62.00-87.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-091813	1,2,3,4,6,7,8-HPCDD	JB	0.924	9.65	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.629	9.65	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.472	9.65	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JBQ	0.357	9.65	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.392	9.65	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.204	9.65	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.628	9.65	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.488	9.65	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JBQ	0.608	9.65	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.712	9.65	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.400	9.65	PQL	pg/L	
	OCDD	JBQ	1.48	19.3	PQL	pg/L	
	OCDF	JB	1.66	19.3	PQL	pg/L	
EB2-091813	1,2,3,4,6,7,8-HPCDD	JBQ	0.798	9.57	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.430	9.57	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.280	9.57	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.490	9.57	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.317	9.57	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.558	9.57	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JB	0.760	9.57	PQL	pg/L	
	1,2,3,7,8-PECDD	JBQ	0.385	9.57	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.513	9.57	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.324	9.57	PQL	pg/L	
	2,3,7,8-TCDD	JBQ	0.511	1.91	PQL	pg/L	
	OCDD	JB	1.03	19.1	PQL	pg/L	
	OCDF	JB	0.949	19.1	PQL	pg/L	

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-091813	CALCIUM	J	0.0464	0.400	PQL	mg/L	J (all detects)
	MOLYBDENUM	J	0.0083	0.0200	PQL	mg/L	
EB2-091813	CALCIUM	J	0.0550	0.400	PQL	mg/L	J (all detects)
	MOLYBDENUM	J	0.0025	0.0200	PQL	mg/L	

Method: 6850

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB2-091813	PERCHLORATE	J	0.25	1.0	PQL	ug/L	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 8270D SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-091813	Diethylphthalate	J	0.30	1.0	PQL	ug/L	J (all detects)
	Di-n-butylphthalate	J	0.20	1.0	PQL	ug/L	
EB2-091813	Diethylphthalate	J	0.30	1.0	PQL	ug/L	J (all detects)
	Di-n-butylphthalate	J	0.19	1.0	PQL	ug/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-509-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.639	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.194	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0828	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0708	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.108	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.352	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0822	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.501	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.891	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.210	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.447	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0808	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.182	5.35	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0485	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.116	1.07	PQL	ng/Kg	
	OCDD	JB	4.32	10.7	PQL	ng/Kg	
	OCDF	JB	0.538	10.7	PQL	ng/Kg	
SL-510-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.249	5.30	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0788	5.30	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.114	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0350	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.114	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.191	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0800	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.302	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.470	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0739	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.330	5.30	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0797	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.113	5.30	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0631	1.06	PQL	ng/Kg	
	OCDD	JB	0.924	10.6	PQL	ng/Kg	
	OCDF	JB	0.163	10.6	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-513-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.193	5.49	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0945	5.49	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.139	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.104	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.158	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.191	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.141	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.288	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.455	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.263	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.350	5.49	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.118	5.49	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.218	5.49	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0600	1.10	PQL	ng/Kg	
	OCDD	JB	0.370	11.0	PQL	ng/Kg	
	OCDF	JB	0.204	11.0	PQL	ng/Kg	
SL-514-SA5D-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.281	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.135	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0947	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.166	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.223	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.300	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.214	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.384	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.566	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.335	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.352	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.147	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.276	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0756	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0607	1.10	PQL	ng/Kg	
	OCDD	JB	0.748	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.308	11.0	PQL	ng/Kg	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-509-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.946	1.07	PQL	mg/Kg	J (all detects)
	BORON	J	10.3	10.7	PQL	mg/Kg	
	MOLYBDENUM	J	0.232	2.15	PQL	mg/Kg	
	SODIUM	J	89.8	107	PQL	mg/Kg	
	TIN	J	2.76	10.7	PQL	mg/Kg	
	Zirconium	J	3.79	5.37	PQL	mg/Kg	
SL-509-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.981	1.15	PQL	mg/Kg	J (all detects)
	BORON	J	11.0	11.5	PQL	mg/Kg	
	TIN	J	3.30	11.5	PQL	mg/Kg	
	Zirconium	J	3.27	5.75	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-510-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.964	1.09	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.329	2.18	PQL	mg/Kg	
	SODIUM	J	85.1	109	PQL	mg/Kg	
	TIN	J	3.12	10.9	PQL	mg/Kg	
	Zirconium	J	4.32	5.46	PQL	mg/Kg	
SL-510-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.955	1.16	PQL	mg/Kg	J (all detects)
	BORON	J	10.9	11.6	PQL	mg/Kg	
	MOLYBDENUM	J	0.216	2.32	PQL	mg/Kg	
	TIN	J	3.25	11.6	PQL	mg/Kg	
	Zirconium	J	3.15	5.80	PQL	mg/Kg	
SL-513-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.983	1.12	PQL	mg/Kg	J (all detects)
	BORON	J	8.61	11.2	PQL	mg/Kg	
	SODIUM	J	102	112	PQL	mg/Kg	
	TIN	J	2.93	11.2	PQL	mg/Kg	
	Zirconium	J	1.81	5.61	PQL	mg/Kg	
SL-513-SA5D-SB-16.0-17.0	BERYLLIUM	J	0.638	1.08	PQL	mg/Kg	J (all detects)
	BORON	J	3.44	10.8	PQL	mg/Kg	
	SODIUM	J	92.5	108	PQL	mg/Kg	
	TIN	J	2.69	10.8	PQL	mg/Kg	
	Zirconium	J	1.10	5.41	PQL	mg/Kg	
SL-513-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.953	1.16	PQL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.435	2.32	PQL	mg/Kg	
	SODIUM	J	106	116	PQL	mg/Kg	
	TIN	J	3.44	11.6	PQL	mg/Kg	
	Zirconium	J	3.52	5.81	PQL	mg/Kg	
SL-513-SA5D-SB-9.0-10.0	BERYLLIUM	J	0.556	1.10	PQL	mg/Kg	J (all detects)
	BORON	J	9.71	11.0	PQL	mg/Kg	
	CADMIUM	J	0.289	1.10	PQL	mg/Kg	
	TIN	J	2.68	11.0	PQL	mg/Kg	
	Zirconium	J	2.61	5.52	PQL	mg/Kg	
SL-514-SA5D-SB-0.0-0.5	BERYLLIUM	J	0.979	1.12	PQL	mg/Kg	J (all detects)
	BORON	J	9.56	11.2	PQL	mg/Kg	
	TIN	J	3.14	11.2	PQL	mg/Kg	
	Zirconium	J	4.19	5.60	PQL	mg/Kg	
SL-514-SA5D-SB-4.0-5.0	BERYLLIUM	J	0.810	1.12	PQL	mg/Kg	J (all detects)
	BORON	J	10.6	11.2	PQL	mg/Kg	
	CADMIUM	J	0.149	1.12	PQL	mg/Kg	
	TIN	J	2.98	11.2	PQL	mg/Kg	
	Zirconium	J	3.34	5.60	PQL	mg/Kg	

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-509-SA5D-SB-0.0-0.5	SELENIUM	J	0.268	0.430	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0515	0.215	PQL	mg/Kg	
SL-509-SA5D-SB-4.0-5.0	SELENIUM	J	0.146	0.460	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0371	0.230	PQL	mg/Kg	

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-510-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.298 0.0452	0.437 0.218	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-510-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.165 0.0380	0.464 0.232	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-513-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.157 0.0537	0.449 0.224	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-513-SA5D-SB-4.0-5.0	SELENIUM SILVER	J J	0.176 0.0439	0.465 0.232	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-513-SA5D-SB-9.0-10.0	SELENIUM	J	0.208	0.441	PQL	mg/Kg	J (all detects)
SL-514-SA5D-SB-0.0-0.5	SELENIUM SILVER	J J	0.187 0.0455	0.448 0.224	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-514-SA5D-SB-4.0-5.0	SILVER	J	0.0401	0.224	PQL	mg/Kg	J (all detects)

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-509-SA5D-SB-0.0-0.5	MERCURY	J	0.0129	0.0174	PQL	mg/Kg	J (all detects)
SL-509-SA5D-SB-4.0-5.0	MERCURY	J	0.0134	0.0182	PQL	mg/Kg	J (all detects)
SL-510-SA5D-SB-0.0-0.5	MERCURY	J	0.0114	0.0176	PQL	mg/Kg	J (all detects)
SL-510-SA5D-SB-4.0-5.0	MERCURY	J	0.0124	0.0183	PQL	mg/Kg	J (all detects)
SL-513-SA5D-SB-16.0-17.0	MERCURY	J	0.0103	0.0170	PQL	mg/Kg	J (all detects)
SL-513-SA5D-SB-4.0-5.0	MERCURY	J	0.0149	0.0193	PQL	mg/Kg	J (all detects)
SL-513-SA5D-SB-9.0-10.0	MERCURY	J	0.0125	0.0187	PQL	mg/Kg	J (all detects)
SL-514-SA5D-SB-4.0-5.0	MERCURY	J	0.0124	0.0180	PQL	mg/Kg	J (all detects)

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-510-SA5D-SB-0.0-0.5	4,4'-DDT	J	0.47	1.9	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: PH110 **Laboratory: LL**

EDD Filename: PH110 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8270D SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-509-SA5D-SB-0.0-0.5	2-METHYLNAPHTHALENE	J	0.89	1.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.6	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.3	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.6	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.1	1.8	PQL	ug/Kg	
	PYRENE	J	0.90	1.8	PQL	ug/Kg	
SL-509-SA5D-SB-4.0-5.0	NAPHTHALENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	PHENANTHRENE	J	1.0	1.9	PQL	ug/Kg	
SL-510-SA5D-SB-0.0-0.5	ANTHRACENE	J	0.80	1.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.4	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	
	FLUORENE	J	0.85	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	1.8	PQL	ug/Kg	
SL-510-SA5D-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	0.92	1.9	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	1.4	1.9	PQL	ug/Kg	
SL-513-SA5D-SB-0.0-0.5	ANTHRACENE	J	0.45	1.9	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.86	1.9	PQL	ug/Kg	
SL-513-SA5D-SB-4.0-5.0	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
SL-514-SA5D-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	0.85	1.9	PQL	ug/Kg	J (all detects)
	PHENANTHRENE	J	1.0	1.9	PQL	ug/Kg	

LDC #: 30695M4

SDG #: PH110

Laboratory: Eurofins Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11/11/13

Page: 1 of 1

Reviewer: CL

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010C/6020A/7000)

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	—	Sampling dates: 9/18/13
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	DUP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB=1,2 FB= ~~FB-041113~~ 041613 (PH024) 3-2

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:

1	EB1-091813	11	SL-509-SA5D-SB-0.0-0.5	21		31	
2	EB2-091813	12	SL-509-SA5D-SB-4.0-5.0	22		32	
3	SL-510-SA5D-SB-0.0-0.5	13	(#6) MS	23		33	
4	SL-510-SA5D-SB-4.0-5.0	14	MSD	24		34	
5	SL-513-SA5D-SB-0.0-0.5	15	DUP	25		35	
6	SL-513-SA5D-SB-4.0-5.0	16	(#7) MS (#8)	26		36	
7	SL-513-SA5D-SB-9.0-10.0	17	DUP	27		37	
8	SL-513-SA5D-SB-16.0-17.0	18	MSD	28		38	
9	SL-514-SA5D-SB-0.0-0.5	19		29		39	
10	SL-514-SA5D-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 30695M4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg Reason: F
Sampling date: 4/16/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification												
	FB-041613 (SDG: PH032)	Action Limit	3	4	6	11								
Sn	0.0029	1.45												
Mo	0.0132	~~0.33~~ 6.6 m	0.329	0.216	0.435	0.232								

Sampling date: 9/18/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	EB1-091813 (SDG: PH110)	Action Limit	3, 4, 6, 11										
Ca	0.0464	23.2											
Mo	0.0083	4.15	See FB										

Sampling date: 9/18/13 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: None

Analyte	Blank ID	Sample Identification											
	EB2-091813 (SDG: PH110)	Action Limit											
Ca	0.055	27.5											
Mo	0.0025	1.25											

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 #: 30695M4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer:
2nd Reviewer:

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	1	2									
Mo			2.1	10.5	8.3	2.5									

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All Soil

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	3	4	6	11							
Mo			1.7	0.85	0.329 ~~0.33~~	0.216 ~~0.22~~	0.435	0.232							

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.

eurofins | Lancaster Laboratories

RPD OK -qual J/UJ/A

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH110
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7203252BKG Matrix Spike Lab Sample ID: 7203252MS Matrix Spike Duplicate Lab Sample ID: 7203252MSD
Batch Id(s): P26337A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		24851.9020		32350.9663		33236.1277		198.0198	198.0198	MG/KG	3787		4234		3			20	P
Antimony		0.7327	U	31.1495		31.4426		49.5050	49.5050	MG/KG	63	N	64	N	1		75 - 125	20	P
Arsenic		5.8079		20.0901		18.9624		14.8515	14.8515	MG/KG	96		89		6		75 - 125	20	P
Barium		110.4802		303.4079		300.1743		198.0198	198.0198	MG/KG	97		96		1		75 - 125	20	P
Beryllium		0.8119	B	5.5921		5.5188		4.9505	4.9505	MG/KG	97		95		1		75 - 125	20	P
Boron		10.3851		194.1594		194.7238		198.0198	198.0198	MG/KG	93		93		0		75 - 125	20	P
Cadmium		0.0752	U	4.2050		4.3020		4.9505	4.9505	MG/KG	85		87		2		75 - 125	20	P
Calcium		8926.2168		9941.3040		9970.0673		396.0396	396.0396	MG/KG	256		264		0			20	P
Chromium		33.5525		57.4574		57.5119		19.8020	19.8020	MG/KG	121		121		0		75 - 125	20	P
Cobalt		9.1129		53.3663		52.3594		49.5050	49.5050	MG/KG	89		87		2		75 - 125	20	P
Copper		15.6782		41.0703		40.9337		24.7525	24.7525	MG/KG	103		102		0		75 - 125	20	P
Iron		32089.5149		45155.2079		33127.9703		99.0099	99.0099	MG/KG	13196		1049		31	*		20	P
Lead		9.6069		24.2891		22.1782		14.8515	14.8515	MG/KG	99		85		9		75 - 125	20	P
Lithium		23.9564		121.5129		123.3465		99.0099	99.0099	MG/KG	99		100		1		75 - 125	20	P
Magnesium		6882.4693		7626.0891		7945.1446		198.0198	198.0198	MG/KG	376		537		4			20	P
Manganese		382.9515		495.7980		466.6663		49.5050	49.5050	MG/KG	228		169	*	6			20	P
Molybdenum		0.3703	B	179.7970		177.6564		198.0198	198.0198	MG/KG	91		90		1		75 - 125	20	P
Nickel		18.5683		65.2851		63.0475		49.5050	49.5050	MG/KG	94		90		3		75 - 125	20	P
Phosphorus		294.6485		443.5297		406.6030		99.0099	99.0099	MG/KG	150	N	113		9		75 - 125	20	P
Potassium		4029.8099		5445.7604		5548.3386		990.0990	990.0990	MG/KG	143		153		2			20	P
Selenium	78	0.1501	B	2.0119		2.2515		1.9802	1.9802	MG/KG	94		106		11		75 - 125	20	MS
Silver	107	0.0374	B	9.6059		10.2772		9.9010	9.9010	MG/KG	97		103		7		75 - 125	20	MS
Sodium		90.2663	B	1018.0267		1021.6970		990.0990	990.0990	MG/KG	94		94		0		75 - 125	20	P
Strontium	88	39.1089		45.6436		51.0693		7.9208	7.9208	MG/KG	83		151		11			20	MS
Thallium	203	0.3430		0.7028		0.7762		0.3960	0.3960	MG/KG	91		109		10		75 - 125	20	MS
Tin		2.9277	B	346.9327		344.9475		396.0396	396.0396	MG/KG	87		86		1		75 - 125	20	P
Titanium		978.8832		1615.1752		1627.6079		99.0099	99.0099	MG/KG	643		655		1			20	P
Vanadium		61.0861		131.5851		122.4139		49.5050	49.5050	MG/KG	142	N	124		7		75 - 125	20	P
Zinc		71.1584		117.9396		116.4752		49.5050	49.5050	MG/KG	94		92		1		75 - 125	20	P
Zirconium		2.9960	B	100.8327		100.8327		99.0099	99.0099	MG/KG	99		99		0		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH110
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7203252BKG
Duplicate Lab Sample ID: 7203252DUP
Batch ID(s): P26337A
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			24851.9020		23242.3040		7		P
Antimony			0.7327	U	0.7327	U			P
Arsenic		4.0	5.8079		5.8168		0		P
Barium			110.4802		108.8653		1		P
Beryllium			0.8119	B	0.7941	B	2		P
Boron		9.9	10.3851		9.3248	B	11		P
Cadmium			0.0752	U	0.0752	U			P
Calcium			8926.2168		10329.4079		15		P
Chromium			33.5525		32.1129		4		P
Cobalt			9.1129		9.3366		2		P
Copper			15.6782		15.4515		1		P
Iron			32089.5149		31253.7228		3		P
Lead		3.0	9.6069		9.6238		0		P
Lithium			23.9564		22.9158		4		P
Magnesium			6882.4693		6682.5129		3		P
Manganese			382.9515		392.3455		2		P
Molybdenum			0.3703	B	0.1683	U	200		P
Nickel			18.5683		18.4733		1		P
Phosphorus			294.6485		302.1416		3		P
Potassium			4029.8099		3856.3515		4		P
Selenium	78		0.1501	B	0.1318	B	13		MS
Silver	107		0.0374	B	0.0319	B	16		MS
Sodium			90.2663	B	90.6040	B	0		P
Strontium	88		39.1089		39.5644		1		MS
Thallium	203	0.2	0.3430		0.3178		8		MS
Tin			2.9277	B	2.6743	B	9		P
Titanium			978.8832		876.5604		11		P
Vanadium			61.0861		58.1010		5		P
Zinc			71.1584		69.0267		3		P
Zirconium			2.9960	B	4.7554	B	45		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

ok by difference

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH110
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7203253BKG
Duplicate Lab Sample ID: 7203253DUP
Batch ID(s): P26238B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Mercury			0.0110	B	0.0099	U	200		CV

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

gt 20 difference

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

Data Validation Report
Santa Susana Field Laboratory

Subarea 5D

SDG: PH111

Prepared for

CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by

Laboratory Data Consultants, Inc
2701 Loker Ave West, Suite 220
Carlsbad, California 92010

December 11, 2013

INTRODUCTION

This Data Validation Report (DVR) presents Level III data validation results for samples collected on September 19, 2013. Data validation was performed in accordance with 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), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005) and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Semivolatiles (SVOCs) by EPA SW 846 Method 8270D utilizing Selective Ion Monitoring (SIM)
Pesticides by EPA SW 846 Method 8081A
Polychlorinated Biphenyls (PCBs) by EPA SW 846 Method 8082A
Metals by EPA SW 846 Method 6010C, 6020A and 7471B
Herbicides by EPA SW 846 Method 8151A
Perchlorate by EPA Method 6850
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW 846 Method 8015M
TPH as Extractables by EPA SW 846 Method 8015M
Dioxins and Dibenzofurans by EPA Method 1613B

Wet Chemistry:
Hexavalent Chromium by EPA Method 7199

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment II. Level III Automated Data Review outliers are presented in Enclosure I.

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibration blanks (ICB/CCBs), surrogates, internal standards (dioxins only), matrix spike/matrix spike duplicates (MS/MSD), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), method blanks, trip blanks, equipment blanks, field blanks and field duplicates. No samples in this SDG were subjected to Level IV evaluation.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of ICB/CCBs, which were validated manually. Quality assurance (QA)/QC criteria specified in the QAPP and CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

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.

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 QC criteria.

II. Initial Calibration

Initial Calibration data were not reviewed for level III.

III. Continuing Calibration

Continuing calibration data were not reviewed for level III.

IV. Blanks

Method blanks were performed at the required frequencies. No contaminant concentrations were detected in the method or preparation blanks with the exception of two blanks for metals and dioxins. The associated sample results were qualified as non-detected (U) due to method blank contamination as applicable. The sample results that were not detected or were significantly greater than the concentrations found in the associated blanks were not qualified. The details regarding the qualification of data are provided in Enclosure I.

No contaminant concentrations were detected in the initial or continuing calibration blanks.

V. 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 exception of one sample for PCBs. No data were qualified due to high %Rs since the associated results were non-detected.

VI. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for level III.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were performed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pairs for dioxins. The associated sample results were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

VIII. Laboratory Duplicates Sample

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for the samples in this SDG, and therefore laboratory duplicate analyses were not performed for this SDG.

IX. 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 with the exception of one LCS/LCSD pair for PCBs. No data were qualified due to high %Rs since the associated results were non-detected. The details regarding the qualification of data are provided in Enclosure I.

X. Internal Standards

Internal standards were reviewed for dioxins. Percent recoveries (%R) were within QC limits.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the RL as detected were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG PH111	All compounds reported as detected below the RL.	J (all detects)	A

XIII. Field Duplicate Samples

One field duplicate pair was collected and analyzed for pesticides, perchlorate and dioxins. All RPDs were within QC limits with the exception of several dioxins. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The field duplicate result comparisons are provided in Enclosure I.

XIV. Field Blank Samples

One trip blank was collected and analyzed for TPH as gasoline. No volatile contaminants were found in the trip blank.

One equipment blank (from SDG PH110) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins and hexavalent chromium. The equipment blank had detections for SVOCs, metals and dioxins. The associated sample results were not detected or were significantly greater than the concentrations found in the equipment blank, therefore no data were qualified.

One field blank (from SDG PH032) was collected and analyzed for SVOCs, pesticides, PCBs, metals, herbicides, perchlorate, TPH as gasoline, TPH as extractables, dioxins and hexavalent chromium. The field blank had detections for SVOCs, metals and dioxins. The associated sample results were not detected or were significantly greater than the concentrations found in the field blank, therefore no data were qualified

XV. Overall Assessment of Data

No data associated with this sampling event were rejected. The overall assessment of QA/QC data review by automated and manual validation of this sampling event met project requirements and analytical completeness levels with the exceptions noted in the above sections. All data are deemed useable for the intended use.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Sep-2013	TB-091913	7204675	TB	5030B	8015M	III
19-Sep-2013	SL-580-SA5D-SB-0.0-0.5	7204681	N	3060A	7199	III
19-Sep-2013	SL-580-SA5D-SB-0.0-0.5	7204681	N	METHOD	6850	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5	7204677	N	3546	8081B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5	7204677	N	METHOD	1613B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5	7204677	N	METHOD	6850	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MS	7204678	MS	3546	8081B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MS	7204678	MS	METHOD	1613B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MS	7204678	MS	METHOD	6850	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MSD	7204679	MSD	3546	8081B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MSD	7204679	MSD	METHOD	1613B	III
19-Sep-2013	SL-579-SA5D-SB-0.0-0.5MSD	7204679	MSD	METHOD	6850	III
19-Sep-2013	SL-879-SA5D-SB-0.0-0.5	7204680	FD	3546	8081B	III
19-Sep-2013	SL-879-SA5D-SB-0.0-0.5	7204680	FD	METHOD	1613B	III
19-Sep-2013	SL-879-SA5D-SB-0.0-0.5	7204680	FD	METHOD	6850	III
19-Sep-2013	SL-581-SA5D-SB-0.0-0.5	7204682	N	3060A	7199	III
19-Sep-2013	SL-581-SA5D-SB-0.0-0.5	7204682	N	3546	8270D SIM	III
19-Sep-2013	SL-581-SA5D-SB-2.5-3.5	7204683	N	3060A	7199	III
19-Sep-2013	SL-581-SA5D-SB-2.5-3.5	7204683	N	3546	8270D SIM	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	3050B	6010C	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	3050B	6020A	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	3546	8015M	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	3546	8082A	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	3546	8270D SIM	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	METHOD	1613B	III
19-Sep-2013	SL-577-SA5D-SB-0.0-0.5	7204676	N	METHOD	7471B	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
19-Sep-2013	SL-578-SA5D-SB-0.0-0.5	7204686	N	3546	8015M	III
19-Sep-2013	SL-578-SA5D-SB-0.0-0.5	7204686	N	3546	8270D SIM	III
19-Sep-2013	SL-578-SA5D-SB-0.0-0.5	7204686	N	3550B	8151A	III
19-Sep-2013	SL-578-SA5D-SB-0.0-0.5	7204686	N	METHOD	1613B	III
19-Sep-2013	SL-576-SA5D-SB-0.0-0.5	7204684	N	3546	8015M	III
19-Sep-2013	SL-576-SA5D-SB-0.0-0.5	7204684	N	3546	8081B	III
19-Sep-2013	SL-576-SA5D-SB-0.0-0.5	7204684	N	3550B	8151A	III
19-Sep-2013	SL-576-SA5D-SB-0.0-0.5	7204684	N	METHOD	1613B	III
19-Sep-2013	SL-576-SA5D-SB-3.5-4.5	7204685	N	3546	8015M	III
19-Sep-2013	SL-576-SA5D-SB-3.5-4.5	7204685	N	3546	8081B	III
19-Sep-2013	SL-576-SA5D-SB-3.5-4.5	7204685	N	3550B	8151A	III
19-Sep-2013	SL-576-SA5D-SB-3.5-4.5	7204685	N	5035A	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 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-577-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 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
ARSENIC	1.81	J	0.687	MDL	3.93	PQL	mg/Kg	J	Z
BERYLLIUM	0.544	J	0.0658	MDL	0.982	PQL	mg/Kg	J	Z
CADMIUM	0.799	J	0.0746	MDL	0.982	PQL	mg/Kg	J	Z
TIN	2.37	J	0.216	MDL	9.82	PQL	mg/Kg	U	B

Method Category: **METALS**

Method: **6020A** ***Matrix:*** **SO**

Sample ID: **SL-577-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 10:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.253	J	0.0982	MDL	0.393	PQL	mg/Kg	J	Z

Sample ID: **SL-577-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 10:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.187	J	0.0295	MDL	0.196	PQL	mg/Kg	J	Z

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-576-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.44	JB	0.0169	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.748	JB	0.0120	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.104	JB	0.0172	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0940	JB	0.0264	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.156	JB	0.0229	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.377	JB	0.0285	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.149	JB	0.0214	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.397	JB	0.0254	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.294	JB	0.0218	MDL	4.91	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0919	JBQ	0.0227	MDL	4.91	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-576-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.366	JB	0.0226	MDL	4.91	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.160	JB	0.0207	MDL	4.91	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.475	JB	0.0220	MDL	4.91	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.278	JQ	0.0493	MDL	0.982	PQL	ng/Kg	J	Z
OCDF	1.34	JB	0.0162	MDL	9.82	PQL	ng/Kg	J	Z

Sample ID: **SL-577-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 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
1,2,3,4,6,7,8-HPCDD	0.148	JBQ	0.0219	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0872	JB	0.0102	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0451	JB	0.0151	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0610	JBQ	0.0172	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0751	JBQ	0.0174	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0773	JBQ	0.0183	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0551	JBQ	0.0153	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0378	JBQ	0.0174	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0745	JB	0.0198	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0627	JBQ	0.0267	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.107	JBQ	0.0199	MDL	4.98	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0553	JBQ	0.0167	MDL	4.98	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0442	JBQ	0.0199	MDL	4.98	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0714	JBQ	0.0514	MDL	0.996	PQL	ng/Kg	U	B
OCDD	0.620	JB	0.0221	MDL	9.96	PQL	ng/Kg	U	B
OCDF	0.181	JBQ	0.0353	MDL	9.96	PQL	ng/Kg	U	B

Sample ID: **SL-578-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.40	JB	0.0182	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.597	JB	0.0142	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0881	JBQ	0.0200	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0716	JB	0.0242	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.113	JBQ	0.0183	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.320	JB	0.0249	MDL	5.08	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-578-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	0.143	JB	0.0173	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.348	JB	0.0228	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.504	JB	0.0209	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0832	JBQ	0.0247	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.234	JB	0.0203	MDL	5.08	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.150	JB	0.0172	MDL	5.08	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.364	JBQ	0.0196	MDL	5.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.175	J	0.0451	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	1.32	JB	0.0131	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: **SL-579-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 8:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.36	JB	0.0230	MDL	4.98	PQL	ng/Kg	J	Z, FD
1,2,3,4,6,7,8-HPCDF	0.422	JB	0.0137	MDL	4.98	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.0917	JB	0.0196	MDL	4.98	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.0742	JB	0.0255	MDL	4.98	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.125	JBQ	0.0259	MDL	4.98	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.316	JB	0.0272	MDL	4.98	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.121	JB	0.0236	MDL	4.98	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.390	JB	0.0255	MDL	4.98	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.506	JB	0.0257	MDL	4.98	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	4.98	U	0.0281	MDL	4.98	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.226	JBQ	0.0222	MDL	4.98	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.139	JBQ	0.0253	MDL	4.98	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.235	JB	0.0217	MDL	4.98	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.996	U	0.0491	MDL	0.996	PQL	ng/Kg	UJ	FD
2,3,7,8-TCDF	0.113	JQ	0.0482	MDL	0.996	PQL	ng/Kg	J	Z, FD
OCDD	12.9	B	0.0166	MDL	9.96	PQL	ng/Kg	J	Q, Q, FD
OCDF	0.803	JB	0.0250	MDL	9.96	PQL	ng/Kg	UJ	B, FD

Sample ID: **SL-879-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.30	B	0.0297	MDL	4.90	PQL	ng/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: **SL-879-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.05	JB	0.0184	MDL	4.90	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.170	JBQ	0.0277	MDL	4.90	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.121	JBQ	0.0310	MDL	4.90	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.212	JB	0.0337	MDL	4.90	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.697	JB	0.0321	MDL	4.90	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.220	JB	0.0291	MDL	4.90	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.882	JB	0.0293	MDL	4.90	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.745	JB	0.0353	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.166	JBQ	0.0370	MDL	4.90	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDF	0.588	JB	0.0323	MDL	4.90	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.208	JB	0.0299	MDL	4.90	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.664	JB	0.0316	MDL	4.90	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDD	0.0995	JBQ	0.0405	MDL	0.980	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDF	0.307	JQ	0.0778	MDL	0.980	PQL	ng/Kg	J	Z, FD
OCDD	54.4	B	0.0278	MDL	9.80	PQL	ng/Kg	J	FD
OCDF	2.82	JB	0.0270	MDL	9.80	PQL	ng/Kg	J	Z, FD

Method Category: **SVOA**

Method: **8015M** ***Matrix:*** **SO**

Sample ID: **SL-576-SA5D-SB-3.5-4.5** ***Collected:*** **9/19/2013 1:30:00** ***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)	5.1	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z

Sample ID: **SL-578-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.6	J	2.1	MDL	5.3	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8081B** ***Matrix:*** **SO**

Sample ID: **SL-576-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.40	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-579-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 8:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.86	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
4,4'-DDT	0.98	J	0.36	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-879-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 8:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.82	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z
4,4'-DDT	1.0	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-578-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 12:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.4	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-578-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 12:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.2	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.2	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.89	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.86	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-581-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 9:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method Category: **SVOA**

Method: **8270D SIM** ***Matrix:*** **SO**

Sample ID: **SL-581-SA5D-SB-0.0-0.5** ***Collected:*** **9/19/2013 9:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.98	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	12	J	6.0	MDL	18	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.33	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	1.1	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.87	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	0.90	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-581-SA5D-SB-2.5-3.5** ***Collected:*** **9/19/2013 9:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.74	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
L	Laboratory Control Spike Upper Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

PH111

Method Blank Outlier Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2680B370155	9/27/2013 1:55:00 AM	1,2,3,4,6,7,8-HPCDD	0.127 ng/Kg	SL-576-SA5D-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0505 ng/Kg	SL-577-SA5D-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0860 ng/Kg	SL-578-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0483 ng/Kg	SL-579-SA5D-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0573 ng/Kg	SL-879-SA5D-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0406 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0517 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0644 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0692 ng/Kg	
		1,2,3,7,8-PECDD	0.103 ng/Kg	
		1,2,3,7,8-PECDF	0.0673 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0444 ng/Kg	
		2,3,4,7,8-PECDF	0.0538 ng/Kg	
		2,3,7,8-TCDD	0.104 ng/Kg	
		OCDD	0.212 ng/Kg	
		OCDF	0.223 ng/Kg	

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-576-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.104 ng/Kg	0.104U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0940 ng/Kg	0.0940U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.156 ng/Kg	0.156U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.294 ng/Kg	0.294U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0919 ng/Kg	0.0919U ng/Kg
SL-576-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.160 ng/Kg	0.160U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.148 ng/Kg	0.148U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0872 ng/Kg	0.0872U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0451 ng/Kg	0.0451U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0610 ng/Kg	0.0610U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0751 ng/Kg	0.0751U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0773 ng/Kg	0.0773U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0551 ng/Kg	0.0551U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0378 ng/Kg	0.0378U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0745 ng/Kg	0.0745U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0627 ng/Kg	0.0627U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.107 ng/Kg	0.107U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0553 ng/Kg	0.0553U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0442 ng/Kg	0.0442U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0714 ng/Kg	0.0714U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	OCDD	0.620 ng/Kg	0.620U ng/Kg
SL-577-SA5D-SB-0.0-0.5(RES)	OCDF	0.181 ng/Kg	0.181U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0881 ng/Kg	0.0881U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0716 ng/Kg	0.0716U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.113 ng/Kg	0.113U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.143 ng/Kg	0.143U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0832 ng/Kg	0.0832U ng/Kg
SL-578-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.234 ng/Kg	0.234U ng/Kg

Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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-578-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.150 ng/Kg	0.150U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0917 ng/Kg	0.0917U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0742 ng/Kg	0.0742U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.125 ng/Kg	0.125U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.121 ng/Kg	0.121U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.226 ng/Kg	0.226U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.139 ng/Kg	0.139U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.235 ng/Kg	0.235U ng/Kg
SL-579-SA5D-SB-0.0-0.5(RES)	OCDF	0.803 ng/Kg	0.803U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.170 ng/Kg	0.170U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.121 ng/Kg	0.121U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.212 ng/Kg	0.212U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.220 ng/Kg	0.220U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.166 ng/Kg	0.166U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.208 ng/Kg	0.208U ng/Kg
SL-879-SA5D-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0995 ng/Kg	0.0995U ng/Kg

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P26837AB221826	9/27/2013 6:26:00 PM	CALCIUM TIN ZINC	7.61 mg/Kg 1.45 mg/Kg 0.570 mg/Kg	SL-577-SA5D-SB-0.0-0.5

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-577-SA5D-SB-0.0-0.5(RES)	TIN	2.37 mg/Kg	2.37U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **SO**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-577-SA5D-SB-0.0-0.5	DECACHLOROBIPHENYL	121	45.00-120.00	All Target Analytes	J (all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **1613B**

Matrix: **SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-579-SA5D-SB-0.0-0.5MSD (SL-579-SA5D-SB-0.0-0.5)	OCDD	-	230	40.00-135.00	73 (20.00)	OCDD	J (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: **8082A**
Matrix: **SO**

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P32699AQ241313A **P32699AY241254A** (SL-577-SA5D-SB-0.0-0.5)	Aroclor 5442	96	94	62.00-87.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH111 **Laboratory: LL**

EDD Filename: PH111 **eQAPP Name: CDM_SSFL_131101_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%) SL-579-SA5D-SB-0.0-0.5	Concentration (%) SL-879-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
MOISTURE	1.7	1.7	0		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg) SL-579-SA5D-SB-0.0-0.5	Concentration (ng/Kg) SL-879-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
1,2,3,4,7,8-HxCDD	0.0742	0.121	48	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDF	0.506	0.745	38	50.00	
2,3,4,6,7,8-HXCDF	0.139	0.208	40	50.00	
1,2,3,4,6,7,8-HPCDD	1.36	5.30	118	50.00	J(all detects) UJ(all non-detects)
1,2,3,4,6,7,8-HPCDF	0.422	1.05	85	50.00	
1,2,3,4,7,8,9-HPCDF	0.0917	0.170	60	50.00	
1,2,3,4,7,8-HXCDF	0.125	0.212	52	50.00	
1,2,3,6,7,8-HXCDD	0.316	0.697	75	50.00	
1,2,3,6,7,8-HXCDF	0.121	0.220	58	50.00	
1,2,3,7,8,9-HXCDD	0.390	0.882	77	50.00	
1,2,3,7,8-PECDD	4.98 U	0.166	200	50.00	
1,2,3,7,8-PECDF	0.226	0.588	89	50.00	
2,3,4,7,8-PECDF	0.235	0.664	95	50.00	
2,3,7,8-TCDD	0.996 U	0.0995	200	50.00	
2,3,7,8-TCDF	0.113	0.307	92	50.00	
OCDD	12.9	54.4	123	50.00	
OCDF	0.803	2.82	111	50.00	

Method: 8081B
Matrix: SO

Analyte	Concentration (ug/Kg) SL-579-SA5D-SB-0.0-0.5	Concentration (ug/Kg) SL-879-SA5D-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
4,4'-DDE	0.86	0.82	5	50.00	No Qualifiers Applied
4,4'-DDT	0.98	1.0	2	50.00	