Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.575		0.0779	MDL	0.211	PQL	mg/Kg	J	Q
ARSENIC	7.67		0.0842	MDL	0.421	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.814		0.0168	MDL	0.105	PQL	mg/Kg	J	Q, E
CADMIUM	0.696		0.0463	MDL	0.105	PQL	mg/Kg	J	Q
CHROMIUM	30.4		0.126	MDL	0.421	PQL	mg/Kg	J	Q
COBALT	12.5		0.0211	MDL	0.105	PQL	mg/Kg	J	Q, E
COPPER	20.3		0.0842	MDL	0.421	PQL	mg/Kg	J	Q
LEAD	25.1		0.0107	MDL	0.211	PQL	mg/Kg	J	Q, E
NICKEL	19.5		0.105	MDL	0.421	PQL	mg/Kg	J	Q, A
SILVER	0.0572	J	0.0150	MDL	0.105	PQL	mg/Kg	J	Z, Q
THALLIUM	0.326		0.0316	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.208	J	0.0611	MDL	0.421	PQL	mg/Kg	J	Z, Q

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.797		0.0527	MDL	0.105	PQL	mg/Kg	J	Q, E

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	150		0.112	MDL	0.421	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 *Collected:* 6/3/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.21	U	0.21	MDL	1.0	PQL	mg/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-027-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 2:50:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.53	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-052-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 4:04:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.33	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-152-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.65	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-154-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.29	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-155-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z, FD

Sample ID: SL-157-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
HEXAVALENT CHROMIUM	0.44	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-160-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
HEXAVALENT CHROMIUM	0.32	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-162-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 2:25:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.69	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
HEXAVALENT CHROMIUM	0.37	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 *Collected:* 6/3/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0175	J	0.0028	MDL	0.0989	PQL	mg/Kg	UJ	B, B, FD

Sample ID: SL-019-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 11:16:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0294	J	0.0033	MDL	0.115	PQL	mg/Kg	U	B

Sample ID: SL-019-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 2:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0162	J	0.0031	MDL	0.108	PQL	mg/Kg	U	B, B

Sample ID: SL-027-SA5DN-SB-14.0-15.0 *Collected:* 6/3/2011 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
MERCURY	0.0119	J	0.0031	MDL	0.110	PQL	mg/Kg	U	B, B

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0185	J	0.0031	MDL	0.109	PQL	mg/Kg	U	B, B

Sample ID: SL-052-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 4:08:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0044	J	0.0032	MDL	0.111	PQL	mg/Kg	U	B, B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-152-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0136	J	0.0030	MDL	0.104	PQL	mg/Kg	U	B

Sample ID: SL-153-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
MERCURY	0.0496	J	0.0030	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-155-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0029	U	0.0029	MDL	0.0998	PQL	mg/Kg	UJ	FD

Sample ID: SL-156-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 9:45:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0247	J	0.0030	MDL	0.106	PQL	mg/Kg	U	B

Sample ID: SL-157-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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	0.0110	J	0.0031	MDL	0.110	PQL	mg/Kg	U	B, B

Sample ID: SL-159-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
MERCURY	0.0261	J	0.0030	MDL	0.105	PQL	mg/Kg	U	B

Sample ID: SL-160-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
MERCURY	0.0165	J	0.0028	MDL	0.0991	PQL	mg/Kg	U	B, B

Sample ID: SL-162-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 2:25:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0274	J	0.0032	MDL	0.111	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0316	J	0.0032	MDL	0.111	PQL	mg/Kg	U	B

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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	0.0657	J	0.0029	MDL	0.103	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 1625C **Matrix: SO**

Sample ID: SL-019-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 2:50:00 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
N-NITROSODIMETHYLAMINE	40.2		18.6	MDL	37.1	PQL	ng/Kg	U	B

Sample ID: SL-027-SA5DN-SB-14.0-15.0 *Collected:* 6/3/2011 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
N-NITROSODIMETHYLAMINE	41.7		18.5	MDL	36.9	PQL	ng/Kg	U	B

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 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
N-NITROSODIMETHYLAMINE	45.4		19.1	MDL	38.3	PQL	ng/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA2 *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	7.4	J	4.3	MDL	13	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** AQ

Sample ID: EB13-SA5DN-SS-060311 *Collected:* 6/3/2011 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
4,4'-DDD	0.0052	U	0.0052	MDL	0.021	PQL	ug/L	UJ	C
4,4'-DDE	0.0052	U	0.0052	MDL	0.021	PQL	ug/L	UJ	C, C
4,4'-DDT	0.0052	U	0.0052	MDL	0.021	PQL	ug/L	UJ	C
ENDOSULFAN II	0.016	U	0.016	MDL	0.021	PQL	ug/L	UJ	C
ENDOSULFAN SULFATE	0.0060	U	0.0060	MDL	0.021	PQL	ug/L	UJ	C
ENDRIN	0.0084	U	0.0084	MDL	0.021	PQL	ug/L	UJ	C, C
ENDRIN ALDEHYDE	0.021	U	0.021	MDL	0.10	PQL	ug/L	UJ	C
HEPTACHLOR	0.0086	J	0.0027	MDL	0.010	PQL	ug/L	J	Z
METHOXYCHLOR	0.031	U	0.031	MDL	0.10	PQL	ug/L	UJ	C

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 *Collected:* 6/3/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.45	U	0.45	MDL	0.45	PQL	ug/Kg	UJ	C, FD
4,4'-DDT	0.30	U	0.30	MDL	0.36	PQL	ug/Kg	UJ	C, FD
ALDRIN	0.069	U	0.069	MDL	0.17	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.036	U	0.036	MDL	0.17	PQL	ug/Kg	UJ	C
BETA-BHC	0.063	U	0.063	MDL	0.17	PQL	ug/Kg	UJ	C
Chlordane	4.0		0.84	MDL	3.6	PQL	ug/Kg	J	C
DELTA-BHC	0.038	U	0.038	MDL	0.17	PQL	ug/Kg	UJ	C, FD
DIELDRIN	0.069	U	0.069	MDL	0.36	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.046	U	0.046	MDL	0.17	PQL	ug/Kg	UJ	C
ENDOSULFAN II	0.12	U	0.12	MDL	0.36	PQL	ug/Kg	UJ	C, FD
ENDOSULFAN SULFATE	0.069	U	0.069	MDL	0.36	PQL	ug/Kg	UJ	C
ENDRIN	0.069	U	0.069	MDL	0.36	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.29	U	0.29	MDL	0.36	PQL	ug/Kg	UJ	C, FD
ENDRIN KETONE	0.075	J	0.069	MDL	0.36	PQL	ug/Kg	J	Z, C, *XIII, FD
gamma-BHC (Lindane)	0.036	U	0.036	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.063	U	0.063	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.036	U	0.036	MDL	0.17	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.36	U	0.36	MDL	1.7	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: DUP-13-SA5DN-QC-060311 **Collected:** 6/3/2011 10:55:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MIREX	0.069	U	0.069	MDL	0.36	PQL	ug/Kg	UJ	C
TOXAPHENE	2.3	U	2.3	MDL	6.9	PQL	ug/Kg	UJ	C

Sample ID: SL-152-SA5DN-SS-0.0-0.5 **Collected:** 6/3/2011 11:45:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.26	J	0.18	MDL	0.91	PQL	ug/Kg	J	Z, *XIII
BETA-BHC	1.0		0.16	MDL	0.45	PQL	ug/Kg	J	* XIII

Sample ID: SL-153-SA5DN-SS-0.0-0.5 **Collected:** 6/3/2011 12:10:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
4,4'-DDE	0.093	J	0.071	MDL	0.37	PQL	ug/Kg	J	Z, S
4,4'-DDT	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ALDRIN	0.071	U	0.071	MDL	0.18	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
BETA-BHC	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	S
Chlordane	1.8	J	0.86	MDL	3.7	PQL	ug/Kg	J	Z, S, * XIII
DELTA-BHC	0.039	U	0.039	MDL	0.18	PQL	ug/Kg	UJ	S
DIELDRIN	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.047	U	0.047	MDL	0.18	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.099	J	0.071	MDL	0.37	PQL	ug/Kg	J	Z, S
ENDOSULFAN SULFATE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
METHOXYCHLOR	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	S
MIREX	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
TOXAPHENE	2.4	U	2.4	MDL	7.1	PQL	ug/Kg	UJ	S

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-154-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 11:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BETA-BHC	0.15	J	0.066	MDL	0.18	PQL	ug/Kg	J	Z, * XIII
Chlordane	3.1	J	0.88	MDL	3.7	PQL	ug/Kg	J	Z, * XIII
ENDRIN KETONE	0.14	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z

Sample ID: SL-155-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.29	J	0.069	MDL	0.36	PQL	ug/Kg	J	Z, * XIII, FD
4,4'-DDT	0.37		0.069	MDL	0.36	PQL	ug/Kg	J	FD
Chlordane	2.5	J	0.84	MDL	3.6	PQL	ug/Kg	J	Z
DELTA-BHC	0.063	J	0.038	MDL	0.17	PQL	ug/Kg	J	Z, FD
ENDOSULFAN II	0.15	J	0.069	MDL	0.36	PQL	ug/Kg	J	Z, FD
ENDRIN ALDEHYDE	0.23	J	0.069	MDL	0.36	PQL	ug/Kg	J	Z, * XIII, FD
ENDRIN KETONE	0.069	U	0.069	MDL	0.36	PQL	ug/Kg	UJ	FD

Sample ID: SL-156-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 9:45:00 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
4,4'-DDD	0.44		0.074	MDL	0.38	PQL	ug/Kg	J	* XIII
4,4'-DDE	0.40		0.074	MDL	0.38	PQL	ug/Kg	J	* XIII
4,4'-DDT	0.27	J	0.074	MDL	0.38	PQL	ug/Kg	J	Z, * XIII
Chlordane	4.7		0.89	MDL	3.8	PQL	ug/Kg	J	*XIII
ENDRIN KETONE	0.14	J	0.074	MDL	0.38	PQL	ug/Kg	J	Z, * XIII

Sample ID: SL-157-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
4,4'-DDE	0.53		0.074	MDL	0.38	PQL	ug/Kg	J	* XIII
Chlordane	3.5	J	0.89	MDL	3.8	PQL	ug/Kg	J	Z
DELTA-BHC	0.048	J	0.040	MDL	0.19	PQL	ug/Kg	J	Z, * XIII

Sample ID: SL-158-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 10:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-158-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:25:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.60		0.071	MDL	0.37	PQL	ug/Kg	J	C, * XIII
4,4'-DDT	0.35	J	0.071	MDL	0.37	PQL	ug/Kg	J	Z, C, * XIII
ALDRIN	0.071	U	0.071	MDL	0.18	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	C
BETA-BHC	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	C
Chlordane	2.1	J	0.86	MDL	3.7	PQL	ug/Kg	J	Z, C
DELTA-BHC	0.058	J	0.039	MDL	0.18	PQL	ug/Kg	J	Z, C, * XIII
DIELDRIN	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.048	U	0.048	MDL	0.18	PQL	ug/Kg	UJ	C
ENDOSULFAN II	0.092	U	0.092	MDL	0.37	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C
ENDRIN	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C
ENDRIN KETONE	0.084	J	0.071	MDL	0.37	PQL	ug/Kg	J	Z, C
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	C
MIREX	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	C
TOXAPHENE	2.4	U	2.4	MDL	7.1	PQL	ug/Kg	UJ	C

Sample ID: SL-159-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 9:25:00 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
4,4'-DDD	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
4,4'-DDE	1.1	U	1.1	MDL	1.1	PQL	ug/Kg	UJ	C
4,4'-DDT	0.81	U	0.81	MDL	0.81	PQL	ug/Kg	UJ	C
ALDRIN	0.074	U	0.074	MDL	0.19	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.038	U	0.038	MDL	0.19	PQL	ug/Kg	UJ	C
BETA-BHC	0.067	U	0.067	MDL	0.19	PQL	ug/Kg	UJ	C
Chlordane	3.3	J	0.90	MDL	3.8	PQL	ug/Kg	J	Z, C
DELTA-BHC	0.067	J	0.040	MDL	0.19	PQL	ug/Kg	J	Z, C, * XIII
DIELDRIN	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.049	U	0.049	MDL	0.19	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-159-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 9:25:00 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
ENDOSULFAN II	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN KETONE	0.19	U	0.19	MDL	0.38	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.038	U	0.038	MDL	0.19	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.067	U	0.067	MDL	0.19	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.089	U	0.089	MDL	0.19	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
MIREX	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
TOXAPHENE	2.5	U	2.5	MDL	7.4	PQL	ug/Kg	UJ	C

Sample ID: SL-160-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
4,4'-DDD	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
4,4'-DDE	0.16	J	0.068	MDL	0.35	PQL	ug/Kg	J	Z, C, * XIII
4,4'-DDT	0.17	U	0.17	MDL	0.35	PQL	ug/Kg	UJ	C
ALDRIN	0.068	U	0.068	MDL	0.17	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.035	U	0.035	MDL	0.17	PQL	ug/Kg	UJ	C
BETA-BHC	0.062	U	0.062	MDL	0.17	PQL	ug/Kg	UJ	C
Chlordane	1.1	J	0.83	MDL	3.5	PQL	ug/Kg	J	Z, C, * XIII
DELTA-BHC	0.037	U	0.037	MDL	0.17	PQL	ug/Kg	UJ	C
DIELDRIN	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.064	J	0.046	MDL	0.17	PQL	ug/Kg	J	Z, C
ENDOSULFAN II	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
ENDRIN	0.096	U	0.096	MDL	0.35	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
ENDRIN KETONE	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.035	U	0.035	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.062	U	0.062	MDL	0.17	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.035	U	0.035	MDL	0.17	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.35	U	0.35	MDL	1.7	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-160-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
MIREX	0.068	U	0.068	MDL	0.35	PQL	ug/Kg	UJ	C
TOXAPHENE	2.3	U	2.3	MDL	6.8	PQL	ug/Kg	UJ	C

Sample ID: SL-162-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 2:25:00 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
4,4'-DDD	0.31	J	0.074	MDL	0.38	PQL	ug/Kg	J	Z, C, * XIII
4,4'-DDE	0.52	U	0.52	MDL	0.52	PQL	ug/Kg	UJ	C
4,4'-DDT	0.51		0.074	MDL	0.38	PQL	ug/Kg	J	C
ALDRIN	0.074	U	0.074	MDL	0.19	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.038	U	0.038	MDL	0.19	PQL	ug/Kg	UJ	C
BETA-BHC	0.14	J	0.067	MDL	0.19	PQL	ug/Kg	J	Z, C
Chlordane	4.7		0.89	MDL	3.8	PQL	ug/Kg	J	C
DELTA-BHC	0.042	J	0.040	MDL	0.19	PQL	ug/Kg	J	Z, C, * XIII
DIELDRIN	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.049	U	0.049	MDL	0.19	PQL	ug/Kg	UJ	C
ENDOSULFAN II	0.086	U	0.086	MDL	0.38	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN ALDEHYDE	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
ENDRIN KETONE	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.038	U	0.038	MDL	0.19	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.067	U	0.067	MDL	0.19	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.060	U	0.060	MDL	0.19	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
MIREX	0.074	U	0.074	MDL	0.38	PQL	ug/Kg	UJ	C
TOXAPHENE	2.5	U	2.5	MDL	7.4	PQL	ug/Kg	UJ	C

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 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
4,4'-DDD	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
4,4'-DDE	0.37	U	0.37	MDL	0.38	PQL	ug/Kg	UJ	S, C
4,4'-DDT	0.46	U	0.46	MDL	0.46	PQL	ug/Kg	UJ	S, C
ALDRIN	0.073	U	0.073	MDL	0.18	PQL	ug/Kg	UJ	S, C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 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
ALPHA-BHC	0.038	U	0.038	MDL	0.18	PQL	ug/Kg	UJ	S, C
BETA-BHC	0.067	U	0.067	MDL	0.18	PQL	ug/Kg	UJ	S, C
Chlordane	1.1	J	0.89	MDL	3.8	PQL	ug/Kg	J	Z, S, C, * XIII
DELTA-BHC	0.040	U	0.040	MDL	0.18	PQL	ug/Kg	UJ	S, C
DIELDRIN	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
ENDOSULFAN I	0.049	U	0.049	MDL	0.18	PQL	ug/Kg	UJ	S, C
ENDOSULFAN II	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
ENDOSULFAN SULFATE	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
ENDRIN	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
ENDRIN ALDEHYDE	0.13	J	0.073	MDL	0.38	PQL	ug/Kg	J	Z, S, C
ENDRIN KETONE	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
gamma-BHC (Lindane)	0.038	U	0.038	MDL	0.18	PQL	ug/Kg	UJ	S, C
HEPTACHLOR	0.067	U	0.067	MDL	0.18	PQL	ug/Kg	UJ	S, C
HEPTACHLOR EPOXIDE	0.042	U	0.042	MDL	0.18	PQL	ug/Kg	UJ	S, C
METHOXYCHLOR	0.38	U	0.38	MDL	1.8	PQL	ug/Kg	UJ	S, C
MIREX	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S, C
TOXAPHENE	2.4	U	2.4	MDL	7.3	PQL	ug/Kg	UJ	S, C

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* DL-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	4.9	U	4.9	MDL	4.9	PQL	ug/Kg	UJ	C
DIELDRIN	18	U	18	MDL	18	PQL	ug/Kg	UJ	C
ENDOSULFAN I	0.47	U	0.47	MDL	1.8	PQL	ug/Kg	UJ	C
ENDOSULFAN II	1.8	U	1.8	MDL	3.7	PQL	ug/Kg	UJ	C
ENDOSULFAN SULFATE	0.97	U	0.97	MDL	3.7	PQL	ug/Kg	UJ	C
ENDRIN	8.2	U	8.2	MDL	8.2	PQL	ug/Kg	UJ	C
ENDRIN KETONE	0.71	U	0.71	MDL	3.7	PQL	ug/Kg	UJ	C
HEPTACHLOR EPOXIDE	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	C
METHOXYCHLOR	3.7	U	3.7	MDL	18	PQL	ug/Kg	UJ	C
MIREX	0.71	U	0.71	MDL	3.7	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* DL2-BASE/NEUTRAL *Dilution:* 25

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDRIN ALDEHYDE	21		1.8	MDL	9.1	PQL	ug/Kg	J	* XIII

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
ALDRIN	0.071	U	0.071	MDL	0.18	PQL	ug/Kg	UJ	C
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	C
BETA-BHC	0.064	U	0.064	MDL	0.18	PQL	ug/Kg	UJ	C
Chlordane	4.0		0.86	MDL	3.7	PQL	ug/Kg	J	C, * XIII
DELTA-BHC	0.039	U	0.039	MDL	0.18	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	C
HEPTACHLOR	0.064	U	0.064	MDL	0.18	PQL	ug/Kg	UJ	C
TOXAPHENE	2.4	U	2.4	MDL	7.1	PQL	ug/Kg	UJ	C

Method Category: SVOA

Method: 8082 **Matrix:** AQ

Sample ID: EB13-SA5DN-SS-060311 *Collected:* 6/3/2011 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
AROCLOR 1016	0.10	U	0.10	MDL	0.52	PQL	ug/L	UJ	C
AROCLOR 1221	0.10	U	0.10	MDL	0.52	PQL	ug/L	UJ	C
AROCLOR 1232	0.21	U	0.21	MDL	0.52	PQL	ug/L	UJ	C
AROCLOR 1242	0.10	U	0.10	MDL	0.52	PQL	ug/L	UJ	C
Aroclor 5460	0.10	U	0.10	MDL	0.52	PQL	ug/L	UJ	C

Sample ID: EB14-SA5DN-SB-060311 *Collected:* 6/3/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.10	U	0.10	MDL	0.51	PQL	ug/L	UJ	C
AROCLOR 1221	0.10	U	0.10	MDL	0.51	PQL	ug/L	UJ	C
AROCLOR 1232	0.20	U	0.20	MDL	0.51	PQL	ug/L	UJ	C
AROCLOR 1242	0.10	U	0.10	MDL	0.51	PQL	ug/L	UJ	C
Aroclor 5460	0.10	U	0.10	MDL	0.51	PQL	ug/L	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 ***Collected:*** 6/3/2011 10:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	1.6	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z, C
Aroclor 5460	2.7	J	1.0	MDL	3.5	PQL	ug/Kg	J	Z, L

Sample ID: SL-019-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 11:16:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.45	U	0.45	MDL	2.0	PQL	ug/Kg	UJ	C

Sample ID: SL-019-SA5DN-SB-9.0-10.0 ***Collected:*** 6/3/2011 2:50:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.43	U	0.43	MDL	1.9	PQL	ug/Kg	UJ	C

Sample ID: SL-027-SA5DN-SB-14.0-15.0 ***Collected:*** 6/3/2011 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.43	U	0.43	MDL	1.9	PQL	ug/Kg	UJ	C

Sample ID: SL-027-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 2:50:00 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
AROCLOR 1242	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 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
AROCLOR 1254	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.46	J	0.45	MDL	2.0	PQL	ug/Kg	J	Z, C, * XIII

Sample ID: SL-052-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 4:04:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.57	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z, C
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-052-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 4:08:00 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
AROCLOR 1242	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.45	U	0.45	MDL	2.0	PQL	ug/Kg	UJ	C
Aroclor 5432	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	C

Sample ID: SL-152-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	1.9		0.42	MDL	1.8	PQL	ug/Kg	J	C
Aroclor 5460	1.3	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z, L

Sample ID: SL-153-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 12:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-153-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 12:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.42	U	0.42	MDL	1.8	PQL	ug/Kg	UJ	C

Sample ID: SL-154-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.36	U	0.36	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.36	U	0.36	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.36	U	0.36	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.70	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z, C, * XIII

Sample ID: SL-155-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	1.6	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z, C
Aroclor 5460	3.5		1.0	MDL	3.5	PQL	ug/Kg	J	L

Sample ID: SL-156-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 9:45:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	1.2	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z, C
Aroclor 5460	2.3	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z, L

Sample ID: SL-157-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-157-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
AROCLOR 1260	1.3	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z, C
Aroclor 5460	1.5	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z, L

Sample ID: SL-158-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 10:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.36	U	0.36	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	1.1	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z, C
Aroclor 5460	1.8	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z, L

Sample ID: SL-159-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 9:25:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	2.4		0.44	MDL	1.9	PQL	ug/Kg	J	S, C
Aroclor 5460	3.4	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z, S, L

Sample ID: SL-160-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
AROCLOR 1242	0.34	U	0.34	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.34	U	0.34	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.34	U	0.34	MDL	1.8	PQL	ug/Kg	UJ	C
AROCLOR 1260	0.40	U	0.40	MDL	1.8	PQL	ug/Kg	UJ	C

Sample ID: SL-162-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 2:25:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 Laboratory: LL

EDD Filename: PrepDE173_v2 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-162-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 2:25:00 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
AROCLOR 1260	1.3	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z, C, * XIII
Aroclor 5460	1.9	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z, L

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 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
AROCLOR 1242	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1248	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1254	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	3.0		0.43	MDL	1.9	PQL	ug/Kg	J	C
Aroclor 5460	4.6		1.1	MDL	3.7	PQL	ug/Kg	J	L

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	7.1	U	7.1	MDL	37	PQL	ug/Kg	UJ	C
AROCLOR 1248	7.1	U	7.1	MDL	37	PQL	ug/Kg	UJ	C
AROCLOR 1254	7.1	U	7.1	MDL	37	PQL	ug/Kg	UJ	C
AROCLOR 1260	300		8.4	MDL	37	PQL	ug/Kg	J	C

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: SL-153-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
MCPA	460		81	MDL	270	PQL	ug/Kg	J	*IX

Sample ID: SL-157-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
DICAMBA	0.46	J	0.45	MDL	1.3	PQL	ug/Kg	J	Z, * IX

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: SL-160-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
MCPA	330		78	MDL	260	PQL	ug/Kg	J	* IX

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
MCPA	220	J	81	MDL	270	PQL	ug/Kg	J	Z, * IX

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 *Collected:* 6/3/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	17	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-019-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 2:50:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-152-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	44	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-153-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 12:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	360	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-154-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-155-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,4-DICHLOROBENZENE	17	U	17	MDL	170	PQL	ug/Kg	UJ	Q
2,4,5-TRICHLOROPHENOL	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
2,4-DICHLOROPHENOL	17	U	17	MDL	170	PQL	ug/Kg	UJ	Q
2,4-DIMETHYLPHENOL	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
2-METHYLPHENOL	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
4-CHLORO-3-METHYLPHENOL	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
4-CHLOROPHENYL-PHENYLETHER	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
4-METHYLPHENOL	35	U	35	MDL	170	PQL	ug/Kg	UJ	Q
BENZIDINE	1200	U	1200	MDL	3500	PQL	ug/Kg	R	Q
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	17	MDL	350	PQL	ug/Kg	J	Z
N-NITROSODIPHENYLAMINE	17	U	17	MDL	170	PQL	ug/Kg	UJ	Q

Sample ID: SL-156-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 9:45:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	44	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-157-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 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	61	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-158-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 10:25:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	18	MDL	360	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-159-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 9:25:00 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	31	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	370	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB13-SA5DN-SS-060311 *Collected:* 6/3/2011 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
1-METHYLNAPHTHALENE	0.026	J	0.011	MDL	0.053	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.026	J	0.011	MDL	0.053	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.055	J	0.053	MDL	1.1	PQL	ug/L	J	Z
Di-n-butylphthalate	0.065	J	0.053	MDL	1.1	PQL	ug/L	J	Z
Di-n-octylphthalate	0.053	U	0.053	MDL	1.1	PQL	ug/L	UJ	E

Sample ID: EB14-SA5DN-SB-060311 *Collected:* 6/3/2011 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
1-METHYLNAPHTHALENE	0.028	J	0.010	MDL	0.051	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.026	J	0.010	MDL	0.051	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.057	J	0.051	MDL	1.0	PQL	ug/L	J	Z
Di-n-butylphthalate	0.067	J	0.051	MDL	1.0	PQL	ug/L	J	Z
Di-n-octylphthalate	0.051	U	0.051	MDL	1.0	PQL	ug/L	UJ	E

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP-13-SA5DN-QC-060311 *Collected:* 6/3/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.79	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: DUP-13-SA5DN-QC-060311 ***Collected:*** 6/3/2011 10:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.1	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.82	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.9		0.35	MDL	1.7	PQL	ug/Kg	J	FD
Di-n-butylphthalate	6.3	U	6.3	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	2.5		0.70	MDL	1.7	PQL	ug/Kg	J	L
NAPHTHALENE	0.88	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

Sample ID: SL-019-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 11:16:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.78	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.5	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.7	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.9	U	6.9	MDL	21	PQL	ug/Kg	UJ	L
FLUORANTHENE	1.0	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z, L
PYRENE	0.80	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-019-SA5DN-SB-9.0-10.0 ***Collected:*** 6/3/2011 2:50:00 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
Di-n-butylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.74	U	0.74	MDL	1.8	PQL	ug/Kg	UJ	L
PYRENE	0.97	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-027-SA5DN-SB-14.0-15.0 ***Collected:*** 6/3/2011 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
Di-n-butylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.74	U	0.74	MDL	1.8	PQL	ug/Kg	UJ	L

Sample ID: SL-027-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 2:50:00 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
Di-n-butylphthalate	6.9	U	6.9	MDL	21	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-027-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 2:50:00 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
FLUORANTHENE	0.76	U	0.76	MDL	1.9	PQL	ug/Kg	UJ	L

Sample ID: SL-052-SA5DN-SB-4.0-5.0 ***Collected:*** 6/3/2011 4:04:00 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
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.74	U	0.74	MDL	1.8	PQL	ug/Kg	UJ	L

Sample ID: SL-052-SA5DN-SB-9.0-10.0 ***Collected:*** 6/3/2011 4:08:00 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
Di-n-butylphthalate	6.9	U	6.9	MDL	21	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.76	U	0.76	MDL	1.9	PQL	ug/Kg	UJ	L

Sample ID: SL-152-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 11:45:00 ***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(A)ANTHRACENE	0.79	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.81	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	1.7	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, L
INDENO(1,2,3-CD)PYRENE	1.6	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-153-SA5DN-SS-0.0-0.5 ***Collected:*** 6/3/2011 12:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.79	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.0	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.99	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.5	U	6.5	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	2.4		0.72	MDL	1.8	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	0.90	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	1.6	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: **SL-154-SA5DN-SS-0.0-0.5** ***Collected:*** **6/3/2011 11:20:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.77	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.84	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	1.9		0.73	MDL	1.8	PQL	ug/Kg	J	L
NAPHTHALENE	0.75	J	0.73	MDL	1.8	PQL	ug/Kg	U	F
PHENANTHRENE	0.98	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.6	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-155-SA5DN-SS-0.0-0.5** ***Collected:*** **6/3/2011 10:45:00** ***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(A)ANTHRACENE	0.70	U	0.70	MDL	1.7	PQL	ug/Kg	UJ	FD
BENZO(A)PYRENE	1.1	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.73	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	5.4		0.35	MDL	1.7	PQL	ug/Kg	J	FD
Di-n-butylphthalate	6.3	U	6.3	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	2.6		0.70	MDL	1.7	PQL	ug/Kg	J	L
NAPHTHALENE	0.96	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.6	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-156-SA5DN-SS-0.0-0.5** ***Collected:*** **6/3/2011 9:45:00 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
2-METHYLNAPHTHALENE	1.0	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.5	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.5	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	4.5		0.74	MDL	1.9	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	0.90	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.5	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-157-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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(A)PYRENE	0.76	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.8	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	1.8	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z, L
NAPHTHALENE	0.99	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.3	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-158-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 10:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.5	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	1.5	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z, L
NAPHTHALENE	0.97	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.0	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-159-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 9:25:00 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	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.5	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	4.4		0.75	MDL	1.9	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	1.1	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-160-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
BENZO(B)FLUORANTHENE	1.1	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.2	U	6.2	MDL	19	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.69	U	0.69	MDL	1.7	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-160-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
NAPHTHALENE	0.71	J	0.69	MDL	1.7	PQL	ug/Kg	U	F

Sample ID: SL-162-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 2:25:00 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
BENZO(B)FLUORANTHENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.74	U	0.74	MDL	1.9	PQL	ug/Kg	UJ	L

Sample ID: SL-166-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 3:25:00 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
BENZO(A)PYRENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.86	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.92	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	L
FLUORANTHENE	2.3		0.74	MDL	1.9	PQL	ug/Kg	J	L
NAPHTHALENE	1.4	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.6	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.6	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
Di-n-butylphthalate	6.9	J	6.4	MDL	19	PQL	ug/Kg	J	Z, L
FLUORANTHENE	6.1		0.72	MDL	1.8	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	1.5	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8315A **Matrix:** SO

Sample ID: SL-019-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 11:16:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	690	U	690	MDL	1700	PQL	ug/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8315A **Matrix:** SO

Sample ID: SL-027-SA5DN-SB-14.0-15.0 *Collected:* 6/3/2011 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
FORMALDEHYDE	660	U	660	MDL	1600	PQL	ug/Kg	UJ	S

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	690	U	690	MDL	1700	PQL	ug/Kg	UJ	S

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 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
FORMALDEHYDE	1500	J	640	MDL	1600	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-207-SA5DN-SS-0.0-0.5 *Collected:* 6/3/2011 8:35:00 AM *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.6	U	1.6	MDL	3.8	PQL	mg/Kg	UJ	S
O-TERPHENYL	1.6	U	1.6	MDL	3.8	PQL	mg/Kg	UJ	S
p-Terphenyl	1.6	U	1.6	MDL	3.8	PQL	mg/Kg	UJ	S

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-019-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 11:16:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.81	U	0.81	MDL	4.6	PQL	ug/Kg	UJ	C
2-BUTANONE (MEK)	1.4	U	1.4	MDL	9.3	PQL	ug/Kg	UJ	C
2-HEXANONE	1.9	U	1.9	MDL	9.3	PQL	ug/Kg	UJ	C
4-METHYL-2-PENTANONE (MIBK)	0.45	U	0.45	MDL	9.3	PQL	ug/Kg	UJ	C
ACETONE	14		7.7	MDL	9.3	PQL	ug/Kg	UJ	B, C
METHYLENE CHLORIDE	1.2	J	0.28	MDL	4.6	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory:** LL

EDD Filename: PrepDE173_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-019-SA5DN-SB-9.0-10.0 *Collected:* 6/3/2011 2:50:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.02

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.79	U	0.79	MDL	4.5	PQL	ug/Kg	UJ	C
2-BUTANONE (MEK)	1.4	U	1.4	MDL	9.1	PQL	ug/Kg	UJ	C
2-HEXANONE	1.8	U	1.8	MDL	9.1	PQL	ug/Kg	UJ	C
4-METHYL-2-PENTANONE (MIBK)	0.44	U	0.44	MDL	9.1	PQL	ug/Kg	UJ	C
ACETONE	12		7.6	MDL	9.1	PQL	ug/Kg	UJ	B, C
METHYLENE CHLORIDE	5.0		0.27	MDL	4.5	PQL	ug/Kg	U	B

Sample ID: SL-027-SA5DN-SB-14.0-15.0 *Collected:* 6/3/2011 3:00:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 0.95

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.74	U	0.74	MDL	4.2	PQL	ug/Kg	UJ	C
2-BUTANONE (MEK)	1.3	U	1.3	MDL	8.4	PQL	ug/Kg	UJ	C
2-HEXANONE	1.7	U	1.7	MDL	8.4	PQL	ug/Kg	UJ	C
4-METHYL-2-PENTANONE (MIBK)	0.41	U	0.41	MDL	8.4	PQL	ug/Kg	UJ	C
ACETONE	11		7.1	MDL	8.4	PQL	ug/Kg	UJ	B, C
METHYLENE CHLORIDE	5.5		0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.09	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-027-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 2:50:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.73	U	0.73	MDL	4.2	PQL	ug/Kg	UJ	C
2-BUTANONE (MEK)	1.3	U	1.3	MDL	8.4	PQL	ug/Kg	UJ	C
2-HEXANONE	1.7	U	1.7	MDL	8.4	PQL	ug/Kg	UJ	C
4-METHYL-2-PENTANONE (MIBK)	0.41	U	0.41	MDL	8.4	PQL	ug/Kg	UJ	C
ACETONE	9.0		7.0	MDL	8.4	PQL	ug/Kg	UJ	B, C
METHYLENE CHLORIDE	1.2	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-052-SA5DN-SB-4.0-5.0 *Collected:* 6/3/2011 4:04:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.01

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DIBROMO-3-CHLOROPROPANE	0.79	U	0.79	MDL	4.5	PQL	ug/Kg	UJ	C
2-BUTANONE (MEK)	1.4	U	1.4	MDL	9.0	PQL	ug/Kg	UJ	C
2-HEXANONE	1.8	U	1.8	MDL	9.0	PQL	ug/Kg	UJ	C
4-METHYL-2-PENTANONE (MIBK)	0.44	U	0.44	MDL	9.0	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-052-SA5DN-SB-4.0-5.0** ***Collected:*** **6/3/2011 4:04:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1.01**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ACETONE	10		7.5	MDL	9.0	PQL	ug/Kg	UJ	B, C
METHYLENE CHLORIDE	1.4	J	0.27	MDL	4.5	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*IX, *XIII	Compound Quantitation and CRQL
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: PrepDE173_v2 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE173

Method Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB16B261008	6/28/2011 10:08:00 AM	N-NITROSODIMETHYLAMINE	18.9 ng/Kg	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-207-SA5DN-SS-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-019-SA5DN-SB-9.0-10.0(RES)	N-NITROSODIMETHYLAMINE	40.2 ng/Kg	40.2U ng/Kg
SL-027-SA5DN-SB-14.0-15.0(RES)	N-NITROSODIMETHYLAMINE	41.7 ng/Kg	41.7U ng/Kg
SL-027-SA5DN-SB-4.0-5.0(RES)	N-NITROSODIMETHYLAMINE	45.4 ng/Kg	45.4U ng/Kg

Method: **6010B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16048CB221243	6/10/2011 12:43:00 PM	MAGNESIUM	0.0195 mg/L	EB13-SA5DN-SS-060311 EB14-SA5DN-SB-060311

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16408BB221704	6/14/2011 5:04:00 PM	ALUMINUM CALCIUM PHOSPHORUS TIN	9.32 mg/Kg 11.0 mg/Kg 1.80 mg/Kg 1.74 mg/Kg	DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-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
DUP-13-SA5DN-QC-060311(REA2)	TIN	3.19 mg/Kg	3.19U mg/Kg
SL-019-SA5DN-SB-4.0-5.0(REA2)	TIN	3.37 mg/Kg	3.37U mg/Kg
SL-019-SA5DN-SB-9.0-10.0(REA2)	TIN	3.22 mg/Kg	3.22U mg/Kg
SL-027-SA5DN-SB-14.0-15.0(REA2)	TIN	3.33 mg/Kg	3.33U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
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-027-SA5DN-SB-4.0-5.0(REA2)	TIN	3.29 mg/Kg	3.29U mg/Kg
SL-052-SA5DN-SB-4.0-5.0(REA2)	TIN	3.13 mg/Kg	3.13U mg/Kg
SL-052-SA5DN-SB-9.0-10.0(REA2)	TIN	3.27 mg/Kg	3.27U mg/Kg
SL-152-SA5DN-SS-0.0-0.5(REA2)	TIN	4.34 mg/Kg	4.34U mg/Kg
SL-153-SA5DN-SS-0.0-0.5(REA2)	TIN	3.34 mg/Kg	3.34U mg/Kg
SL-154-SA5DN-SS-0.0-0.5(REA2)	TIN	3.45 mg/Kg	3.45U mg/Kg
SL-155-SA5DN-SS-0.0-0.5(REA2)	TIN	3.35 mg/Kg	3.35U mg/Kg
SL-156-SA5DN-SS-0.0-0.5(REA2)	TIN	3.31 mg/Kg	3.31U mg/Kg
SL-157-SA5DN-SS-0.0-0.5(REA2)	TIN	3.24 mg/Kg	3.24U mg/Kg
SL-158-SA5DN-SS-0.0-0.5(REA2)	TIN	3.26 mg/Kg	3.26U mg/Kg
SL-159-SA5DN-SS-0.0-0.5(REA2)	TIN	3.40 mg/Kg	3.40U mg/Kg
SL-160-SA5DN-SS-0.0-0.5(REA2)	TIN	3.29 mg/Kg	3.29U mg/Kg
SL-162-SA5DN-SS-0.0-0.5(REA2)	TIN	3.70 mg/Kg	3.70U mg/Kg
SL-166-SA5DN-SS-0.0-0.5(REA2)	TIN	3.40 mg/Kg	3.40U mg/Kg
SL-207-SA5DN-SS-0.0-0.5(REA2)	TIN	3.47 mg/Kg	3.47U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16426BB221130A	6/16/2011 11:30:00 AM	ANTIMONY	0.0975 mg/Kg	DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-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
DUP-13-SA5DN-QC-060311(REA4)	ANTIMONY	0.252 mg/Kg	0.252U mg/Kg
SL-019-SA5DN-SB-4.0-5.0(REA4)	ANTIMONY	0.303 mg/Kg	0.303U mg/Kg
SL-019-SA5DN-SB-9.0-10.0(REA4)	ANTIMONY	0.212 mg/Kg	0.212U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
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-027-SA5DN-SB-14.0-15.0(REA4)	ANTIMONY	0.117 mg/Kg	0.117U mg/Kg
SL-027-SA5DN-SB-4.0-5.0(REA4)	ANTIMONY	0.245 mg/Kg	0.245U mg/Kg
SL-052-SA5DN-SB-4.0-5.0(REA4)	ANTIMONY	0.273 mg/Kg	0.273U mg/Kg
SL-052-SA5DN-SB-9.0-10.0(REA4)	ANTIMONY	0.226 mg/Kg	0.226U mg/Kg
SL-152-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.259 mg/Kg	0.259U mg/Kg
SL-153-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.239 mg/Kg	0.239U mg/Kg
SL-154-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.401 mg/Kg	0.401U mg/Kg
SL-155-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.339 mg/Kg	0.339U mg/Kg
SL-156-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.335 mg/Kg	0.335U mg/Kg
SL-157-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.341 mg/Kg	0.341U mg/Kg
SL-158-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.288 mg/Kg	0.288U mg/Kg
SL-159-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.258 mg/Kg	0.258U mg/Kg
SL-160-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.310 mg/Kg	0.310U mg/Kg
SL-162-SA5DN-SS-0.0-0.5(REA4)	ANTIMONY	0.326 mg/Kg	0.326U mg/Kg

Method: **7470A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16013BB221002	6/11/2011 10:02:00 AM	MERCURY	0.00012 mg/L	EB13-SA5DN-SS-060311 EB14-SA5DN-SB-060311

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16411BB221342	6/14/2011 1:42:00 PM	MERCURY	0.0044 mg/Kg	DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **7471A**
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
DUP-13-SA5DN-QC-060311(RES)	MERCURY	0.0175 mg/Kg	0.0175U mg/Kg
SL-019-SA5DN-SB-9.0-10.0(RES)	MERCURY	0.0162 mg/Kg	0.0162U mg/Kg
SL-027-SA5DN-SB-14.0-15.0(RES)	MERCURY	0.0119 mg/Kg	0.0119U mg/Kg
SL-027-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0185 mg/Kg	0.0185U mg/Kg
SL-052-SA5DN-SB-9.0-10.0(RES)	MERCURY	0.0044 mg/Kg	0.0044U mg/Kg
SL-152-SA5DN-SS-0.0-0.5(RES)	MERCURY	0.0136 mg/Kg	0.0136U mg/Kg
SL-157-SA5DN-SS-0.0-0.5(RES)	MERCURY	0.0110 mg/Kg	0.0110U mg/Kg
SL-160-SA5DN-SS-0.0-0.5(RES)	MERCURY	0.0165 mg/Kg	0.0165U mg/Kg

Method: **8151A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P66665AB240051A	6/18/2011 12:51:00 AM	MCPP	150 ug/Kg	DUP-13-SA5DN-QC-060311 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB78B211215A	6/8/2011 12:15:00 PM	ACETONE METHYLENE CHLORIDE	8.7 ug/Kg 1.0 ug/Kg	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-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-019-SA5DN-SB-4.0-5.0(RES)	ACETONE	14 ug/Kg	14U ug/Kg
SL-019-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	4.6U ug/Kg
SL-019-SA5DN-SB-9.0-10.0(RES)	ACETONE	12 ug/Kg	12U ug/Kg
SL-019-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	5.0 ug/Kg	5.0U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
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-027-SA5DN-SB-14.0-15.0(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-027-SA5DN-SB-14.0-15.0(RES)	METHYLENE CHLORIDE	5.5 ug/Kg	5.5U ug/Kg
SL-027-SA5DN-SB-4.0-5.0(RES)	ACETONE	9.0 ug/Kg	9.0U ug/Kg
SL-027-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	4.2U ug/Kg
SL-052-SA5DN-SB-4.0-5.0(RES)	ACETONE	10 ug/Kg	10U ug/Kg
SL-052-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.4 ug/Kg	4.5U ug/Kg

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLD16B261938	6/21/2011 7:38:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	71 ug/Kg	DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB13-SA5DN-SS-060311 (RES)	6/3/2011 1:30:00 PM	1-METHYLNAPHTHALENE	0.026 ug/L	DUP-13-SA5DN-QC-060311
		2-METHYLNAPHTHALENE	0.026 ug/L	SL-152-SA5DN-SS-0.0-0.5
		BIS(2-ETHYLHEXYL)PHTHALATE	0.055 ug/L	SL-153-SA5DN-SS-0.0-0.5
		Di-n-butylphthalate	0.065 ug/L	SL-154-SA5DN-SS-0.0-0.5
		NAPHTHALENE	0.16 ug/L	SL-155-SA5DN-SS-0.0-0.5
				SL-156-SA5DN-SS-0.0-0.5
				SL-157-SA5DN-SS-0.0-0.5
				SL-158-SA5DN-SS-0.0-0.5
				SL-159-SA5DN-SS-0.0-0.5
				SL-160-SA5DN-SS-0.0-0.5
				SL-162-SA5DN-SS-0.0-0.5
				SL-166-SA5DN-SS-0.0-0.5
				SL-207-SA5DN-SS-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-154-SA5DN-SS-0.0-0.5(RES)	NAPHTHALENE	0.75 ug/Kg	1.8U ug/Kg
SL-160-SA5DN-SS-0.0-0.5(RES)	NAPHTHALENE	0.71 ug/Kg	1.7U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 Laboratory: LL

EDD Filename: DE173_v2 eQAPP Name: CDM_SSFL_110509

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN -SS-0.0-0.5MS SL-155-SA5DN -SS-0.0-0.5MSD (SL-155-SA5DN -SS-0.0-0.5)	HEPTACHLOR	130	142	13.00-126.00	-	HEPTACHLOR	J (all detects)

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN -SS-0.0-0.5MSD (SL-155-SA5DN -SS-0.0-0.5)	2,4,5-T	-	-	10.00-156.00	36 (35.00)	2,4,5-T	J(all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN -SS-0.0-0.5MSD (SL-155-SA5DN -SS-0.0-0.5)	4-CHLOROANILINE	-	-	23.00-95.00	33 (30.00)	4-CHLOROANILINE	J(all detects)
SL-155-SA5DN -SS-0.0-0.5MS SL-155-SA5DN -SS-0.0-0.5MSD (SL-155-SA5DN -SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)
SL-155-SA5DN -SS-0.0-0.5MS SL-155-SA5DN -SS-0.0-0.5MSD (SL-155-SA5DN -SS-0.0-0.5)	1,4-DICHLOROBENZENE	-	69	70.00-100.00	-	1,4-DICHLOROBENZENE	J(all detects) UJ(all non-detects)
	2,4,5-TRICHLOROPHENOL	-	76	78.00-109.00	-	2,4,5-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	-	77	78.00-117.00	-	2,4-DICHLOROPHENOL	
	2,4-DIMETHYLPHENOL	77	76	78.00-110.00	-	2,4-DIMETHYLPHENOL	
	2-METHYLNAPHTHALENE	72	71	76.00-114.00	-	2-METHYLNAPHTHALENE	
	2-METHYLPHENOL	-	73	75.00-111.00	-	2-METHYLPHENOL	
	4-CHLORO-3-METHYLPHENOL	74	74	76.00-110.00	-	4-CHLORO-3-METHYLPHENOL	
	4-CHLOROPHENYL-PHENYLET	77	74	80.00-109.00	-	4-CHLOROPHENYL-PHENYLE	
	4-METHYLPHENOL	68	65	71.00-111.00	-	4-METHYLPHENOL	
	ACENAPHTHYLENE	80	77	81.00-110.00	-	ACENAPHTHYLENE	
	FLUORENE	76	74	77.00-111.00	-	FLUORENE	
	N-NITROSODIPHENYLAMINE	82	81	86.00-145.00	-	N-NITROSODIPHENYLAMINE	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**

Matrix: **SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN-SS-0.0-0.5MS **SL-155-SA5DN-SS-0.0-0.5MSD** (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	275 154 178 235 191 216 242 182 163 163 293 412	210 144 160 194 176 193 204 159 154 149 251 346	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 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - - - - - - - -	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	J(all detects) V, Zn, No Qual, >4x
SL-155-SA5DN-SS-0.0-0.5MS **SL-155-SA5DN-SS-0.0-0.5MSD** (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	ANTIMONY	66	66	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)
SL-155-SA5DN-SS-0.0-0.5MS **SL-155-SA5DN-SS-0.0-0.5MSD** (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	SELENIUM	143	138	75.00-125.00	-	SELENIUM	J(all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

***Method:* 6020**
***Matrix:* SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN-SS-0.0-0.5MS **SL-155-SA5DN-SS-0.0-0.5MSD** (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	MOLYBDENUM	175	163	75.00-125.00	-	MOLYBDENUM	J(all detects)
SL-155-SA5DN-SS-0.0-0.5MS **SL-155-SA5DN-SS-0.0-0.5MSD** (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	BARIUM	-159	-227	75.00-125.00	-	BARIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN-SS-0.0-0.5MS	ALUMINUM	1984	1712	75.00-125.00	-	ALUMINUM	
SL-155-SA5DN-SS-0.0-0.5MSD	CALCIUM	184	195	75.00-125.00	-	CALCIUM	
(DUP-13-SA5DN-QC-060311	MAGNESIUM	241	181	75.00-125.00	-	MAGNESIUM	
SL-019-SA5DN-SB-4.0-5.0	POTASSIUM	143	129	75.00-125.00	-	POTASSIUM	
SL-019-SA5DN-SB-9.0-10.0	TITANIUM	476	583	75.00-125.00	-	TITANIUM	
SL-027-SA5DN-SB-14.0-15.0							
SL-027-SA5DN-SB-4.0-5.0							
SL-052-SA5DN-SB-4.0-5.0							
SL-052-SA5DN-SB-9.0-10.0							
SL-152-SA5DN-SS-0.0-0.5							
SL-153-SA5DN-SS-0.0-0.5							No Qual, >4x
SL-154-SA5DN-SS-0.0-0.5							
SL-155-SA5DN-SS-0.0-0.5							
SL-156-SA5DN-SS-0.0-0.5							
SL-157-SA5DN-SS-0.0-0.5							
SL-158-SA5DN-SS-0.0-0.5							
SL-159-SA5DN-SS-0.0-0.5							
SL-160-SA5DN-SS-0.0-0.5							
SL-162-SA5DN-SS-0.0-0.5							
SL-166-SA5DN-SS-0.0-0.5							
SL-207-SA5DN-SS-0.0-0.5)							
SL-155-SA5DN-SS-0.0-0.5MS	IRON	-661	2110	75.00-125.00	-	IRON	
SL-155-SA5DN-SS-0.0-0.5MSD							
(DUP-13-SA5DN-QC-060311							
SL-019-SA5DN-SB-4.0-5.0							
SL-019-SA5DN-SB-9.0-10.0							
SL-027-SA5DN-SB-14.0-15.0							
SL-027-SA5DN-SB-4.0-5.0							
SL-052-SA5DN-SB-4.0-5.0							
SL-052-SA5DN-SB-9.0-10.0							
SL-152-SA5DN-SS-0.0-0.5							
SL-153-SA5DN-SS-0.0-0.5							No Qual, >4x
SL-154-SA5DN-SS-0.0-0.5							
SL-155-SA5DN-SS-0.0-0.5							
SL-156-SA5DN-SS-0.0-0.5							
SL-157-SA5DN-SS-0.0-0.5							
SL-158-SA5DN-SS-0.0-0.5							
SL-159-SA5DN-SS-0.0-0.5							
SL-160-SA5DN-SS-0.0-0.5							
SL-162-SA5DN-SS-0.0-0.5							
SL-166-SA5DN-SS-0.0-0.5							
SL-207-SA5DN-SS-0.0-0.5)							

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-155-SA5DN-SS-0.0-0.5MSD	BIS(2-ETHYLHEXYL)PHTHALAT	-	205	39.00-167.00	58 (30.00)	BIS(2-ETHYLHEXYL)PHTHALA	J(all detects)
(SL-155-SA5DN-SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	-	-	48.00-113.00	48 (30.00)	N-NITROSODIMETHYLAMINE	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

***Method:* 300.0**

***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-155-SA5DN-SS-0.0-0.5MS (SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5)	FLUORIDE	56	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-166-SA5DN-SS-0.0-0.5MS (DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-14.0-15.0 SL-027-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5)	FLUORIDE	48	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE173 Laboratory: LL

EDD Filename: DE173_v2 eQAPP Name: CDM_SSFL_110509

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-155-SA5DN-SS-0.0-0.5DUP (SL-152-SA5DN-SS-0.0-0.5 SL -153-SA5DN-SS-0.0-0.5 SL -154-SA5DN-SS-0.0-0.5 SL -155-SA5DN-SS-0.0-0.5 SL -156-SA5DN-SS-0.0-0.5 SL -157-SA5DN-SS-0.0-0.5 SL -158-SA5DN-SS-0.0-0.5 SL -159-SA5DN-SS-0.0-0.5 SL -160-SA5DN-SS-0.0-0.5 SL -162-SA5DN-SS-0.0-0.5)	FLUORIDE	25	20.00	No Qual, OK by Difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-155-SA5DN-SS-0.0-0.5DUP	ARSENIC	23	20.00	
(DUP-13-SA5DN-QC-060311	BARIUM	26	20.00	
SL -019-SA5DN-SB-4.0-5.0	BERYLLIUM	26	20.00	
SL -019-SA5DN-SB-9.0-10.0	CADMIUM	26	20.00	
SL -027-SA5DN-SB-14.0-15.0	COBALT	25	20.00	
SL -027-SA5DN-SB-4.0-5.0	LEAD	27	20.00	J(all detects)
SL -052-SA5DN-SB-4.0-5.0	MOLYBDENUM	27	20.00	UJ(all non-detects)
SL -052-SA5DN-SB-9.0-10.0	SELENIUM	22	20.00	
SL -152-SA5DN-SS-0.0-0.5	SILVER	24	20.00	
SL -153-SA5DN-SS-0.0-0.5	THALLIUM	28	20.00	
SL -154-SA5DN-SS-0.0-0.5				
SL -155-SA5DN-SS-0.0-0.5				
SL -156-SA5DN-SS-0.0-0.5				
SL -157-SA5DN-SS-0.0-0.5				Cd, Se, Ag, Tl,
SL -158-SA5DN-SS-0.0-0.5				No Qual,
SL -159-SA5DN-SS-0.0-0.5				OK by Difference
SL -160-SA5DN-SS-0.0-0.5				
SL -162-SA5DN-SS-0.0-0.5				
SL -166-SA5DN-SS-0.0-0.5				
SL -207-SA5DN-SS-0.0-0.5)				

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-155-SA5DN-SS-0.0-0.5DUP (DUP-13-SA5DN-QC-060311 SL -019-SA5DN-SB-4.0-5.0 SL -019-SA5DN-SB-9.0-10.0 SL -027-SA5DN-SB-14.0-15.0 SL -027-SA5DN-SB-4.0-5.0 SL -052-SA5DN-SB-4.0-5.0 SL -052-SA5DN-SB-9.0-10.0 SL -152-SA5DN-SS-0.0-0.5 SL -153-SA5DN-SS-0.0-0.5 SL -154-SA5DN-SS-0.0-0.5 SL -155-SA5DN-SS-0.0-0.5 SL -156-SA5DN-SS-0.0-0.5 SL -157-SA5DN-SS-0.0-0.5 SL -158-SA5DN-SS-0.0-0.5 SL -159-SA5DN-SS-0.0-0.5 SL -160-SA5DN-SS-0.0-0.5 SL -162-SA5DN-SS-0.0-0.5 SL -166-SA5DN-SS-0.0-0.5 SL -207-SA5DN-SS-0.0-0.5)	HEXAVALENT CHROMIUM	69	20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 Laboratory: LL

EDD Filename: DE173_v2 eQAPP Name: CDM_SSFL_110509

Method: 8081A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11570AQ242021A P11570AY242034A (EB13-SA5DN-SS-060311)	4,4'-DDE ENDOSULFAN I	142 130	142 130	66.00-130.00 68.00-128.00	- -	4,4'-DDE ENDOSULFAN I	J (all detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P7WELCSY260343 (EB13-SA5DN-SS-060311 EB14-SA5DN-SB-060311)	Di-n-octylphthalate	-	148	57.00-145.00	43 (30.00)	Di-n-octylphthalate	J(all detects) UJ(all non-detects)

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P8WILCSQ261304 P8WILCSY261354 (EB13-SA5DN-SS-060311 EB14-SA5DN-SB-060311)	1,2,4-TRICHLOROBENZENE	114	114	71.00-112.00	-	1,2,4-TRICHLOROBENZENE	J(all detects)
	1,2-Diphenylhydrazine/Azobenzen	140	137	78.00-116.00	-	1,2-Diphenylhydrazine/Azobenz	
	2,4,5-TRICHLOROPHENOL	131	134	79.00-107.00	-	2,4,5-TRICHLOROPHENOL	
	2,4,6-TRICHLOROPHENOL	133	134	81.00-113.00	-	2,4,6-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	129	133	80.00-109.00	-	2,4-DICHLOROPHENOL	
	2,4-DIMETHYLPHENOL	126	130	72.00-110.00	-	2,4-DIMETHYLPHENOL	
	2,4-DINITROPHENOL	142	149	52.00-131.00	-	2,4-DINITROPHENOL	
	2,4-DINITROTOLUENE	131	132	81.00-115.00	-	2,4-DINITROTOLUENE	
	2,6-DINITROTOLUENE	130	131	85.00-115.00	-	2,6-DINITROTOLUENE	
	2-CHLOROPHENOL	130	132	77.00-108.00	-	2-CHLOROPHENOL	
	2-METHYLPHENOL	120	122	64.00-101.00	-	2-METHYLPHENOL	
	2-NITROANILINE	134	135	83.00-116.00	-	2-NITROANILINE	
	2-NITROPHENOL	131	134	86.00-120.00	-	2-NITROPHENOL	
	3-NITROANILINE	126	125	74.00-113.00	-	3-NITROANILINE	
	4,6-DINITRO-2-METHYLPHENOL	143	145	78.00-119.00	-	4,6-DINITRO-2-METHYLPHEN	
	4-BROMOPHENYL-PHENYLETH	127	129	82.00-117.00	-	4-BROMOPHENYL-PHENYLET	
	4-CHLORO-3-METHYLPHENOL	127	131	70.00-123.00	-	4-CHLORO-3-METHYLPHENOL	
	4-CHLOROPHENYL-PHENYLET	127	123	82.00-111.00	-	4-CHLOROPHENYL-PHENYLE	
	4-METHYLPHENOL	105	107	61.00-103.00	-	4-METHYLPHENOL	
	4-NITROANILINE	109	105	59.00-100.00	-	4-NITROANILINE	
	ANILINE	109	110	49.00-101.00	-	ANILINE	
	BENZYL ALCOHOL	109	107	66.00-97.00	-	BENZYL ALCOHOL	
	BIS(2-CHLOROETHOXY)METHA	127	131	74.00-124.00	-	BIS(2-CHLOROETHOXY)METH	
	BIS(2-CHLOROETHYL) ETHER	121	126	77.00-108.00	-	BIS(2-CHLOROETHYL) ETHER	
	CARBAZOLE	129	130	81.00-114.00	-	CARBAZOLE	
	DIBENZOFURAN	128	126	83.00-108.00	-	DIBENZOFURAN	
	HEXACHLOROBENZENE	130	131	81.00-118.00	-	HEXACHLOROBENZENE	
	ISOPHORONE	128	132	74.00-117.00	-	ISOPHORONE	
	NITROBENZENE	123	129	75.00-109.00	-	NITROBENZENE	
	N-NITROSO-DI-N-PROPYLAMIN	126	127	69.00-110.00	-	N-NITROSO-DI-N-PROPYLAMI	
	PENTACHLOROPHENOL	128	129	53.00-110.00	-	PENTACHLOROPHENOL	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11604AQ242321A (DUP-13-SA5DN -QC-060311 SL -019-SA5DN -SB-4.0-5.0 SL -019-SA5DN -SB-9.0-10.0 SL -027-SA5DN -SB-14.0-15.0 SL -027-SA5DN -SB-4.0-5.0 SL -052-SA5DN -SB-4.0-5.0 SL -052-SA5DN -SB-9.0-10.0 SL -152-SA5DN -SS-0.0-0.5 SL -153-SA5DN -SS-0.0-0.5 SL -154-SA5DN -SS-0.0-0.5 SL -155-SA5DN -SS-0.0-0.5 SL -156-SA5DN -SS-0.0-0.5 SL -157-SA5DN -SS-0.0-0.5 SL -158-SA5DN -SS-0.0-0.5 SL -159-SA5DN -SS-0.0-0.5 SL -160-SA5DN -SS-0.0-0.5 SL -162-SA5DN -SS-0.0-0.5 SL -166-SA5DN -SS-0.0-0.5 SL -207-SA5DN -SS-0.0-0.5)	Aroclor 5442	112	-	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11612AQ241935A (DUP-13-SA5DN -QC-060311 SL -152-SA5DN -SS-0.0-0.5 SL -153-SA5DN -SS-0.0-0.5 SL -154-SA5DN -SS-0.0-0.5 SL -155-SA5DN -SS-0.0-0.5 SL -156-SA5DN -SS-0.0-0.5 SL -157-SA5DN -SS-0.0-0.5 SL -158-SA5DN -SS-0.0-0.5 SL -159-SA5DN -SS-0.0-0.5 SL -160-SA5DN -SS-0.0-0.5 SL -162-SA5DN -SS-0.0-0.5 SL -166-SA5DN -SS-0.0-0.5 SL -207-SA5DN -SS-0.0-0.5)	HEPTACHLOR	130	-	43.00-124.00	-	HEPTACHLOR	J(all detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11678AQ240711A	2,4,6-TRINITROTOLUENE	128	-	80.00-120.00	-	2,4,6-TRINITROTOLUENE	J(all detects)
(SL-019-SA5DN -SB-4.0-5.0	2,6-DINITROTOLUENE	123	-	80.00-120.00	-	2,6-DINITROTOLUENE	
SL -019-SA5DN -SB-9.0-10.0	2-AMINO-4,6-DINITROTOLUENE	125	-	80.00-120.00	-	2-AMINO-4,6-DINITROTOLUEN	
SL -027-SA5DN -SB-14.0-15.0	4-AMINO-2,6-DINITROTOLUENE	122	-	80.00-120.00	-	4-AMINO-2,6-DINITROTOLUEN	
SL -027-SA5DN -SB-4.0-5.0	NITROBENZENE	127	-	80.00-120.00	-	NITROBENZENE	
SL -207-SA5DN -SS-0.0-0.5)	PETN	126	-	80.00-120.00	-	PETN	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P0LELCSQ261213	3,3'-DICHLOROBENZIDINE	116	-	24.00-101.00	-	3,3'-DICHLOROBENZIDINE	
(DUP-13-SA5DN -QC-060311	ANILINE	101	-	34.00-94.00	-	ANILINE	
SL -019-SA5DN -SB-4.0-5.0							
SL -019-SA5DN -SB-9.0-10.0							
SL -027-SA5DN -SB-14.0-15.0							
SL -027-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-9.0-10.0							
SL -152-SA5DN -SS-0.0-0.5							
SL -153-SA5DN -SS-0.0-0.5							
SL -154-SA5DN -SS-0.0-0.5							J(all detects)
SL -155-SA5DN -SS-0.0-0.5							
SL -156-SA5DN -SS-0.0-0.5							
SL -157-SA5DN -SS-0.0-0.5							
SL -158-SA5DN -SS-0.0-0.5							
SL -159-SA5DN -SS-0.0-0.5							
SL -160-SA5DN -SS-0.0-0.5							
SL -162-SA5DN -SS-0.0-0.5							
SL -166-SA5DN -SS-0.0-0.5							
SL -207-SA5DN -SS-0.0-0.5)							

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16426BQ221133A	ANTIMONY	135	-	80.00-120.00	-	ANTIMONY	
(DUP-13-SA5DN -QC-060311							
SL -019-SA5DN -SB-4.0-5.0							
SL -019-SA5DN -SB-9.0-10.0							
SL -027-SA5DN -SB-14.0-15.0							
SL -027-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-9.0-10.0							
SL -152-SA5DN -SS-0.0-0.5							
SL -153-SA5DN -SS-0.0-0.5							
SL -154-SA5DN -SS-0.0-0.5							No Qual, SRM within QC Limits
SL -155-SA5DN -SS-0.0-0.5							
SL -156-SA5DN -SS-0.0-0.5							
SL -157-SA5DN -SS-0.0-0.5							
SL -158-SA5DN -SS-0.0-0.5							
SL -159-SA5DN -SS-0.0-0.5							
SL -160-SA5DN -SS-0.0-0.5							
SL -162-SA5DN -SS-0.0-0.5							
SL -166-SA5DN -SS-0.0-0.5							
SL -207-SA5DN -SS-0.0-0.5)							

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P7LDLCSQ262010	Di-n-butylphthalate	74	-	84.00-132.00	-	Di-n-butylphthalate	
(DUP-13-SA5DN -QC-060311	FLUORANTHENE	77	-	78.00-120.00	-	FLUORANTHENE	
SL -019-SA5DN -SB-4.0-5.0							
SL -019-SA5DN -SB-9.0-10.0							
SL -027-SA5DN -SB-14.0-15.0							
SL -027-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-4.0-5.0							
SL -052-SA5DN -SB-9.0-10.0							
SL -152-SA5DN -SS-0.0-0.5							
SL -153-SA5DN -SS-0.0-0.5							J(all detects)
SL -154-SA5DN -SS-0.0-0.5							UJ(all non-detects)
SL -155-SA5DN -SS-0.0-0.5							
SL -156-SA5DN -SS-0.0-0.5							
SL -157-SA5DN -SS-0.0-0.5							
SL -158-SA5DN -SS-0.0-0.5							
SL -159-SA5DN -SS-0.0-0.5							
SL -160-SA5DN -SS-0.0-0.5							
SL -162-SA5DN -SS-0.0-0.5							
SL -166-SA5DN -SS-0.0-0.5							
SL -207-SA5DN -SS-0.0-0.5)							

Surrogate Outlier Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-207-SA5DN-SS-0.0-0.5	n-Triacontane-d62	14	50.00-150.00	All Target Analytes	J(all detects) UJ(all non-detects)

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-153-SA5DN-SS-0.0-0.5	TETRACHLORO-M-XYLENE	48	50.00-130.00	All Target Analytes	J(all detects) UJ(all non-detects)
SL-166-SA5DN-SS-0.0-0.5	TETRACHLORO-M-XYLENE	35	50.00-130.00	All Target Analytes	J(all detects) UJ(all non-detects)

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-159-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	122	45.00-120.00	All Target Analytes	J(all detects)

Method: 8151A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-156-SA5DN-SS-0.0-0.5	2,4-Dichlorophenylacetic acid	277	36.00-156.00	All Target Analytes	J(all detects)

Method: 8315A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-019-SA5DN-SB-4.0-5.0	Butyraldehyde	59	64.00-126.00	All Target Analytes	J (all detects) UJ (all non-detects)
SL-027-SA5DN-SB-14.0-15.0	Butyraldehyde	49	64.00-126.00	All Target Analytes	J(all detects) UJ(all non-detects)
SL-027-SA5DN-SB-4.0-5.0	Butyraldehyde	42	64.00-126.00	All Target Analytes	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
MOISTURE	4.4	4.6	4		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
FLUORIDE	1.6	1.7	6	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
ALUMINUM	19800	20400	3	50.00	
CALCIUM	4280	4440	4	50.00	
IRON	27800	26400	5	50.00	
LITHIUM	23.8	24.9	5	50.00	
MAGNESIUM	5850	6170	5	50.00	
MANGANESE	421	428	2	50.00	
PHOSPHORUS	530	575	8	50.00	No Qualifiers Applied
POTASSIUM	5630	5850	4	50.00	
SODIUM	90.7	92.0	1	50.00	
STRONTIUM	27.6	28.3	3	50.00	
TIN	3.35	3.19	5	50.00	
TITANIUM	1500	1510	1	50.00	
Zirconium	7.52	7.67	2	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
ANTIMONY	0.339	0.252	29	50.00	
ARSENIC	7.79	6.29	21	50.00	
BARIUM	144	116	22	50.00	
BERYLLIUM	0.815	0.636	25	50.00	
CADMIUM	0.423	0.365	15	50.00	
CHROMIUM	33.0	27.8	17	50.00	
COBALT	12.0	9.72	21	50.00	
COPPER	17.5	14.7	17	50.00	
LEAD	11.8	8.67	31	50.00	No Qualifiers Applied
MOLYBDENUM	0.903	0.736	20	50.00	
NICKEL	20.5	17.7	15	50.00	
SELENIUM	0.247	0.204	19	50.00	
SILVER	0.0436	0.0381	13	50.00	
THALLIUM	0.419	0.298	34	50.00	
VANADIUM	55.3	47.4	15	50.00	
ZINC	87.7	75.6	15	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
HEXAVALENT CHROMIUM	0.32	1.0 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
MERCURY	0.0998 U	0.0175	200	50.00	J(all detects) UJ(all non-detects)

Method: 8081A
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Chlordane	2.5	4.0	46	50.00	No Qualifiers Applied
4,4'-DDE	0.29	0.45 U	200	50.00	J(all detects) UJ(all non-detects)
4,4'-DDT	0.37	0.36 U	200	50.00	
DELTA-BHC	0.063	0.17 U	200	50.00	
ENDOSULFAN II	0.15	0.36 U	200	50.00	
ENDRIN ALDEHYDE	0.23	0.36 U	200	50.00	
ENDRIN KETONE	0.36 U	0.075	200	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
AROCLOR 1260	1.6	1.6	0	50.00	No Qualifiers Applied
Aroclor 5460	3.5	2.7	26	50.00	

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
BENZO(A)PYRENE	1.1	1.1	0	50.00	No Qualifiers Applied
BENZO(B)FLUORANTHENE	4.1	3.5	16	50.00	
BENZO(K)FLUORANTHENE	0.73	0.82	12	50.00	
FLUORANTHENE	2.6	2.5	4	50.00	
NAPHTHALENE	0.96	0.88	9	50.00	
PHENANTHRENE	1.6	1.7	6	50.00	
PYRENE	1.7	1.5	12	50.00	
BENZO(A)ANTHRACENE	1.7 U	0.79	200	50.00	J(all detects) UJ(all non-detects)
CHRYSENE	5.4	1.9	96	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
BIS(2-ETHYLHEXYL)PHTHALATE	23	22	4	50.00	No Qualifiers Applied

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
PH	7.00	7.06	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB13-SA5DN-SS-060311	LEAD	J	0.000062	0.0010	PQL	mg/L	J (all detects)
EB14-SA5DN-SB-060311	LEAD	J	0.000064	0.0010	PQL	mg/L	J (all detects)

Method: 8081A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB13-SA5DN-SS-060311	HEPTACHLOR	J	0.0086	0.010	PQL	ug/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB13-SA5DN-SS-060311	1-METHYLNAPHTHALENE	J	0.026	0.053	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.026	0.053	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.055	1.1	PQL	ug/L	
	Di-n-butylphthalate	J	0.065	1.1	PQL	ug/L	
EB14-SA5DN-SB-060311	1-METHYLNAPHTHALENE	J	0.028	0.051	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.026	0.051	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.057	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.067	1.0	PQL	ug/L	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.6	1.7	PQL	mg/Kg	J (all detects)
SL-019-SA5DN-SB-9.0-10.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	SODIUM	J	92.0	101	PQL	mg/Kg	J (all detects)
	TIN	J	3.19	10.1	PQL	mg/Kg	
SL-019-SA5DN-SB-4.0-5.0	TIN	J	3.37	11.4	PQL	mg/Kg	J (all detects)
SL-019-SA5DN-SB-9.0-10.0	TIN	J	3.22	10.9	PQL	mg/Kg	J (all detects)
SL-027-SA5DN-SB-14.0-15.0	TIN	J	3.33	10.8	PQL	mg/Kg	J (all detects)
SL-027-SA5DN-SB-4.0-5.0	TIN	J	3.29	11.5	PQL	mg/Kg	J (all detects)
SL-052-SA5DN-SB-4.0-5.0	TIN	J	3.13	11.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.50	5.58	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-052-SA5DN-SB-9.0-10.0	BORON TIN	J J	10.4 3.27	28.1 11.3	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	BORON TIN	J J	14.0 4.34	26.3 10.5	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-153-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	87.4 3.34	106 10.6	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-154-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	94.4 3.45	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-155-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	90.7 3.35	104 10.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-156-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	79.6 3.31	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	90.7 3.24	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-158-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	87.7 3.26	106 10.6	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-159-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	93.5 3.40	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-160-SA5DN-SS-0.0-0.5	TIN	J	3.29	10.2	PQL	mg/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	98.6 3.70	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	87.7 3.40	108 10.8	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-207-SA5DN-SS-0.0-0.5	SODIUM TIN	J J	94.7 3.47	105 10.5	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	SELENIUM SILVER	J J	0.204 0.0381	0.411 0.103	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-019-SA5DN-SB-4.0-5.0	SILVER	J	0.0629	0.115	PQL	mg/Kg	J (all detects)
SL-019-SA5DN-SB-9.0-10.0	ANTIMONY SILVER	J J	0.212 0.0445	0.218 0.109	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-027-SA5DN-SB-14.0-15.0	ANTIMONY SILVER	J J	0.117 0.0434	0.213 0.106	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-027-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.0939 0.0659	0.446 0.111	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-052-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.136 0.0528	0.429 0.107	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	SELENIUM	J	0.369	0.425	PQL	mg/Kg	J (all detects)
SL-153-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.176 0.0737	0.423 0.106	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-154-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.257 0.0571	0.427 0.107	PQL PQL	mg/Kg mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-155-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.247 0.0436	0.406 0.102	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-156-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.226 0.0398	0.442 0.110	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.253 0.0381	0.434 0.109	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-158-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.242 0.0290	0.424 0.106	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-159-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.223 0.0268	0.436 0.109	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-160-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.257 0.0232	0.399 0.0996	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.270 0.0322	0.429 0.107	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.267 0.0656	0.428 0.107	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-207-SA5DN-SS-0.0-0.5	SELENIUM SILVER	J J	0.208 0.0572	0.421 0.105	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-027-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.53	1.1	PQL	mg/Kg	J (all detects)
SL-052-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.33	1.1	PQL	mg/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.65	1.1	PQL	mg/Kg	J (all detects)
SL-154-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.29	1.1	PQL	mg/Kg	J (all detects)
SL-155-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.32	1.0	PQL	mg/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.44	1.1	PQL	mg/Kg	J (all detects)
SL-160-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.32	1.0	PQL	mg/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.69	1.1	PQL	mg/Kg	J (all detects)
SL-207-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.37	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	MERCURY	J	0.0175	0.0989	PQL	mg/Kg	J (all detects)
SL-019-SA5DN-SB-4.0-5.0	MERCURY	J	0.0294	0.115	PQL	mg/Kg	J (all detects)
SL-019-SA5DN-SB-9.0-10.0	MERCURY	J	0.0162	0.108	PQL	mg/Kg	J (all detects)
SL-027-SA5DN-SB-14.0-15.0	MERCURY	J	0.0119	0.110	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA5DN-SB-4.0-5.0	MERCURY	J	0.0185	0.109	PQL	mg/Kg	J (all detects)
SL-052-SA5DN-SB-9.0-10.0	MERCURY	J	0.0044	0.111	PQL	mg/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	MERCURY	J	0.0136	0.104	PQL	mg/Kg	J (all detects)
SL-153-SA5DN-SS-0.0-0.5	MERCURY	J	0.0496	0.103	PQL	mg/Kg	J (all detects)
SL-156-SA5DN-SS-0.0-0.5	MERCURY	J	0.0247	0.106	PQL	mg/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	MERCURY	J	0.0110	0.110	PQL	mg/Kg	J (all detects)
SL-159-SA5DN-SS-0.0-0.5	MERCURY	J	0.0261	0.105	PQL	mg/Kg	J (all detects)
SL-160-SA5DN-SS-0.0-0.5	MERCURY	J	0.0165	0.0991	PQL	mg/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	MERCURY	J	0.0274	0.111	PQL	mg/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	MERCURY	J	0.0316	0.111	PQL	mg/Kg	J (all detects)
SL-207-SA5DN-SS-0.0-0.5	MERCURY	J	0.0657	0.103	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-207-SA5DN-SS-0.0-0.5	EFH (C15-C20)	J	7.4	13	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	ENDRIN KETONE	J	0.075	0.36	PQL	ug/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	4,4'-DDD	J	0.26	0.91	PQL	ug/Kg	J (all detects)
SL-153-SA5DN-SS-0.0-0.5	4,4'-DDE	J	0.093	0.37	PQL	ug/Kg	J (all detects)
	Chlordane	J	1.8	3.7	PQL	ug/Kg	
	ENDOSULFAN II	J	0.099	0.37	PQL	ug/Kg	
SL-154-SA5DN-SS-0.0-0.5	BETA-BHC	J	0.15	0.18	PQL	ug/Kg	J (all detects)
	Chlordane	J	3.1	3.7	PQL	ug/Kg	
	ENDRIN KETONE	J	0.14	0.37	PQL	ug/Kg	
SL-155-SA5DN-SS-0.0-0.5	4,4'-DDE	J	0.29	0.36	PQL	ug/Kg	J (all detects)
	Chlordane	J	2.5	3.6	PQL	ug/Kg	
	DELTA-BHC	J	0.063	0.17	PQL	ug/Kg	
	ENDOSULFAN II	J	0.15	0.36	PQL	ug/Kg	
	ENDRIN ALDEHYDE	J	0.23	0.36	PQL	ug/Kg	
SL-156-SA5DN-SS-0.0-0.5	4,4'-DDT	J	0.27	0.38	PQL	ug/Kg	J (all detects)
	ENDRIN KETONE	J	0.14	0.38	PQL	ug/Kg	
SL-157-SA5DN-SS-0.0-0.5	Chlordane	J	3.5	3.8	PQL	ug/Kg	J (all detects)
	DELTA-BHC	J	0.048	0.19	PQL	ug/Kg	
SL-158-SA5DN-SS-0.0-0.5	4,4'-DDT	J	0.35	0.37	PQL	ug/Kg	J (all detects)
	Chlordane	J	2.1	3.7	PQL	ug/Kg	
	DELTA-BHC	J	0.058	0.18	PQL	ug/Kg	
	ENDRIN KETONE	J	0.084	0.37	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-159-SA5DN-SS-0.0-0.5	Chlordane DELTA-BHC	J J	3.3 0.067	3.8 0.19	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-160-SA5DN-SS-0.0-0.5	4,4'-DDE Chlordane ENDOSULFAN I	J J J	0.16 1.1 0.064	0.35 3.5 0.17	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	4,4'-DDD BETA-BHC DELTA-BHC	J J J	0.31 0.14 0.042	0.38 0.19 0.19	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	Chlordane ENDRIN ALDEHYDE	J J	1.1 0.13	3.8 0.38	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	AROCLOR 1260 Aroclor 5460	J J	1.6 2.7	1.8 3.5	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-027-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.46	2.0	PQL	ug/Kg	J (all detects)
SL-052-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.57	1.9	PQL	ug/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	Aroclor 5460	J	1.3	3.5	PQL	ug/Kg	J (all detects)
SL-154-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	0.70	1.9	PQL	ug/Kg	J (all detects)
SL-155-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.6	1.8	PQL	ug/Kg	J (all detects)
SL-156-SA5DN-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.2 2.3	1.9 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.3 1.5	1.9 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-158-SA5DN-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.1 1.8	1.8 3.6	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-159-SA5DN-SS-0.0-0.5	Aroclor 5460	J	3.4	3.7	PQL	ug/Kg	J (all detects)
SL-162-SA5DN-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.3 1.9	1.9 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8151A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-157-SA5DN-SS-0.0-0.5	DICAMBA	J	0.46	1.3	PQL	ug/Kg	J (all detects)
SL-207-SA5DN-SS-0.0-0.5	MCPA	J	220	270	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.2	4.6	PQL	ug/Kg	J (all detects)
SL-027-SA5DN-SB-14.0-15.0	TOLUENE	J	0.09	4.2	PQL	ug/Kg	J (all detects)
SL-027-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.2	4.2	PQL	ug/Kg	J (all detects)
SL-052-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.4	4.5	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	350	PQL	ug/Kg	J (all detects)
SL-019-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	370	PQL	ug/Kg	J (all detects)
SL-027-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	380	PQL	ug/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	44	360	PQL	ug/Kg	J (all detects)
SL-153-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	360	PQL	ug/Kg	J (all detects)
SL-154-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	360	PQL	ug/Kg	J (all detects)
SL-155-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	350	PQL	ug/Kg	J (all detects)
SL-156-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	44	370	PQL	ug/Kg	J (all detects)
SL-157-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	61	370	PQL	ug/Kg	J (all detects)
SL-158-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	360	PQL	ug/Kg	J (all detects)
SL-159-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	31	370	PQL	ug/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-13-SA5DN-QC-060311	BENZO(A)ANTHRACENE	J	0.79	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.1	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.82	1.7	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.88	1.7	PQL	ug/Kg	
	PYRENE	J	1.5	1.7	PQL	ug/Kg	
SL-019-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	0.78	1.9	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.5	1.9	PQL	ug/Kg	
	CHRYSENE	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	1.0	1.9	PQL	ug/Kg	
	PYRENE	J	0.80	1.9	PQL	ug/Kg	
SL-019-SA5DN-SB-9.0-10.0	PYRENE	J	0.97	1.8	PQL	ug/Kg	J (all detects)
SL-152-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.79	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.81	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.7	1.8	PQL	ug/Kg	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	1.6	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-153-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.79	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.0	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.99	1.8	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.90	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	1.0	1.8	PQL	ug/Kg	
	PYRENE	J	1.6	1.8	PQL	ug/Kg	
SL-154-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	1.0	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.1	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.77	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.84	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.75	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.98	1.8	PQL	ug/Kg	
	PYRENE	J	1.6	1.8	PQL	ug/Kg	
SL-155-SA5DN-SS-0.0-0.5	BENZO(A)PYRENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	0.73	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.96	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.6	1.7	PQL	ug/Kg	
SL-156-SA5DN-SS-0.0-0.5	2-METHYLNAPHTHALENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.5	1.9	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.5	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.1	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.90	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.5	1.9	PQL	ug/Kg	
SL-157-SA5DN-SS-0.0-0.5	BENZO(A)PYRENE	J	0.76	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.8	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	1.8	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	0.99	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.9	PQL	ug/Kg	
	PYRENE	J	1.3	1.9	PQL	ug/Kg	
SL-158-SA5DN-SS-0.0-0.5	CHRYSENE	J	1.5	1.8	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	1.5	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.97	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.8	PQL	ug/Kg	
	PYRENE	J	1.0	1.8	PQL	ug/Kg	
SL-159-SA5DN-SS-0.0-0.5	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	1.5	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	
SL-160-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.1	1.7	PQL	ug/Kg	
	NAPHTHALENE	J	0.71	1.7	PQL	ug/Kg	
SL-162-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
SL-166-SA5DN-SS-0.0-0.5	BENZO(A)PYRENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.86	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.92	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.4	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.6	1.9	PQL	ug/Kg	
	PYRENE	J	1.6	1.9	PQL	ug/Kg	
SL-207-SA5DN-SS-0.0-0.5	Di-n-butylphthalate	J	6.9	19	PQL	ug/Kg	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	1.5	1.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE173 **Laboratory: LL**

EDD Filename: DE173_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **8315A**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-207-SA5DN-SS-0.0-0.5	FORMALDEHYDE	J	1500	1600	PQL	ug/Kg	J (all detects)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 3, 2011
LDC Report Date:	October 6, 2011
Matrix:	Soil/Water
Parameters:	Volatiles
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
TB-060311

Introduction

This data review covers 5 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 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
6/8/11	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone 1,2-Dibromo-3-chloropropane	51 49 56 64 45	All soil samples in SDG DE173	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
VBLKB78	6/8/11	Acetone Methylene chloride	8.7 ug/Kg 1.0 ug/Kg	All soil samples in SDG DE173

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-019-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	14 ug/Kg 1.2 ug/Kg	14U ug/Kg 4.6U ug/Kg
SL-019-SA5DN-SB-9.0-10.0	Acetone Methylene chloride	12 ug/Kg 5.0 ug/Kg	12U ug/Kg 5.0U ug/Kg
SL-027-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	9.0 ug/Kg 1.2 ug/Kg	9.0U ug/Kg 4.2U ug/Kg
SL-027-SA5DN-SB-14.0-15.0	Acetone Methylene chloride	11 ug/Kg 5.5 ug/Kg	11U ug/Kg 5.5U ug/Kg
SL-052-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	10 ug/Kg 1.4 ug/Kg	10U ug/Kg 4.5U ug/Kg

Sample TB-060311 was identified as a trip blank. No volatile 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. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone 1,2-Dibromo-3-chloropropane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 TB-060311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Volatiles - Laboratory Blank Data Qualification Summary - SDG DE173

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE173	SL-019-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	14U ug/Kg 4.6U ug/Kg	A	B
DE173	SL-019-SA5DN-SB-9.0-10.0	Acetone Methylene chloride	12U ug/Kg 5.0U ug/Kg	A	B
DE173	SL-027-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	9.0U ug/Kg 4.2U ug/Kg	A	B
DE173	SL-027-SA5DN-SB-14.0-15.0	Acetone Methylene chloride	11U ug/Kg 5.5U ug/Kg	A	B
DE173	SL-052-SA5DN-SB-4.0-5.0	Acetone Methylene chloride	10U ug/Kg 4.5U ug/Kg	A	B

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D1a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ± 20
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-019-SA5DN-SB-4.0-5.0	11 1	YBLKB78	21		31	
2 1	SL-019-SA5DN-SB-9.0-10.0	12 2	YBLKL89	22		32	
3 1	SL-027-SA5DN-SB-4.0-5.0	13		23		33	
4 1	SL-027-SA5DN-SB-14.0-15.0	14		24		34	
5 1	SL-052-SA5DN-SB-4.0-5.0	15		25		35	
6 2	TB-060311	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26277D1a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 26277D1a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26277P/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?

Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: <25.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	6/8/11	BU08C01-CCV	F	51		All soils	J/UJ/A (C)
			M	49			
			Y	56			
			Z	64			
			MM	45			

LDC #: 26277D1a

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 6/8/11
Conc. units: ug/Kg
Associated Samples: All 8015

Compound	Blank ID	10X	Sample Identification							
	VBLKB78		1	2	3	4	5			
F	8.7	87	14/U	12/U	9.0/U	11/U	10/U			
E	1.0	10	1.2/4.6U	5.0/U	1.2/4.2U	5.5/U	1.4/4.5U			
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277D1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/24/11	C (1st internal standard)	0.3569	0.3569	0.3517	0.3517	7	7
			CC (2nd internal standard)	0.9017	0.9017	0.8572	0.8572	5	5
			BB (3rd internal standard)	0.6820	0.6820	0.6887	0.6887	7	7
			(4th internal standard)						
2	ICAL	4/21/11	C (1st internal standard)	0.3956	0.3956	0.4093	0.4093	4	4
			CC (2nd internal standard)	1.0058	1.0058	1.0092	1.0092	2	2
			BB (3rd internal standard)	1.1471	1.1471	1.1204	1.1204	3	3
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to 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 #: 26277D1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	BU08C01	6/8/11	C (1st internal standard)	0.3517	0.3174	0.3174	10	10
			CC (2nd internal standard)	0.8572	0.8595	0.8595	0	0
			BB (3rd internal standard)	0.6887	0.7811	0.7811	13	13
			(4th internal standard)					
2	LU07C05	6/7/11	C (1st internal standard)	0.4093	0.4103	0.4103	0	0
			CC (2nd internal standard)	1.0092	1.0098	1.0098	0	0
			BB (3rd internal standard)	1.1204	1.1050	1.1050	1	1
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26577D1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	52.391	105	105	0
1,2-Dichloroethane-d4	↓	51.434	103	103	↓
Toluene-d8		49.635	99	99	
Bromofluorobenzene		47.484	95	95	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/D 1378

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20.0	20.0	21.68	21.26	108	108	106	106	2	2
Trichloroethene	↓	↓	20.64	20.2	103	103	101	101	2	2
Benzene			21.39	21.06	107	107	105	105	2	2
Toluene			20.68	20.46	103	103	102	102	1	1
Chlorobenzene			20.85	20.22	104	104	101	101	3	3

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 #: 26277O/a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, E:

Conc. = $\frac{(4603)(50)(5.0)}{(100)(2740)(0.2290)(5.01)(0.86)}$

=

1.16 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 10, 2011

Matrix: Soil/Water

Parameters: 1,4-Dioxane

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
TB-060311

Introduction

This data review covers 5 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 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for 1,4-Dioxane.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for 1,4-Dioxane.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-dioxane was found in the method blanks.

Sample TB-060311 was identified as a trip blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 TB-060311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D1b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/2/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer:

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8260B-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-019-SA5DN-SB-4.0-5.0	11	VBLKE48	21		31	
2	SL-019-SA5DN-SB-9.0-10.0	12	VBLKE47	22		32	
3	SL-027-SA5DN-SB-4.0-5.0	13		23		33	
4	SL-027-SA5DN-SB-14.0-15.0	14		24		34	
5	SL-052-SA5DN-SB-4.0-5.0	15		25		35	
6	TB-060311	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DC #: 262770 1b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
VI. Surrogate Spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓		✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26277D1b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/7/10	1,4-Dioxane (1st internal standard)	1.3392	1.3392	1.3396	1.3396	2	2
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
2	ICAL	11/01/10	↓ (1st internal standard)	1.3359	1.3359	1.3219	1.3219	1	1
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D1b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	6/7/11	1,4-Dioxane (1st internal standard)	1.3396	1.4362	1.4362	7	7
	9:24		(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
2	CCV	6/6/11	↓ (1st internal standard)	1.3219	1.3970	1.3970	6	6
	8:55		(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277P1b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8	10	9.412	94	94	0
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCSE48 / LCSD

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										
1,4-Dioxane	125	125	131.13	143.27	105	105	115	115	9	9

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D1b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. _____ , _____:

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

=

NP

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 7, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB14-SA5DN-SB-060311
EB13-SA5DN-SS-060311
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
SL-052-SA5DN-SB-9.0-10.0
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD

Introduction

This data review covers 21 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Samples EB14-SA5DN-SB-060311 and EB13-SA5DN-SS-060311 were identified as equipment blanks. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	Benzidine	0 (35-141)	0 (35-141)	-	J (all detects) R (all non-detects)	A
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	1,4-Dichlorobenzene	-	69 (70-100)	-	J (all detects) UJ (all non-detects)	A
	2-Methylphenol	-	73 (75-111)	-		
	4-Methylphenol	68 (71-111)	65 (71-111)	-		
	2,4-Dimethylphenol	77 (78-110)	76 (78-110)	-		
	2,4-Dichlorophenol	-	77 (78-117)	-		
	4-Chloro-3-methylphenol	74 (76-110)	74 (76-110)	-		
	2-Methylnaphthalene	72 (76-114)	71 (76-114)	-		
	2,4,5-Trichlorophenol	-	76 (78-109)	-		
	Acenaphthylene	80 (81-110)	77 (81-110)	-		
	Fluorene	76 (77-111)	74 (77-111)	-		
	4-Chlorophenyl-phenyl ether	77 (80-109)	74 (80-109)	-		
	N-Nitrosodiphenylamine	82 (86-145)	81 (86-145)	-		
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	4-Chloroaniline	-	-	33 (≤30)	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
160LELCS (All soil samples in SDG DE173)	Aniline	101 (34-94)	NA	NA	J (all detects)	P
	3,3'-Dichlorobenzidine	116 (24-101)	NA	NA	J (all detects)	

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
158WILCS/D (All water samples in SDG DE173)	Aniline	109 (49-101)	110 (49-101)	-	J (all detects)	P
	Bis(2-chloroethyl) ether	121 (77-108)	126 (77-108)	-	J (all detects)	
	2-Chlorophenol	130 (77-108)	132 (77-108)	-	J (all detects)	
	Benzyl alcohol	109 (66-97)	107 (66-97)	-	J (all detects)	
	2-Methylphenol	120 (64-101)	122 (64-101)	-	J (all detects)	
	4-Methylphenol	105 (61-103)	107 (61-103)	-	J (all detects)	
	N-Nitroso-di-n-propylamine	126 (69-110)	127 (69-110)	-	J (all detects)	
	Nitrobenzene	123 (75-109)	129 (75-109)	-	J (all detects)	
	Isophorone	128 (74-117)	132 (74-117)	-	J (all detects)	
	2-Nitrophenol	131 (86-120)	134 (86-120)	-	J (all detects)	
	2,4-Dimethylphenol	126 (72-110)	130 (72-110)	-	J (all detects)	
	Bis(2-chloroethoxy)methane	127 (74-124)	131 (74-124)	-	J (all detects)	
	2,4-Dichlorophenol	129 (80-109)	133 (80-109)	-	J (all detects)	
	1,2,4-Trichlorobenzene	114 (71-112)	114 (71-112)	-	J (all detects)	
	4-Chloro-3-methylphenol	127 (70-123)	131 (70-123)	-	J (all detects)	
	2,4,6-Trichlorophenol	133 (81-113)	134 (81-113)	-	J (all detects)	
	2,4,5-Trichlorophenol	131 (79-107)	134 (79-107)	-	J (all detects)	
	2-Nitroaniline	134 (83-116)	135 (83-116)	-	J (all detects)	
	2,6-Dinitrotoluene	130 (85-115)	131 (85-115)	-	J (all detects)	
	3-Nitroaniline	126 (74-113)	125 (74-113)	-	J (all detects)	
	2,4-Dinitrophenol	142 (52-131)	149 (52-131)	-	J (all detects)	
	2,4-Dinitrotoluene	131 (81-115)	132 (81-115)	-	J (all detects)	
	Dibenzofuran	128 (83-108)	126 (83-108)	-	J (all detects)	
	4-Chlorophenyl-phenyl ether	127 (82-111)	123 (82-111)	-	J (all detects)	
	4-Nitroaniline	109 (59-100)	105 (59-100)	-	J (all detects)	
	4,6-Dinitro-2-methylphenol	143 (78-119)	145 (78-119)	-	J (all detects)	
	1,2-Diphenylhydrazine	140 (78-116)	137 (78-116)	-	J (all detects)	
	4-Bromophenyl-phenyl ether	127 (82-117)	129 (82-117)	-	J (all detects)	
	Hexachlorobenzene	130 (81-118)	131 (81-118)	-	J (all detects)	
	Pentachlorophenol	128 (53-110)	129 (53-110)	-	J (all detects)	
	Carbazole	129 (81-114)	130 (81-114)	-	J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Bis(2-ethylhexyl)phthalate	23	22	4 (≤50)	-	-

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-155-SA5DN-SS-0.0-0.5	Benzidine	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE173	SL-155-SA5DN-SS-0.0-0.5	1,4-Dichlorobenzene 2-Methylphenol 4-Methylphenol 2,4-Dimethylphenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2-Methylnaphthalene 2,4,5-Trichlorophenol Acenaphthylene Fluorene 4-Chlorophenyl-phenyl ether N-Nitrosodiphenylamine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE173	SL-155-SA5DN-SS-0.0-0.5	4-Chloroaniline	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Aniline 3,3'-Dichlorobenzidine	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311	Aniline Bis(2-chloroethyl) ether 2-Chlorophenol Benzyl alcohol 2-Methylphenol 4-Methylphenol N-Nitroso-di-n-propylamine Nitrobenzene Isophorone 2-Nitrophenol 2,4-Dimethylphenol Bis(2-chloroethoxy)methane 2,4-Dichlorophenol 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Nitroaniline 2,6-Dinitrotoluene 3-Nitroaniline 2,4-Dinitrophenol 2,4-Dinitrotoluene Dibenzofuran 4-Chlorophenyl-phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol 1,2-Diphenylhydrazine 4-Bromophenyl-phenyl ether Hexachlorobenzene Pentachlorophenol Carbazole	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D2a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: KJ
2nd Reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D/RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A ~~ND~~	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation (RL/LOQ/LODs)	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 4, 13
XVII.	Field blanks	ND	EB = 14, 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	SL-052-SA5DN-SB-9.0-10.0	31	SBLKLE160
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	SL-155-SA5DN-SS-0.0-0.5MS	32	SBLKWT158
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23	SL-155-SA5DN-SS-0.0-0.5MSD	33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB14-SA5DN-SB-060311 W	24		34	
5	SL-156-SA5DN-SS-0.0-0.5	15	EB13-SA5DN-SS-060311 W	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-019-SA5DN-SB-4.0-5.0	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17	SL-019-SA5DN-SB-9.0-10.0	27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18	SL-027-SA5DN-SB-4.0-5.0	28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19	SL-027-SA5DN-SB-14.0-15.0	29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20	SL-052-SA5DN-SB-4.0-5.0	30		40	

LDC #: 26271D2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
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 #: 26277D2c

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Reported 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				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Reconstructed Ion Chromatography				
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				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field Blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26277D2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		22 o 23	all	following pages			4	code (Q) (All)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: DE173
Matrix: SOLID

GC/MS Semivolatiles
Fraction: Semivolatiles by GC/MS

22 + 23 (Q)

UNSPK: 6306836 MS: 6306837 MSD: 6306838 Analyte	Batch: 11160SLE026 (Sample numbers: 6306833-6306838, 6306840-6306848, 6306851-6306856)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
N-Nitrosodimethylamine	1644.74	N.D.	1238.9	1144.57	75	69	47-116	8	30
Phenol	1644.74	N.D.	1166.98	1123.8	71	68	58-126	4	30
Aniline	1644.74	N.D.	718.78	769.	44	46	35-95	7	30
bis(2-Chloroethyl)ether	1644.74	N.D.	1233.56	1191.08	75	72	60-116	4	30
2-Chlorophenol	1644.74	N.D.	1309.06	1279.6	80	77	73-121	2	30
1,3-Dichlorobenzene	1644.74	N.D.	1129.88	1125.44	69	68	63-109	0	30
1,4-Dichlorobenzene E	1644.74	N.D.	1146.82	1148.55	70	69 *	70-100	0	30
Benzyl alcohol	1644.74	N.D.	1233.73	1201.09	75	73	67-115	3	30
1,2-Dichlorobenzene	1644.74	N.D.	1157.09	1138.53	70	69	66-108	2	30
2-Methylphenol G	1644.74	N.D.	1233.27	1201.87	75	73 *	75-111	3	30
bis(2-Chloroisopropyl)ether	1644.74	N.D.	1255.1	1210.44	76	73	55-142	4	30
4-Methylphenol I	1644.74	N.D.	1116.62	1082.27	68 *	65 *	71-111	3	30
N-Nitroso-di-n-propylamine	1644.74	N.D.	1203.51	1177.22	73	71	60-116	2	30
Hexachloroethane	1644.74	N.D.	1099.4	1083.06	67	65	57-109	1	30
Nitrobenzene	1644.74	N.D.	1314.48	1287.81	80	78	72-106	2	30
Isophorone	1644.74	N.D.	1272.57	1254.79	77	76	73-102	1	30
2-Nitrophenol	1644.74	N.D.	1288.9	1280.96	78	77	74-115	1	30
2,4-Dimethylphenol O	1644.74	N.D.	1270.65	1251.59	77 *	76 *	78-110	2	30
Benzoic acid	1644.74	N.D.	710.53	941.3	43	57	10-173	28	30
3,5-Dimethylphenol	1644.74	N.D.	1710.35	1702.98	104	103	70-130	0	30
bis(2-Chloroethoxy)methane	1644.74	N.D.	1291.62	1257.78	79	76	75-104	3	30
2,4-Dichlorophenol Q	1644.74	N.D.	1299.47	1277.93	79	77 *	78-117	2	30
1,2,4-Trichlorobenzene	1644.74	N.D.	1298.39	1276.84	79	77	72-115	2	30
Naphthalene	1644.74	N.D.	1246.94	1246.97	76	75	72-116	0	30
4-Chloroaniline T	1644.74	N.D.	551.61	773.41	34	47	23-95	33 *	30
Hexachlorobutadiene	1644.74	N.D.	1287.06	1284.42	78	78	62-120	0	30
4-Chloro-3-methylphenol V	1644.74	N.D.	1216.33	1229.48	74 *	74 *	76-110	1	30
2-Methylnaphthalene W	1644.74	N.D.	1186.14	1176.63	72 *	71 *	76-114	1	30
1-Methylnaphthalene	1644.74	N.D.	1242.25	1247.94	76	75	73-112	0	30
Hexachlorocyclopentadiene	3289.47	N.D.	1524.37	1442.	46	44	10-153	6	30
2,4,6-Trichlorophenol	1644.74	N.D.	1366.32	1332.31	83	80	77-115	3	30
2,4,5-Trichlorophenol Z	1644.74	N.D.	1274.69	1258.88	78	76 *	78-109	1	30
2-Chloronaphthalene	1644.74	N.D.	1240.39	1178.21	75	71	50-141	5	30
2-Nitroaniline	1644.74	N.D.	1309.68	1293.99	80	78	67-125	1	30
Dimethylphthalate	1644.74	N.D.	1294.05	1262.36	79	76	64-118	2	30
2,6-Dinitrotoluene	1644.74	N.D.	1284.68	1251.65	78	76	69-123	3	30
Acenaphthylene DD	1644.74	N.D.	1323.93	1278.44	80 *	77 *	81-110	3	30
3-Nitroaniline	1644.74	N.D.	1135.59	1128.54	69	68	59-122	1	30
Acenaphthene	1644.74	N.D.	1297.09	1280.82	79	77	75-115	1	30
2,4-Dinitrophenol	3289.47	N.D.	889.48	844.21	27	25	20-143	5	30
4-Nitrophenol	1644.74	N.D.	1014.83	1003.31	62	61	54-113	1	30
2,4-Dinitrotoluene	1644.74	N.D.	1217.99	1203.06	74	73	73-113	1	30

J/W/A

J/A4

J/W/A

DE173 3032

Results are being reported on an as received basis.

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: DE173
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 6306836 MS: 6306837 MSD: 6306838 Analyte	Batch: 11160SLE026 (Sample numbers: 6306833-6306838, 6306840-6306848, 6306851-6306856)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dibenzofuran	1644.74	N.D.	1285.92	1255.9	78	76	71-112	2	30
Diethylphthalate	1644.74	N.D.	1278.5	1254.28	78	76	66-118	2	30
Fluorene NN	1644.74	N.D.	1244.41	1230.29	76 *	74 *	77-111	1	30
4-Chlorophenyl-phenylether MM	1644.74	N.D.	1271.36	1231.77	77 *	74 *	80-109	3	30
4-Nitroaniline	1644.74	N.D.	942.29	1011.9	57	61	52-112	7	30
4,6-Dinitro-2-methylphenol	1644.74	N.D.	831.79	810.13	51	49	24-116	3	30
N-Nitrosodiphenylamine & Q	1644.74	N.D.	1354.83	1345.24	82 *	81 *	86-145	1	30
1,2-Diphenylhydrazine	1644.74	N.D.	1497.55	1485.33	91	90	71-129	1	30
4-Bromophenyl-phenylether	1644.74	N.D.	1377.33	1367.07	84	83	67-129	1	30
Hexachlorobenzene	1644.74	N.D.	1380.97	1328.82	84	80	77-114	4	30
Pentachlorophenol	1644.74	N.D.	1038.45	976.09	63	59	28-127	6	30
Phenanthrene	1644.74	N.D.	1266.67	1254.85	77	76	65-125	1	30
Anthracene	1644.74	N.D.	1293.54	1284.26	79	78	75-115	1	30
Carbazole	1644.74	N.D.	1254.33	1245.9	76	75	64-120	1	30
Di-n-butylphthalate	1644.74	N.D.	1334.5	1338.03	81	81	67-123	0	30
Fluoranthene	1644.74	N.D.	1202.14	1212.69	73	73	73-112	1	30
Benzidine SSS	8223.68	N.D.	N.D.	N.D.	0 *	0 *	35-141	0	30
Pyrene	1644.74	N.D.	1402.73	1359.12	85	82	74-126	3	30
Butylbenzylphthalate	1644.74	N.D.	1472.48	1431.29	90	86	73-134	3	30
bis(2-Ethylhexyl)phthalate	1644.74	21.59	1461.53	1427.59	88	85	63-122	2	30
3,3'-Dichlorobenzidine	1644.74	N.D.	798.23	813.54	49	49	16-119	2	30
Benzo(a)anthracene	1644.74	N.D.	1348.88	1310.28	82	79	65-122	3	30
Chrysene	1644.74	N.D.	1319.08	1287.81	80	78	62-128	2	30
Di-n-octylphthalate	1644.74	N.D.	1317.82	1302.21	80	79	56-126	1	30
Benzo(b)fluoranthene	1644.74	N.D.	1122.01	1073.19	68	65	59-125	4	30
Benzo(k)fluoranthene	1644.74	N.D.	1189.7	1183.94	72	72	56-132	0	30
Benzo(a)pyrene	1644.74	N.D.	1148.33	1130.09	70	68	57-126	2	30
Indeno(1,2,3-cd)pyrene	1644.74	N.D.	1222.73	1177.91	74	71	61-126	4	30
Dibenz(a,h)anthracene	1644.74	N.D.	1229.37	1183.15	75	71	65-125	4	30
Benzo(g,h,i)perylene	1644.74	N.D.	1219.56	1158.73	74	70	59-127	5	30

DE173 1322

Results are being reported on an as received basis.

LDC #: 26277D2a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		160LELCS	NNN	101 (34-94)	( )	( )	All soils	J/Pdet (L)
			BBB	116 (24-101)	( )	( )	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		158WILCS/D	see following	pages	( )	( )	all waters	code (L)
				( )	( )	( )		all J/Pdet
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate (LCSD)

SDG: DE173
Matrix: LIQUID

all J/Pdet(L)

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 158WILCS LCSD: 158WILCSD Analyte	Batch: 11158WAI026 (Sample numbers: 6306849-6306850) Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Phenol ~~AAA~~	50	30.6	30.55	61	61	21-67	0	30
Aniline NNN	50	54.5	55.1	109 *	110 *	49-101	1	30
bis(2-Chloroethyl)ether B	50	60.61	62.96	121 *	126 *	77-108	4	30
2-Chlorophenol C	50	64.86	65.82	130 *	132 *	77-108	1	30
1,3-Dichlorobenzene	50	52.4	48.83	105	98	50-119	7	30
1,4-Dichlorobenzene	50	52.24	48.82	104	98	53-119	7	30
Benzyl alcohol QQQ	50	54.67	53.69	109 *	107 *	66-97	2	30
1,2-Dichlorobenzene	50	52.63	50.17	105	100	55-118	5	30
2-Methylphenol G	50	60.13	61.23	120 *	122 *	64-101	2	30
bis(2-Chloroisopropyl)ether	50	59.6	61.47	119	123	62-127	3	30
4-Methylphenol I	50	52.74	53.61	105 *	107 *	61-103	2	30
N-Nitroso-di-n-propylamine J	50	63.16	63.73	126 *	127 *	69-110	1	30
Hexachloroethane	50	49.8	45.93	100	92	52-113	8	30
Nitrobenzene L	50	61.31	64.61	123 *	129 *	75-109	5	30
Isophorone M	50	64.12	65.96	128 *	132 *	74-117	3	30
2-Nitrophenol N	50	65.52	66.83	131 *	134 *	86-120	2	30
2,4-Dimethylphenol O	50	62.95	65.25	126 *	130 *	72-110	4	30
Benzoic acid	50	29.97	30.93	60	62	10-69	3	30
3,5-Dimethylphenol	50	52.42	54.72	105	109	70-130	4	30
bis(2-Chloroethoxy)methane P	50	63.31	65.26	127 *	131 *	74-124	3	30
2,4-Dichlorophenol Q	50	64.39	66.72	129 *	133 *	80-109	4	30
1,2,4-Trichlorobenzene R	50	57.08	57.05	114 *	114 *	71-112	0	30
4-Chloroaniline	50	47.95	46.97	96	94	42-124	2	30
Hexachlorobutadiene	50	55.77	54.27	112	109	57-124	3	30
4-Chloro-3-methylphenol V	50	63.34	65.44	127 *	131 *	70-123	3	30
Hexachlorocyclopentadiene	100	110.57	107.08	111	107	36-118	3	30
2,4,6-Trichlorophenol Y	50	66.66	67.09	133 *	134 *	81-113	1	30
2,4,5-Trichlorophenol Z	50	65.39	67.11	131 *	134 *	79-107	3	30
2-Chloronaphthalene	50	55.66	56.76	111	114	54-132	2	30
2-Nitroaniline BB	50	66.92	67.25	134 *	135 *	83-116	0	30
2,6-Dinitrotoluene EE	50	65.06	65.54	130 *	131 *	85-115	1	30
3-Nitroaniline FF	50	63.16	62.27	126 *	125 *	74-113	1	30
2,4-Dinitrophenol HH	100	141.99	149.1	142 *	149 *	52-131	5	30
4-Nitrophenol	50	26.68	25.41	53	51	16-78	5	30
2,4-Dinitrotoluene KK	50	65.28	66.02	131 *	132 *	81-115	1	30
Dibenzofuran JJ	50	64.06	63.11	128 *	126 *	83-108	1	30
4-Chlorophenyl-phenylether MM	50	63.59	61.68	127 *	123 *	82-111	3	30
4-Nitroaniline OO	50	54.31	52.5	109 *	105 *	59-100	3	30
4,6-Dinitro-2-methylphenol PP	50	71.5	72.59	143 *	145 *	78-119	2	30
N-Nitrosodiphenylamine	50	64.57	65.8	129	132	67-136	2	30
1,2-Diphenylhydrazine	50	70.12	68.74	140 *	137 *	78-116	2	30
4-Bromophenyl-phenylether RR	50	63.52	64.3	127 *	129 *	82-117	1	30

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate (LCSD)

SDG: DE173
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 158WILCS LCSD: 158WILCSD Analyte	Batch: 11158WAI026 (Sample numbers: 6306849-6306850) Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Hexachlorobenzene SS	50	65.02	65.32	130 *	131 *	81-118	0	30
Pentachlorophenol TT	50	63.94	64.32	128 *	129 *	53-110	1	30
Carbazole WW	50	64.6	65.13	129 *	130 *	81-114	1	30
Benzidine	250	248.64	255.01	99	102	34-117	3	30
3,3'-Dichlorobenzidine	50	52.15	49.9	104	100	49-111	4	30

DE173 1324

LDC #: 26277D2a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (ug/kg)		RPD
	4	13	
EEE	23	22	4

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26277V29

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/01/11	Phenol (1st internal standard)	2.987	2.987	2.948	2.948	3	3
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.496	0.496	0.488	0.488	3	3
			~~Fluorene~~ 2-Methylnaphthalene (3rd internal standard)	0.409	0.409	0.401	0.401	5	5
			Pentachlorophenol (4th internal standard)	0.108	0.108	0.104	0.104	6	6
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.979	0.979	0.948	0.948	5	5
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.996	1.996	1.855	1.855	9	9
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	EF0601	6/14/11	Phenol (1st internal standard)	2.948	2.676	2.676	9	9
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.488	0.517	0.517	6	6
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.401	0.422	0.422	5	5
			Pentachlorophenol (4th internal standard)	0.104	0.100	0.100	3	3
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.948	1.039	1.039	10	10
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.853	2.130	2.730	15	11
2	EF0631	6/15/11	Phenol (1st internal standard)		2.717	2.717	8	8
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)		0.493	0.493	1	1
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)		0.416	0.416	4	4
			Pentachlorophenol (4th internal standard)		0.091	0.091	12	12
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.929	0.929	2	2
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)		1.950	1.950	5	5
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100	83.597	84	84	0
2-Fluorobiphenyl	↓	87.329	87	87	
Terphenyl-d14	↓	86.913	87	87	
Phenol-d5	200	167.674	84	84	
2-Fluorophenol	↓	173.370	87	87	
2,4,6-Tribromophenol	↓	158.825	79	79	↓
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 #: 26277V09

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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 = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 22723

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1644.74	1644.74	ND	1166.98	1123.8	71	71	68	68	4	4
N-Nitroso-di-n-propylamine				1203.51	1177.22	73	73	71	71	2	2
4-Chloro-3-methylphenol				1216.33	1229.48	74	74	74	74	1	1
Acenaphthene				1297.09	1280.82	79	79	77	77	1	1
Pentachlorophenol				1038.45	976.09	63	63	59	59	6	6
Pyrene				1402.73	1359.12	85	85	82	82	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277W29

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 160L ELC5

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	1433.33	NA	1164.83	NA	81	81				
N-Nitroso-di-n-propylamine	1666.67		1236.11		74	74				
4-Chloro-3-methylphenol	1466.67		1308.74		89	89				
Acenaphthene	1466.67		1286.17		88	88				
Pentachlorophenol	1366.67		1174.46		86	86				
Pyrene	1566.67		1410.66		90	90	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277029

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, EET:

Conc. = (17339)(40)(1000)(____)(____) / (59771)(0.948)(30)(0.93)(____)

=

44 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 7, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB14-SA5DN-SB-060311
EB13-SA5DN-SS-060311
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
SL-052-SA5DN-SB-9.0-10.0
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD

Introduction

This data review covers 21 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
SBLKD167	6/17/11	Bis(2-ethylhexyl)phthalate	71 ug/Kg	SL-162-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

Samples EB14-SA5DN-SB-060311 and EB13-SA5DN-SS-060311 were identified as equipment blanks. No semivolatile contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB14-SA5DN-SB-060311	6/3/11	Bis(2-ethylhexyl)phthalate	0.057 ug/L	SL-019-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0
EB14-SA5DN-SB-060311	6/3/11	Di-n-butylphthalate 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	0.067 ug/L 0.028 ug/L 0.026 ug/L 0.15 ug/L	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0
EB13-SA5DN-SS-060311	6/3/11	Bis(2-ethylhexyl)phthalate	0.055 ug/L	SL-162-SA5DN-SS-0.0-0.5
EB13-SA5DN-SS-060311	6/3/11	Di-n-butylphthalate 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	0.065 ug/L 0.026 ug/L 0.026 ug/L 0.16 ug/L	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311

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-154-SA5DN-SS-0.0-0.5	Naphthalene	0.75 ug/Kg	1.8U ug/Kg
SL-160-SA5DN-SS-0.0-0.5	Naphthalene	0.71 ug/Kg	1.7U 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

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	N-Nitrosodimethylamine	-	-	48 (≤30)	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
157WELCS/LCSD (All water samples in SDG DE173)	Di-n-octylphthalate	-	148 (57-145)	43 (≤30)	J (all detects) UJ (all non-detects)	P
167LDLCS (All soil samples in SDG DE173)	Di-n-butylphthalate	74 (75-137)	NA	NA	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Benzo(a)anthracene	1.7U	0.79	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(a)pyrene	1.1	1.1	0 (≤50)	-	-
Benzo(b)fluoranthene	4.1	3.5	16 (≤50)	-	-
Benzo(k)fluoranthene	0.73	0.82	12 (≤50)	-	-
Chrysene	5.4	1.9	96 (≤50)	J (all detects)	A
Fluoranthene	2.6	2.5	4 (≤50)	-	-
Naphthalene	0.96	0.88	9 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Phenanthrene	1.6	1.7	6 (≤50)	-	-
Pyrene	1.7	1.5	12 (≤50)	-	-

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-155-SA5DN-SS-0.0-0.5	N-Nitrosodimethylamine	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE173	EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311	Di-n-octylphthalate	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)(RPD) (L,E)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Di-n-butylphthalate	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All TCL compounds	J (all detects)	A	Compound quantitation and RLs (Z)
DE173	SL-155-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	Benzo(a)anthracene	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)
DE173	SL-155-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	Chrysene	J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DE173	SL-154-SA5DN-SS-0.0-0.5	Naphthalene	1.8U ug/Kg	A	F
DE173	SL-160-SA5DN-SS-0.0-0.5	Naphthalene	1.7U ug/Kg	A	F

LDC #: 26277D2b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11

SDG #: DE173 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: FT

SUOA 2nd Reviewer:

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbons~~ (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 4, 13
XVII.	Field blanks	SW	EB = 14, 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

soil + water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	SL-052-SA5DN-SB-9.0-10.0	31	SBLKLD167
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	SL-155-SA5DN-SS-0.0-0.5MS	32	SBLKW5157
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23	SL-155-SA5DN-SS-0.0-0.5MSD	33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB14-SA5DN-SB-060311 W	24		34	
5	SL-156-SA5DN-SS-0.0-0.5	15	EB13-SA5DN-SS-060311 W	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-019-SA5DN-SB-4.0-5.0	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17	SL-019-SA5DN-SB-9.0-10.0	27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18	SL-027-SA5DN-SB-4.0-5.0	28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19	SL-027-SA5DN-SB-14.0-15.0	29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20	SL-052-SA5DN-SB-4.0-5.0	30		40	

LDC #: 26277D2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogates				
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 #: 26277102-b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
X. 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				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field Blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26277D2-b

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 6/17/11 **Blank analysis date:** 6/21/11 Associated Samples: 10, 16, 19 → 21 (ND)

Conc. units: ug/kg

Compound	Blank ID	Sample Identification							
[redacted]	SBLK D167								
EEE	71								

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 method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277D2h
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/kg

Sampling date: 6/3/17

Field blank type: (circle one) Field Blank / Rinsate / Other: EB

14 = 10, ~~16, 19 - 21~~ (ND)
15 = 16, 19 - 21

Compound	Blank ID	Blk ID	Sample Identification							
	14	15								
~~Diethylphthalate~~										
~~Di-n-butylphthalate~~										
Bis(2-ethylhexyl)phthalate	0.057	0.055								
CRQL										

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 #: 26277025
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/kg

Sampling date: 6/3/11

Field blank type: (circle one) Field Blank / Rinsate / Other: EB

14: 16-21
15: 1-13
~~All SOILS~~ NA

Compound	Blank ID	BLK ID	Sample Identification							
	14	15		3	9					
Diethylphthalate XX	0.067	0.065								
Di-n-butylphthalate TTT	0.028	0.026								
Bis(2-ethylhexyl)phthalate W	0.026	0.026								
S	0.15	0.16		0.75 J-8U	0.71 J-7U					
—	—	—								
CRQL										

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 #: 26277D2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 2
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		22+23	~~DEG~~	( )	( )	48 (30)	4	J/A def Q
			~~000~~	( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC #: 26277D2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		157WELCS/LCSD	FFF	( )	148 (57-145)	43 (30)	All water	J/UJ/P (L, E)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		167LDLCS	XX	74 (75-137)	( )	( )	All soil	J/UJ/P (L)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC#: 26277D2b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: EJ
2nd Reviewer:

METHOD: SVOA (EPA Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(fd)

Compound	Concentration (ug/Kg)		≤50 RPD	
	4	13		
CCC	1.7U	0.79	200	J/UJ/A
III	1.1	1.1	0	
GGG	4.1	3.5	16	
HHH	0.73	0.82	12	
DDD	5.4	1.9	96	J/Adet
YY	2.6	2.5	4	
S	0.96	0.88	9	
UU	1.6	1.7	6	
ZZ	1.7	1.5	12	

V:\FIELD DUPLICATES\templates\26277D2b.wpd

LDC #: 26272D2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (/ std)	Recalculated RRF (/ std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/20/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.048	1.048	1.066	1.066	4	4
			Fluorene (3rd internal standard)	1.285	1.285	1.309	1.309	7	7
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.125	1.125	1.126	1.126	4	4
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.178	1.178	1.196	1.196	2	2
			Benzo(a)pyrene (6th internal standard)	1.068	1.068	1.114	1.114	7	7
2	ICAL	6/29/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.074	1.074	1.074	1.074	4	4
			Fluorene (3rd internal standard)	1.098	1.098	1.301	1.301	9	9
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.014	1.014	1.142	1.142	9	9
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.264	1.264	1.274	1.274	2	2
			Benzo(a)pyrene (6th internal standard)	1.160	1.160	1.147	1.147	6	6
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	IF079	6/21/11	~~Phenol (1st internal standard)~~					
	18:33		Naphthalene (2nd internal standard)	1.066	1.070	1.070	0	0
			Fluorene (3rd internal standard)	1.309	1.299	1.299	1	1
			~~Pentachlorophenol (4th internal standard)~~ Anthracene	1.126	1.181	1.181	5	5
			~~Bis(2-ethylhexyl)phthalate (5th internal standard)~~ Chrysene	1.196	1.187	1.187	1	1
			Benzo(a)pyrene (6th internal standard)	1.114	1.091	1.091	2	2
2	IF104	6/30/11	~~Phenol (1st internal standard)~~					
	06:59		Naphthalene (2nd internal standard)	1.074	1.099	1.099	2	2
			Fluorene (3rd internal standard)	1.301	1.331	1.331	2	2
			~~Pentachlorophenol (4th internal standard)~~ Anthracene	1.142	1.163	1.163	2	2
			~~Bis(2-ethylhexyl)phthalate (5th internal standard)~~ Chrysene	1.274	1.257	1.257	1	1
			Benzo(a)pyrene (6th internal standard)	1.147	1.174	1.174	2	2
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277025

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	1.0	0.844	85	85	0
2-Fluorobiphenyl	↓	0.897	90	90	0
Terphenyl-d14	↓	0.807	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 #: 26211D2D

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 2
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 22 + 23

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/Kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	33.11	33.11	ND	29.43	30.11	89	89	91	91	2	2
Pentachlorophenol											
Pyrene	33.11	33.11	1.66	28.35	30.63	81	81	87	87	8	8

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277N2D

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 167 LDC)

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	33.33	NA	29.2	NA	88	88				
Pentachlorophenol										
Pyrene	33.33	↓	30.71	↓	92	92	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2h

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1 , III

Conc. = $\frac{(27525)(1.0)(1000)(\quad)(\quad)}{(35507)(1.147)(30)(0.93)(\quad)}$

=

2.446 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 3, 2011
LDC Report Date:	October 10, 2011
Matrix:	Soil
Parameters:	N-Nitrosodimethylamine
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% .

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-nitrosodimethylamine was found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
SBLKB160	6/9/11	N-Nitrosodimethylamine	18.9 ng/Kg	All samples in SDG DE173

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 TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-019-SA5DN-SB-9.0-10.0	N-Nitrosodimethylamine	40.2 ng/Kg	40.2U ng/Kg
SL-027-SA5DN-SB-4.0-5.0	N-Nitrosodimethylamine	45.4 ng/Kg	45.4U ng/Kg

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-027-SA5DN-SB-14.0-15.0	N-Nitrosodimethylamine	41.7 ng/Kg	41.7U ng/Kg

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-207-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE173

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE173	SL-019-SA5DN-SB-9.0-10.0	N-Nitrosodimethylamine	40.2U ng/Kg	A	B
DE173	SL-027-SA5DN-SB-4.0-5.0	N-Nitrosodimethylamine	45.4U ng/Kg	A	B
DE173	SL-027-SA5DN-SB-14.0-15.0	N-Nitrosodimethylamine	41.7U ng/Kg	A	B

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D2c **VALIDATION COMPLETENESS WORKSHEET** Date: 10/02/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/MS Instrument performance check	A/N	not required
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	~~ICV~~ CCV ≤ 20 ICV ≤ 30
V.	Blanks	SW	
VI.	Surrogate spikes	A ~~ND~~	~~not required~~
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-207-SA5DN-SS-0.0-0.5	11	SBLKLB160	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 20277O2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate recoveries				
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 duplicate				
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 #: 26277D2C

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.		✓		
XV. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 6/9/11 **Blank analysis date:** 6/28/11

Conc. units: ng/kg Associated Samples: All

Compound	Blank ID	5x	Sample Identification						
	SBLKLB1	60	3	4	5				
N-Nitrosodimethylamine	18.9	94.5	40.2 /U	45.4 /U	41.7/U				

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 method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/27/11	~~Phenol (1st internal standard)~~ NDMA	1.00320	1.00320	0.96558	0.96558	17.466	17.466
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
2	ICAL	6/29/11	~~Phenol (1st internal standard)~~ NDMA	1.144	1.144	1.176	1.176	10	10
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	6/28/11 6:52	~~Phenol (1st internal standard)~~ NDMA	0.96558	1.08069	1.08069	11.92162	11.92162
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2	CCV	6/29/11 14:54	~~Phenol (1st internal standard)~~ NDMA	1.17602	1.09173	1.09173	7.16703	7.16703
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ NDMA-d6	25.0	31.06	124	124	0
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS

Compound	Spike Added (ng/Kg)		Spike Concentration (ng/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
NDMA	833.33	NA	872.33	NA	105	105	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_t	=	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. 3 , NDMA

Conc. = $\frac{(4052)(50)(1000)(\quad)(\quad)}{(96847)(0.9655)(30)(0.90)(\quad)}$ (25)

=

40 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: June 3, 2011

LDC Report Date: October 7, 2011

Matrix: Soil/Water

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB13-SA5DN-SS-060311
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD

Introduction

This data review covers 15 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 8081A for Chlorinated Pesticides.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of single compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Column	Compound	%RSD	Associated Samples	Flag	A or P
6/11/11	RTX-CLP	Endrin	24.0	All water samples in SDG DE173	J (all detects) UJ (all non-detects)	A

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
6/13/11	2P6162.19R	RTX-CLPI	4,4'-DDE 4,4'-DDD Endosulfan II Endrin aldehyde 4,4'-DDT Endosulfan sulfate Methoxychlor	36.5 38.4 26.9 35.5 20.8 24.8 24.3	All water samples in SDG DE173	J (all detects) UJ (all non-detects)	A
6/24/11	1P10174.52R	RTX-CLPI	Endosulfan I Endrin 4,4'-DDD 4,4'-DDT Endrin aldehyde Endosulfan sulfate	21.4 24.1 25.6 25.0 22.1 26.0	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
6/24/11	1P10174.52R	RTX-CLPII	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide Endosulfan I 4,4'-DDE Dieldrin Endrin Endosulfan II 4,4'-DDT Endrin aldehyde Endosulfan sulfate Methoxychlor Endrin ketone	78.5 81.6 92.7 76.0 67.1 114.4 88.4 82.5 102.0 89.2 51.0 63.5 28.7 44.7 49.8 35.0 26.8	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	P
6/24/11	1P10174.53R	RTX-CLP1	Mirex	21.8	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A
6/24/11	1P10174.53R	RTX-CLP2	Mirex	65.3	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A
6/24/11	1P10174.54R	RTX-CLP2	Toxaphene	53.3	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A
6/24/11	1P10174.55R	RTX-CLP2	Chlordane (Technical)	134.8	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A
6/25/11	1P10174B.69R	RTX-CLPII	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide Endosulfan I 4,4'-DDE Dieldrin Endrin Endosulfan II Endosulfan sulfate Methoxychlor Endrin ketone	85.3 85.8 104.8 82.4 71.8 131.1 102.6 104.5 122.7 102.9 68.1 78.4 67.8 46.6 42.8	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	P
6/25/11	1P10174B.69R	RTX-CLPII	4,4'-DDT Endrin aldehyde	40.5 61.1	DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	P

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
6/25/11	1P10174B.70R	RTX-CLPII	Mirex	82.5	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	A
6/25/11	1P10174.71R	RTX-CLPI	Toxaphene	22.0	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	A
6/25/11	1P10174.71R	RTX-CLPII	Toxaphene	50.3	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	A
6/25/11	1P10174.72R	RTX-CLPII	Chlordane (Technical)	129	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
6/11/11	1P6162-ICV	RTX-CLPI	Endrin	28.9	All water samples in SDG DE173	J (all detects) UJ (all non-detects)	A
6/11/11	1P6162-ICV	RTX-CLPII	4,4'-DDE	57.8	All water samples in SDG DE173	J (all detects) UJ (all non-detects)	A

Retention times (RT) of all compounds in the calibration standards were within QC limits.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0% .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

Sample EB13-SA5DN-SS-060311 was identified as an equipment blank. No chlorinated pesticide contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB13-SA5DN-SS-060311	6/3/11	Heptachlor	0.0086 ug/L	All soil samples in SDG DE173

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.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-153-SA5DN-SS-0.0-0.5	Not specified	Tetrachloro-m-xylene	48 (50-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-166-SA5DN-SS-0.0-0.5	Not specified	Tetrachloro-m-xylene	35 (50-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	Heptachlor	130 (13-126)	142 (13-126)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS/D20157 (All water samples In SDG DE173)	4,4'-DDE Endosulfan I	142 (66-130) 130 (68-128)	142 (66-130) 130 (68-128)	- -	J (all detects) J (all detects)	P
LCS02161 (All soil samples In SDG DE173)	Heptachlor	130 (43-124)	-	-	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-152-SA5DN-SS-0.0-0.5	beta-BHC 4,4'-DDD	49.61 71	J (all detects) J (all detects)	A
SL-153-SA5DN-SS-0.0-0.5	Chlordane (Technical)	59.57	J (all detects)	A
SL-154-SA5DN-SS-0.0-0.5	beta-BHC Chlordane (Technical)	83.17 58.54	J (all detects) J (all detects)	A
SL-155-SA5DN-SS-0.0-0.5	4,4'-DDE Endrin aldehyde	74.50 94.53	J (all detects) J (all detects)	A
SL-156-SA5DN-SS-0.0-0.5	4,4'-DDE 4,4'-DDD 4,4'-DDT Endrin ketone Chlordane (Technical)	68.9 79.0 60.91 45.14 59.61	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A
SL-157-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDE	50.27 75.87	J (all detects) J (all detects)	A
SL-158-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDE 4,4'-DDT	62.20 72.83 56.27	J (all detects) J (all detects) J (all detects)	A
SL-159-SA5DN-SS-0.0-0.5	delta-BHC	56.68	J (all detects)	A
SL-160-SA5DN-SS-0.0-0.5	4,4'-DDE Chlordane (Technical)	73.56 70.13	J (all detects) J (all detects)	A

Sample	Compound	RPD	Flag	A or P
SL-162-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDD	42.76 74.0	J (all detects) J (all detects)	A
SL-166-SA5DN-SS-0.0-0.5	Chlordane (Technical)	98.03	J (all detects)	A
SL-207-SA5DN-SS-0.0-0.5	Chlordane (Technical) Endrin aldehyde	48.71 70.11	J (all detects) J (all detects)	A
DUP-13-SA5DN-QC-060311	Endrin ketone	59.11	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No chlorinated pesticides were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Chlordane (Technical)	2.5	4.0	46 (≤50)	-	-
4,4'-DDE	0.29	0.45U	200 (≤50)	J (all detects) UJ (all non-detects)	A
4,4'-DDT	0.37	0.36U	200 (≤50)	J (all detects) UJ (all non-detects)	A
delta-BHC	0.063	0.17U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Endosulfan II	0.15	0.36U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Endrin aldehyde	0.23	0.36U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Endrin ketone	0.36U	0.075	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	EB13-SA5DN-SS-060311	Endrin	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD) (C)
DE173	EB13-SA5DN-SS-060311	4,4'-DDE 4,4'-DDD Endosulfan II Endrin aldehyde 4,4'-DDT Endosulfan sulfate Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	Endosulfan I Endrin 4,4'-DDD 4,4'-DDT Endrin aldehyde Endosulfan sulfate Mirex Toxaphene Chlordane (Technical)	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide Endosulfan I 4,4'-DDE Dieldrin Endrin Endosulfan II 4,4'-DDT Endrin aldehyde Endosulfan sulfate Methoxychlor Endrin ketone	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D) (C)
DE173	SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide Endosulfan I 4,4'-DDE Dieldrin Endrin Endosulfan II Endosulfan sulfate Methoxychlor Endrin ketone Mirex Toxaphene Chlordane (Technical)	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D) (C)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	DUP-13-SA5DN-QC-060311	4,4'-DDT Endrin aldehyde	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D) (C)
DE173	EB13-SA5DN-SS-060311	Endrin 4,4'-DDE	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE173	SL-153-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5	All TCL compounds	J (all detects) UJ (all non-detects)	A	Surrogate spikes (%R) (S)
DE173	SL-155-SA5DN-SS-0.0-0.5	Heptachlor	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE173	EB13-SA5DN-SS-060311	4,4'-DDE Endosulfan I	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	Heptachlor	J (all detects)	P	Laboratory control samples (%R) (L)
DE173	SL-152-SA5DN-SS-0.0-0.5	beta-BHC 4,4'-DDD	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-153-SA5DN-SS-0.0-0.5	Chlordane (Technical)	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-154-SA5DN-SS-0.0-0.5	beta-BHC Chlordane (Technical)	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-155-SA5DN-SS-0.0-0.5	4,4'-DDE Endrin aldehyde	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-156-SA5DN-SS-0.0-0.5	4,4'-DDE 4,4'-DDD 4,4'-DDT Endrin ketone Chlordane (Technical)	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-157-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDE	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-158-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDE 4,4'-DDT	J (all detects) J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-159-SA5DN-SS-0.0-0.5	delta-BHC	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-160-SA5DN-SS-0.0-0.5	4,4'-DDE Chlordane (Technical)	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-162-SA5DN-SS-0.0-0.5	delta-BHC 4,4'-DDD	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-166-SA5DN-SS-0.0-0.5	Chlordane (Technical)	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-207-SA5DN-SS-0.0-0.5	Chlordane (Technical) Endrin aldehyde	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	DUP-13-SA5DN-QC-060311	Endrin ketone	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB13-SA5DN-SS-060311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE173	SL-155-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	4,4'-DDE 4,4'-DDT delta-BHC Endosulfan II Endrin aldehyde Endrin ketone	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D3a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/7/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	SW	%D ≤ 20, r²
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	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	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 4, 13
XVI.	Field blanks	SW	EB = 14

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	PBLK02161	31	
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	PBLK20157	32	
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23		33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB13-SA5DN-SS-060311	24		34	
5	SL-156-SA5DN-SS-0.0-0.5	15	SL-155-SA5DN-SS-0.0-0.5MS	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-155-SA5DN-SS-0.0-0.5MSD	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17		27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18		28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19		29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20		30		40	

Notes:

LDC #: 26277D3a
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
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%?	✓			
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?	✓			80-120
Were all percent differences (%D) ~~≤ 15%.0~~ or percent recoveries ~~85-115%~~?		✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?	✓			
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 26277D3c
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 26277D3c
SDG #: see cover
METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: EJ
2nd Reviewer: A

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a 5 point calibration curve performed?
Y N N/A Was a linear fit used for evaluation? If yes, the acceptance criteria for each compound is %RSD less than or equal to 20.0%.
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation? _____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Was initial calibration performed at the required frequency?

Level IV Only

Y N N/A Were the retention time windows properly established for all compounds?
Y N N/A Were compounds run at the required concentrations in the initial calibrations?

#	Date	Standard ID	Column / Detector	Compound	Finding RPD Limit ≤20%	Associated Samples	Qualifications
	6/11/11	ICAL-IP6162	RTX CLP	K	24.0	All water	J/UJ/A (c)

Comments _____

LDC #: 26277D3s

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/11/11	IP6162-1CV	RTX-CLP I	K	28.9	( )	All water	J/UJ/A (C)
			RTX CLP II	J	57.8	( )	↓	↓
						( )		
						( )		
						( )		
						( )		
	6/13/11	2P6162.19R	RTX-CLP I	J	36.5	( )	All water	(C)
				M	38.4	( )	↓	↓
				L	26.9	( )		
				R	35.5	( )		
				O	20.8	( )		
				N	24.8	( )		
				P	24.3	( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 27703S

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 6 of 7
Reviewer: FT

METHOD: ✓ GC __ HPLC

2nd Reviewer: C

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? __%D or __RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/24/11	IP10174.52R	RTX CLP1	H	21.4	( )	7 → 11	J/UJ/A (C)
				K	24.1	( )		
				M	25.6	( )		
				O	25.0	( )		
				R	22.1	( )		
				N	26.0	( )		
	↓	↓	RTX CLP2	A	78.5	( )		J/UJ/P (C)
				D	81.6	( )		
				B	92.7	( )		
				C	76.0	( )		
				E	67.1	( )		
				F	114.4	( )		
				G	88.4	( )		
				H	82.5	( )		
				J	102.0	( )		
				I	89.2	( )		
				K	51.0	( )		
				L	63.5	( )		
				O	28.7	( )		
				R	44.7	( )		
				N	49.8	( )		
				P	35.0	( )		
				Q	26.8	( )	↓	↓
						( )		

LDC #: 26277D3 5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ___ GC ___ HPLC ✓

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/24/11	IP10174.53R	RTX-CLP1	Mirex	21.8	( )	7 → 11	J/UJ/A (C)
			RTX-CLP2		65.3	( )	↓	↓
						( )		
						( )		
						( )		
	6/24/11	IP10174.54R	RTX-CLP2	11	53.3	( )	↓	J/UJ/A (C)
						( )		
						( )		
	6/24/11	IP10174.55R	RTX-CLP2	chlordane (Technical)	134.8	( )	↓	J/UJ/A (C)
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
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						( )		
						( )		
						( )		

LDC #: 26277D3S

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT

METHOD: ✓ **GC** ___ **HPLC**

2nd Reviewer: [signature]

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/15/17	IP10174B.69R	RTX CLP II	A	85.3	( )	12, 13	J/UJ/A (C)
				D	85.8	( )		P
				B	104.8	( )		
				C	82.4	( )		
				E	71.8	( )		
				F	131.1	( )		
				G	102.6	( )		
				H	104.5	( )		
				J	122.7	( )		
				I	102.9	( )		
				K	68.1	( )		
				L	78.4	( )		
				O	40.5	( )	except # 12 on O	
				R	61.1	( )	except # 12 on R	
				N	67.8	( )		
				P	46.6	( )		
				Q	42.8	( )		
						( )		
	↓	IP10174B.70R	RTX CLP II	Mirex	82.5	( )	↓	J/UJ/A (C)
						( )		
	6/15					( )		
						( )		
						( )		
						( )		

LDC #: 26277D3S

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT

METHOD: ✓ **GC** __ **HPLC**

2nd Reviewer:

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? __%D or __RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/25/11	IP10174.71R	RTX-CLPI	U	22.0	( )	12, 13	J/UJ/A (C)
			RTX-CLPII		50.3	( )	↓	↓
						( )		
						( )		
	6/25/11	IP10174.72R	RTX-CLPII	chlordane (Technical)	129	( )	↓	J/UJ/A (C)
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
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						( )		

LDC #: 26277D3g

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: __ GC __ HPLC

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/kg

Sampling date: 6/3/11

Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: EB

Associated Samples: All soils (ND)

Compound	Blank ID	Blank ID	Sample Identification								
	14										
E	0.0086										
CRQL											

Blank units: _____ **Associated sample units:** _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: _____

Associated Samples: _____

Compound	Blank ID	Blank ID	Sample Identification								
CRQL											

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with compound concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27703c

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes___ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	2	NS	Y	48 (50-130)	J/UJ/A (s)
				( )	
				( )	
	12	↓	Y	35 (50-130)	J/UJ/A (s)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277P35

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: / **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15 + 16	6	130 (13-126)	142 (13-126)	( )	4	J/A det (6)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277D3S

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: FT
2nd Reviewer: C

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS/D 20157	J	142 (66-130)	142 (66-130)	( )	All water	J/Pdet (L)
		"	130 (68-128)	130 (68-128)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
	LCS02161	E	130 (43-124)	( )	( )	All soils	J/Pdet (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277D3s
SDG #: pc cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 3
Reviewer: F7
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

* X III

#	Compound Name	% RPD Bet 2 col. ≤ 40 Finding	Associated Samples	Qualifications
	B	49.61	1	J/A det
	M	71	↓	↓
	Technical chlordane	59.57	2	↓
	B	83.17	3	
	Technical chlordane	58.54	↓	↓
	J	74.50	4	
	R	94.53	↓	↓
	J	68.9	5	
	M	79.0		
	O	60.91		
	Q	45.14		
	Tech chlordane	59.61	↓	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277D3S
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 4 of 37
Reviewer: F7
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

* X 111

#	Compound Name	%RPD Bet 2 col Finding ≤40	Associated Samples	Qualifications
	c	90.27	6	J/A det
	J	75.87		
	c	62.20	7	↓
	J	72.83		
	0	56.27		
	C	56.68	8	↓
	J	73.56	9	↓
	Technical chlordane	~~73.56~~ 70.13		
	c	42.76	10	↓
	M	74.0		

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277039
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: C

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

* X III

#	Compound Name	% RPD Bet 2 columns ≤40 Finding	Associated Samples	Qualifications
	Technical Chlordane	98.03	11	J/A det
	↓	48.71	12	↓
	R	70.11		
	Q	59.11	13	↓

Comments: See sample calculation verification worksheet for recalculations

LDC#: 26277 D3g **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: F
2nd Reviewer: A

METHOD: Chlorinated Pesticide (EPA Method 8081A)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(FD)

Compound	Concentration (ug/Kg)		≤ 50 RPD	
	4	13		
Chlordane (tech. g)	2.5	4.0	46	
J	0.29	0.45U	200	J/UJ/A
O	0.37	0.36U	200	
C	0.063	0.17U	200	
L	0.15	0.36U	200	
R	0.23	0.36U	200	
Q	0.36U	0.075	200	

V:\FIELD DUPLICATES\templates\26277D3a.wpd

LDC #: 26277D3S
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JTC
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported 10^3 CF (std)	Recalculated 10^3 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-IP6162	6/11/11	gamma-BHC RTX CLP I	5.34×10^3	5.34×10^3	5.40×10^3	5.4×10^3	2.7	2.7
			4,4-DDT	1.54×10^3	1.54×10^3	1.61×10^3	1.61×10^3	8.1	8.1
2			↓ RTX CLP II	6.51×10^3	6.51×10^3	6.59×10^3	6.59×10^3	3.0	3.0
			↓	2.97×10^3	2.97×10^3	3.05×10^3	3.05×10^3	4.9	4.9
3	ICAL IP10174	6/24/11	↓	6.91×10^3	6.91×10^3	8.70×10^3	8.70×10^3	7.1	7.1
			↓	3.49×10^3	3.49×10^3	3.35×10^3	3.35×10^3	7.2	7.2
4			↓	3.30×10^3	3.30×10^3	3.26×10^3	3.26×10^3	3.3	3.3
			↓	1.68×10^3	1.68×10^3	1.69×10^3	1.67×10^3	5.2	5.2

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results:

LDC #: 76277N3s
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (10 std)	Recalculated CF (10 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL IP10182	6/30/11	gamma-BHC RTXCLP1	6.29×10^3	6.29×10^3	6.16×10^3	6.16×10^3	2.4	2.4
			4,4-DDT	3.09×10^3	3.09×10^3	3.02×10^3	3.02×10^3	3.3	3.3
2			↓ RTXCLP2	6.42×10^3	6.42×10^3	6.43×10^3	6.43×10^3	5.1	5.1
				2.85×10^3	2.85×10^3	2.84×10^3	2.84×10^3	3.3	3.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D3c
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	2P6162.19R	6/13/11	gamma-BHC RTXCLP1	10.0	11.20	11.20	12.0	12.0
			4,4'-DDT	20.03	24.19	24.19	20.8	20.8
			↓	10.0	10.67	10.67	6.7	6.7
2			↓	20.03	18.80	18.80	6.1	6.1
	IP10174.52R	6/24/11	↓	10.0	8.94 ~~9.45~~	8.94	10.6	10.6
			↓	20.03	15.02	15.02	25.0	25.0
3			↓	10.0	18.16	18.16	81.6	81.6
			↓	20.03	~~28~~.78	25.78	28.7	28.7
	IP10174.69R	6/25/11	↓	10.0	9.02	9.02	9.8	9.8
4			↓	20.03	16.36	16.36	18.3	18.3
			↓	10.0	18.58	18.58	85.8	85.8
			↓	20.03	28.15	28.15	40.5	40.5

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 #: 26271105
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: [illegible]
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: #B 1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	RTXCLP1	1.04	0.550653	53	53	0
Decachlorobiphenyl	↓	↓	1.053663	101	101	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 #: 26272039
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: 1
2nd Reviewer: C

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the 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 = Concentration

RPD = | MS - MSD | * 2/(MS + MSD)

MS = Matrix spike percent recovery

MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC	0.33	0.33	ND	0.24	0.24	73	73	73	73	0	0
4,4'-DDT	0.77	0.77	0.35	0.87	0.85	68	68	65	65	2	2

Comments: Refer ot Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D3g
SDG #: pu cond

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
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: LCS0216/

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	0.33	NA	0.36	NA	109					
4,4'-DDT	0.33	"	0.36	"	109	NA				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D3 S
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Example:

Sample I.D. #1 Beta : BHC

Conc. = $\frac{(37491)\ (\cancel{10,000})\ 4}{(2.64 \times 10^3)\ (60)\ (0.932)}$

=

1.02 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note:

C:\WPDOCS\WRK\PEST\RECALC.3S

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 6, 2011

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB14-SA5DN-SB-060311
EB13-SA5DN-SS-060311
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
SL-052-SA5DN-SB-9.0-10.0
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD

Introduction

This data review covers 21 soil samples 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/8/11	CCV (01:03)	ZBMultiR1	Aroclor-1242	24.6	All water samples in SDG DE173	Aroclor-1242 Aroclor-1016 Aroclor-1221 Aroclor-1232	J (all detects) UJ (all non-detects)	A
6/8/11	CCV (01:22)	ZBMultiR2	Aroclor-5460	39.9	All water samples in SDG DE173	Aroclor-5460	J (all detects) UJ (all non-detects)	A
6/14/11	CCV (15:01)	ZBMultiR2	Aroclor-5460	30.0	PBLK14160	Aroclor-5460	J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/14/11	CCV (22:07)	ZBMultiR1	Aroclor-1260	20.3	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	J (all detects) UJ (all non-detects)	A
6/15/11	CCV (05:31)	ZBMultiR1	Aroclor-1260	26.2	SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	J (all detects) UJ (all non-detects)	A
6/15/11	CCV (05:49)	ZBMultiR1	Aroclor-5432	21.7	SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Aroclor-5432	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.

Samples EB14-SA5DN-SB-060311 and EB13-SA5DN-SS-060311 were identified as equipment blanks. 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
SL-159-SA5DN-SS-0.0-0.5	Not specified	Decachlorobiphenyl	122 (45-120)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Affected Compound	Flag	A or P
LCS/D14160 (All soil samples in SDG DE173)	Aroclor-5442	112 (36-106)	-	-	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-154-SA5DN-SS-0.0-0.5	Aroclor-1260	40.29	J (all detects)	A
SL-162-SA5DN-SS-0.0-0.5	Aroclor-1260	66.01	J (all detects)	A

Sample	Compound	RPD	Flag	A or P
SL-027-SA5DN-SB-4.0-5.0	Aroclor-1260	48.48	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Aroclor-5460	3.5	2.7	26 (≤50)	-	-
Aroclor-1260	1.6	1.6	0 (≤50)	-	-

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311	Aroclor-1242 Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-5460	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-5432	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE173	SL-159-SA5DN-SS-0.0-0.5	All TCL compounds	J (all detects)	P	Surrogate spikes (%R)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE173	SL-154-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-027-SA5DN-SB-4.0-5.0	Aroclor-1260	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D3b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	LCS ID
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 4, 13
XVI.	Field blanks	ND	EB = 14, 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	SL-052-SA5DN-SB-9.0-10.0	31	PBLK14160
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	SL-155-SA5DN-SS-0.0-0.5MS	32	PBLK21157
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23	SL-155-SA5DN-SS-0.0-0.5MSD	33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB14-SA5DN-SB-060311 W	24		34	
5	SL-156-SA5DN-SS-0.0-0.5	15	EB13-SA5DN-SS-060311 W	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-019-SA5DN-SB-4.0-5.0	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17	SL-019-SA5DN-SB-9.0-10.0	27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18	SL-027-SA5DN-SB-4.0-5.0	28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19	SL-027-SA5DN-SB-14.0-15.0	29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20	SL-052-SA5DN-SB-4.0-5.0	30		40	

Notes:

DC #: 26277D3b
SDG #: pel cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FJ
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓	✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

DC #: 26277036
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 26277D3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD

Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/8/11	CCV	ZB multi R1	Y	24.6	( )	All water	J/UJ/A (c)
	1:03					( )		qual Y, W, X
						( )		
	6/8/11	CCV	ZB multi R2	Aroclor 5460	39.9	( )	↓	J/UJ/A (c)
	1:22					( )		qual 5460 only
						( )		
	6/14/11	CCV	ZB multi R2	↓	30.0	( )	PBLK141600	J/UJ/A (c)
	15:01					( )		qual 5460 only
						( )		
	6/14/11	CCV	ZB multi R1	BB	20.3	( )	1→13, 16→19,	J/UJ/A (c)
	22:07					( )	22, 23	qual Y, Z, AA,
						( )		BB
						( )		
	6/15/11	CCV	ZB multi R1	BB	26.2	( )	20, 21	J/UJ/A (c)
	5:37					( )		qual Y, Z, AA, BB
						( )		
						( )		
	6/15/11	CCV	ZB multi R1	Aroclor 5432	21.7	( )	20, 21	J/UJ/A (c)
	5:49					( )		qual 5432 only
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 27723b

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes___ or No___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	8	NS	O	122 (45-120)	J/Pdet (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277P3b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS/P14160	Aroclor 5442	112 (36-106)	( )	( )	All soils	J/Pdet (L)
			( )	( )	( )		qual 5442 only
			( )	( )	( )		5432
			( )	( )	( )		5460
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277P3b
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: F7
2nd Reviewer: A

METHOD: / GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding (% RPD But > w/. ≤40)	Associated Samples	Qualifications
	BB	40.29	3	J/A det (a x III)
	BB	66.01	10	↓
			7B	
	BB	48.48	18	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277D3b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: ✓ GC __ HPLC

Y N N/A Were field duplicate pairs identified in this SDG?

Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/kg)		%RPD Limit ≤ 50	Qualification Parent only / All Samples
	4	13		
Aroclor 5460	3.5	2.7	26	
PCB 1260	1.6	1.6	0	

Compound	Concentration ( )		%RPD Limit _____	Qualification Parent only / All Samples

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LDC #: 26277D3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (20ng std)	Recalculated CF (20ng std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL IC20144B	5/24/11	Aroclo 1260-1 2BMultiR1	36	36	37	37	9.3	9.3
			↓ 7BMultiR2	212	212	219	219	9.6	9.6
2	ICAL IP20164	6/13/11	↓	37	37	37	37	2.9	2.9
				206	206	204	204	8.5	8.5
3	~~ICAL IP20164~~	6/14/11	↓	37					
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.

INIC[illegible]SB

LDC #: 26277P3b
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV	6/8/11	Aroclo 1260 (BR)	200	220.13	220.13	10.1	10.1
	1:03		R2	200.0	186.85	186.85	6.6	6.6
2	CCV	6/14/11	↓	200	237.99	237.99	19.0	19.0
	14:43		↓	200	192.66	129.66	3.7	3.7
3	CCV	6/14/11	↓	200	240.59	240.59	20.3	20.3
	23:07		↓	200	226.34	226.34	13.2	13.2
4	CCV	6/15/11	↓	200.0	252.44	252.44	26.2	26.2
	5:31		↓	200.0	236.78	236.78	18.4	18.4

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 #: [illegible]

SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TCMX	8:ZB-R2	1.0437	0.855869	82	82	0
PCB	↓	↓	1.041867	100	100	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [illegible] of [illegible]
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 22 + 23

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
PCB 1260	16.67	16.67	1.57	13.55	15.43	72	72	83	83	13	13

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D3h
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: RJ
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS/D 141160

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)		NA								
PCB 1260	16.67	~~16.67~~	17.89	NA	107	107	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D3J
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name 1260

Concentration = $\frac{1.79}{(0.932)}$

= 1.92 ug/kg

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	1260-1 = 16758.582 (2000) = 2.738		1260-1	= 2.738	
	204	(60)(1000)		2 = 2.1124	
				3 = 0.9313	
				4 = 1.3248	
				5 = 2.01909	
				6 = 1.61869	
				Ave = 1.79	

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 6, 2011

Matrix: Soil/Water

Parameters: Metals

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB14-SA5DN-SB-060311
EB13-SA5DN-SS-060311
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
SL-052-SA5DN-SB-9.0-10.0
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD
SL-155-SA5DN-SS-0.0-0.5DUP

Introduction

This data review covers 22 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, 7470A, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Magnesium Mercury	19.500 ug/L 0.116 ug/L	All water samples in SDG DE173
ICB/CCB	Magnesium Titanium	41.2 ug/L 0.60 ug/L	All water samples in SDG DE173
PB (prep blank)	Aluminum Antimony Calcium Phosphorus Tin Mercury	9.318 mg/Kg 0.097 mg/Kg 11.040 mg/Kg 1.800 mg/Kg 1.736 mg/Kg 0.004 mg/Kg	All soil samples in SDG DE173

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Mercury	0.075 ug/L	SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0
ICB/CCB	Aluminum	104 ug/L	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5
ICB/CCB	Aluminum Zirconium	110 ug/L 8.2 ug/L	DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0
ICB/CCB	Titanium	1.5 ug/L	SL-152-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5
ICB\CCB	Titanium	2.3 ug/L	SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-152-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.26 mg/Kg 4.3 mg/Kg 0.014 mg/Kg	0.26U mg/Kg 4.3U mg/Kg 0.014U mg/Kg
SL-153-SA5DN-SS-0.0-0.5	Antimony Tin	0.24 mg/Kg 3.3 mg/Kg	0.24U mg/Kg 3.3U mg/Kg
SL-154-SA5DN-SS-0.0-0.5	Antimony Tin	0.40 mg/Kg 3.4 mg/Kg	0.40U mg/Kg 3.4U mg/Kg
SL-155-SA5DN-SS-0.0-0.5	Antimony Tin	0.34 mg/Kg 3.3 mg/Kg	0.34U mg/Kg 3.3U mg/Kg
SL-156-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.34 mg/Kg 3.3 mg/Kg 0.025 mg/Kg	0.34U mg/Kg 3.3U mg/Kg 0.025U mg/Kg
SL-157-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.34 mg/Kg 3.2 mg/Kg 0.011 mg/Kg	0.34U mg/Kg 3.2U mg/Kg 0.011U mg/Kg
SL-158-SA5DN-SS-0.0-0.5	Antimony Tin	0.29 mg/Kg 3.3 mg/Kg	0.29U mg/Kg 3.3U mg/Kg
SL-159-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.26 mg/Kg 3.4 mg/Kg 0.026 mg/Kg	0.26U mg/Kg 3.4U mg/Kg 0.026U mg/Kg
SL-160-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.31 mg/Kg 3.3 mg/Kg 0.017 mg/Kg	0.31U mg/Kg 3.3U mg/Kg 0.017U mg/Kg
SL-162-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.33 mg/Kg 3.7 mg/Kg 0.027 mg/Kg	0.33U mg/Kg 3.7U mg/Kg 0.027U mg/Kg
SL-166-SA5DN-SS-0.0-0.5	Tin Mercury	3.04 mg/Kg 0.032 mg/Kg	3.04U mg/Kg 0.032U mg/Kg
SL-207-SA5DN-SS-0.0-0.5	Tin Mercury	3.5 mg/Kg 0.066 mg/Kg	3.5U mg/Kg 0.066U mg/Kg
DUP-13-SA5DN-QC-060311	Antimony Tin Mercury	0.25 mg/Kg 3.2 mg/Kg 0.017 mg/Kg	0.25U mg/Kg 3.2U mg/Kg 0.017U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-019-SA5DN-SB-4.0-5.0	Antimony Tin Mercury	0.30 mg/Kg 3.4 mg/Kg 0.029 mg/Kg	0.30U mg/Kg 3.4U mg/Kg 0.029U mg/Kg
SL-019-SA5DN-SB-9.0-10.0	Antimony Tin Mercury	0.21 mg/Kg 3.2 mg/Kg 0.016 mg/Kg	0.21U mg/Kg 3.2U mg/Kg 0.016U mg/Kg
SL-027-SA5DN-SB-4.0-5.0	Antimony Tin Mercury	0.25 mg/Kg 3.3 mg/Kg 0.019 mg/Kg	0.25U mg/Kg 3.3U mg/Kg 0.019U mg/Kg
SL-027-SA5DN-SB-14.0-15.0	Antimony Tin Mercury	0.12 mg/Kg 3.3 mg/Kg 0.012 mg/Kg	0.12U mg/Kg 3.3U mg/Kg 0.012U mg/Kg
SL-052-SA5DN-SB-4.0-5.0	Antimony Tin	0.27 mg/Kg 3.1 mg/Kg	0.27U mg/Kg 3.1U mg/Kg
SL-052-SA5DN-SB-9.0-10.0	Antimony Tin Mercury	0.23 mg/Kg 3.3 mg/Kg 0.0044 mg/Kg	0.23U mg/Kg 3.3U mg/Kg 0.0044U mg/Kg

Samples EB14-SA5DN-SB-060311 and EB13-SA5DN-SS-060311 were identified as equipment blanks. No metal contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB14-SA5DN-SB-060311	6/8/11	Lead	0.064 ug/L	All soil samples in SDG DE173
EB13-SA5DN-SS-060311	6/8/11	Lead	0.062 ug/L	All soil samples in SDG DE173

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5MS/MSD (All soil samples in SDG DE173)	Antimony	66 (75-125)	66 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-155-SA5DN-SS-0.0-0.5MS/MSD (All soil samples in SDG DE173)	Arsenic	275 (75-125)	210 (75-125)	-	J (all detects)	A
	Beryllium	154 (75-125)	144 (75-125)	-	J (all detects)	
	Cadmium	178 (75-125)	160 (75-125)	-	J (all detects)	
	Chromium	235 (75-125)	194 (75-125)	-	J (all detects)	
	Cobalt	191 (75-125)	176 (75-125)	-	J (all detects)	
	Copper	216 (75-125)	193 (75-125)	-	J (all detects)	
	Lead	242 (75-125)	204 (75-125)	-	J (all detects)	
	Molybdenum	175 (75-125)	163 (75-125)	-	J (all detects)	
	Nickel	182 (75-125)	159 (75-125)	-	J (all detects)	
	Selenium	143 (75-125)	138 (75-125)	-	J (all detects)	
	Silver	163 (75-125)	154 (75-125)	-	J (all detects)	
	Thallium	163 (75-125)	149 (75-125)	-	J (all detects)	

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5DUP (All soil samples in SDG DE173)	Arsenic	23 (≤20)	-	J (all detects) UJ (all non-detects)	A
	Barium	26 (≤20)	-		
	Beryllium	26 (≤20)	-		
	Cobalt	25 (≤20)	-		
	Lead	27 (≤20)	-		
	Molybdenum	27 (≤20)	-		

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5	Barium Nickel	11 (≤10) 11 (≤10)	All soil samples in SDG DE173	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE173	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Aluminum	19800	20400	3 (≤50)	-	-
Antimony	0.34	0.25	31 (≤50)	-	-
Arsenic	7.8	6.3	21 (≤50)	-	-
Barium	144	116	22 (≤50)	-	-
Beryllium	0.81	0.64	23 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Cadmium	0.42	0.37	13 (≤50)	-	-
Calcium	4280	4440	4 (≤50)	-	-
Chromium	33.0	27.8	17 (≤50)	-	-
Cobalt	12.0	9.7	21 (≤50)	-	-
Copper	17.5	14.7	17 (≤50)	-	-
Iron	27800	26400	5 (≤50)	-	-
Lead	11.8	8.7	30 (≤50)	-	-
Lithium	23.8	24.9	5 (≤50)	-	-
Magnesium	5850	6170	5 (≤50)	-	-
Manganese	421	428	2 (≤50)	-	-
Mercury	0.0030U	0.017	200 (≤50)	J (all detects) UJ (all non-detects)	A
Molybdenum	0.90	0.74	20 (≤50)	-	-
Nickel	20.5	17.7	15 (≤50)	-	-
Phosphorus	530	575	8 (≤50)	-	-
Potassium	5630	5850	4 (≤50)	-	-
Selenium	0.25	0.20	22 (≤50)	-	-
Silver	0.044	0.038	15 (≤50)	-	-
Sodium	90.7	92.0	1 (≤50)	-	-
Strontium	27.6	28.3	3 (≤50)	-	-
Thallium	0.42	0.30	33 (≤50)	-	-
Tin	3.3	3.2	3 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Titanium	1500	1510	1 (≤50)	-	-
Vanadium	55.3	47.4	15 (≤50)	-	-
Zinc	87.7	75.6	15 (≤50)	-	-
Zirconium	7.5	7.7	3 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE173

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Silver Thallium	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Arsenic Barium Beryllium Cobalt Lead Molybdenum	J (all detects) UJ (all non-detects)	A	Duplicate sample analysis (RPD) (E)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Barium Nickel	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
DE173	SL-155-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	Mercury	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE173

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE173	SL-152-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.26U mg/Kg 4.3U mg/Kg 0.014U mg/Kg	A	B
DE173	SL-153-SA5DN-SS-0.0-0.5	Antimony Tin	0.24U mg/Kg 3.3U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE173	SL-154-SA5DN-SS-0.0-0.5	Antimony Tin	0.40U mg/Kg 3.4U mg/Kg	A	B
DE173	SL-155-SA5DN-SS-0.0-0.5	Antimony Tin	0.34U mg/Kg 3.3U mg/Kg	A	B
DE173	SL-156-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.34U mg/Kg 3.3U mg/Kg 0.025U mg/Kg	A	B
DE173	SL-157-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.34U mg/Kg 3.2U mg/Kg 0.011U mg/Kg	A	B
DE173	SL-158-SA5DN-SS-0.0-0.5	Antimony Tin	0.29U mg/Kg 3.3U mg/Kg	A	B
DE173	SL-159-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.26U mg/Kg 3.4U mg/Kg 0.026U mg/Kg	A	B
DE173	SL-160-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.31U mg/Kg 3.3U mg/Kg 0.017U mg/Kg	A	B
DE173	SL-162-SA5DN-SS-0.0-0.5	Antimony Tin Mercury	0.33U mg/Kg 3.7U mg/Kg 0.027U mg/Kg	A	B
DE173	SL-166-SA5DN-SS-0.0-0.5	Tin Mercury	3.04U mg/Kg 0.032U mg/Kg	A	B
DE173	SL-207-SA5DN-SS-0.0-0.5	Tin Mercury	3.5U mg/Kg 0.066U mg/Kg	A	B
DE173	DUP-13-SA5DN-QC-060311	Antimony Tin Mercury	0.25U mg/Kg 3.2U mg/Kg 0.017U mg/Kg	A	B
DE173	SL-019-SA5DN-SB-4.0-5.0	Antimony Tin Mercury	0.30U mg/Kg 3.4U mg/Kg 0.029U mg/Kg	A	B
DE173	SL-019-SA5DN-SB-9.0-10.0	Antimony Tin Mercury	0.21U mg/Kg 3.2U mg/Kg 0.016U mg/Kg	A	B
DE173	SL-027-SA5DN-SB-4.0-5.0	Antimony Tin Mercury	0.25U mg/Kg 3.3U mg/Kg 0.019U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE173	SL-027-SA5DN-SB-14.0-15.0	Antimony Tin Mercury	0.12U mg/Kg 3.3U mg/Kg 0.012U mg/Kg	A	B
DE173	SL-052-SA5DN-SB-4.0-5.0	Antimony Tin	0.27U mg/Kg 3.1U mg/Kg	A	B
DE173	SL-052-SA5DN-SB-9.0-10.0	Antimony Tin Mercury	0.23U mg/Kg 3.3U mg/Kg 0.0044U mg/Kg	A	B
DE173	SL-088-SA5DN-SB-4.0-5.0	Tin	3.1UU mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-4-11

SDG #: DE173 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: OR

2nd Reviewer: W

METHOD: Metals (EPA SW 846 Method 6010B/6020~~A~~/~~7000~~ 7471A/7000A)

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: 6/3/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	SW	
VI.	Matrix Spike Analysis	SW	
VII.	Duplicate Sample Analysis	SW	
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	Not utilized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(4, 13)
XV	Field Blanks	SW	EB= 14, 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil/water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	SL-052-SA5DN-SB-9.0-10.0	31	
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	SL-155-SA5DN-SS-0.0-0.5MS	32	
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23	SL-155-SA5DN-SS-0.0-0.5MSD	33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB14-SA5DN-SB-060311 W	24	SL-155-SA5DN-SS-0.0-0.5DUP	34	
5	SL-156-SA5DN-SS-0.0-0.5	15	EB13-SA5DN-SS-060311 W	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-019-SA5DN-SB-4.0-5.0	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17	SL-019-SA5DN-SB-9.0-10.0	27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18	SL-027-SA5DN-SB-4.0-5.0	28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19	SL-027-SA5DN-SB-14.0-15.0	29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20	SL-052-SA5DN-SB-4.0-5.0	30		40	

Notes:

DC #: 26277D4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: W

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.				
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.		✓		
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

DC #: 26277D4

VALIDATION FINDINGS CHECKLIST

Reviewer: cR
2nd Reviewer: [illegible]

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 #: 26277R4

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)
1-21		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-22-24		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

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x; Hg:167
Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water Reason: B

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Mg		19.500	41.2	206										
Hg		0.116		0.58										
Ti			0.60	3										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	16	17	18	19	20	21
Al	9.318	46.59																			
Sb	0.097	0.485	0.26	0.24	0.40	0.34	0.34	0.34	0.29	0.26	0.31	0.33			0.25	0.30	0.21	0.25	0.12	0.27	0.23
Ca	11.040	55.2																			
P	1.800	9																			
Sn	1.736	8.68	4.3	3.3	3.4	3.3	3.3	3.2	3.3	3.4	3.3	3.7	3.4	3.5	3.2	3.4	3.2	3.3	3.3	3.1	3.3
Hg	0.004	0.02	0.014					0.011			0.017				0.017		0.016	0.019	0.012		0.0044

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 5-13, 16-21

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	5	6	8	9	10	11	12	13	16	17	18	19	21	
Hg			0.075	0.06	0.025	See PB	0.026	See PB	0.027	0.032	0.066	See PB	0.029	See PB	See PB	See PB	See PB	

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-12

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Al			104	52										

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 6 of 6
Reviewer: OZ
2nd Reviewer:

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 100x; Hg:167
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 13, 16-21

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Al			110	55										
Zr			8.2	4.1										

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 1, 4

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Ti			1.5	0.75										

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 2, 3, 5-12, 16-21

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Ti			2.3	1.15										

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 #: 26277D4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CZ
2nd Reviewer: M

METHOD: Trace Metals (EPA SW846 6010B/7000)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target analytes detected in the field blanks? Reason: F

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/8/11 Soil factor applied 100x

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Blank ID	Sample Identification										
	14	15	Action Level	No Qualifiers									
Pb	0.064	0.062	0.032										

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 #: 26270H

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

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 Were ICP interference check samples performed as required?
Y N N/A Were the AB solution percent recoveries (%R) within the control limits of 80-120% ?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	ICS Identification	Analyte	Concentration (ug/L)	Limit (<MDL)	Associated Samples	Qualifications
	6/10/11	ICSA (12:29/13:25)	Mn	5	0.84	All Water	No Qual (<90% ICSA)
	6/14/11	ICSA (16:50/19:04	Mn	5	0.78	All Soil	No Qual (<10x)

Comments:

LDC #: 26277D

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: QR
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 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
	22/23	S	Sb	66	66		All Soils	J/UJ/A (Q)
			As	275	210			J det/A
			Be	154	144			
			Cd	178	160			
			Cr	235	194			
			Co	191	176			
			Cu	216	193			
			Pb	242	204			
			Mo	175	163			
			Ni	182	159			
			Se	143	138			
			Ag	163	154			
			Tl	163	149			

Comments: _____

LDC #: 26277D1

VALIDATION FINDINGS WORKSHEET
Duplicate Analysis

Reviewer: CR
2nd Reviewer: CR

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a duplicate sample analyzed for each matrix in this SDG?

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤ 35% for soil samples? If no, see qualifications below. A control limit of ±R.L. (±2X R.L. for soil) was used for sample values that were <5X the R.L., including the case when only one of the duplicate sample values was <5X R.L.. If field blanks were used for laboratory duplicates, note in the Overall Assessment.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Duplicate ID	Matrix	Analyte	RPD (Limits)	Difference (Limits)	Associated Samples	Qualifications
		24	S	AS	23 (≤20)		All Soil	J (J/A (E)
				Ba	26			
				Be	26			
				Co	25			
				Pb	27			
				Mo	27			

Comments:

LDC #: 26277J4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?

Y N N/A Were ICP serial dilution percent differences (%D) ≤10%?

Y N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		4	S	Ba	11	J/UJ/A all Sa.	J/UJ/A (A)
				Ni	11		

Comments:

SDILICPMS.wpd

LDC#: 26277D4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: OK
2nd Reviewer: V

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	4	13		
Aluminum	19800	20400	3	
Antimony	0.34	0.25	31	
Arsenic	7.8	6.3	21	
Barium	144	116	22	
Beryllium	0.81	0.64	23	
Cadmium	0.42	0.37	13	
Calcium	4280	4440	4	
Chromium	33.0	27.8	17	
Cobalt	12.0	9.7	21	
Copper	17.5	14.7	17	
Iron	27800	26400	5	
Lead	11.8	8.7	30	
Lithium	23.8	24.9	5	
Magnesium	5850	6170	5	
Manganese	421	428	2	
Mercury	0.0030U	0.017	~~140~~ 200	J/UJ/A
Molybdenum	0.90	0.74	20	
Nickel	20.5	17.7	15	
Phosphorus	530	575	8	

LDC#: 26277D4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Page: 22 of 22
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	4	13		
Potassium	5630	5850	4	
Selenium	0.25	0.20	22	
Silver	0.044	0.038	15	
Sodium	90.7	92.0	1	
Strontium	27.6	28.3	3	
Thallium	0.42	0.30	33	
Tin	3.3	3.2	3	
Titanium	1500	1510	1	
Vanadium	55.3	47.4	15	
Zinc	87.7	75.6	15	
Zirconium	7.5	7.7	3	

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CS
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 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)	Al	28359.03	30000	94.6	94.6	Y
ICV	ICP/MS (Initial calibration)	As	493.80	500	98.8	98.8	
ICV	CVAA (Initial calibration)	Hg	2.64	2.5	105.6	105.6	
CCV	ICP (Continuing calibration)	Zn	508.77	5000	101.8	101.8	
CCV	ICP/MS (Continuing calibration)	Tl	23.25	25.0	93.0	93.0	
CCV	CVAA (Continuing calibration)	Hg	1.01	1	10.1	101	
	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 #: 26277D4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Ag	20.3	20	101.5	101.5	Y
LCS	Laboratory control sample	Zr	1042.2	1000	104	104	
22	Matrix spike	Pb	(SSR-SR) 7.3588	3.0467	242	242	
24	Duplicate	Sr	27.6461	28.2488	2	2	
4	ICP serial dilution	P	517.96	5041.7	1	1	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: AR
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 AS were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(100mL)(2)(70.53\mu g/L)}{0.9322(1.01g)(1000)} = 14.99 mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	19200	19200	Y
		Sb	0.26	0.26	
		As	15.0	15.0	
		Ba	151	151	
		Be	1.3	1.3	
		B	14.0	14.0	
		Cd	0.28	0.28	
		Ca	17800	17800	
		Cr	36.5	36.5	
		Co	15.4	15.4	
		Cu	26.5	26.5	
		Fe	32800	32800	
		Pb	12.4	12.4	
		Li	48.2	48.2	
		Mg	10200	10200	
		Mn	510	510	
		Hg	0.014	0.014	
		Mo	1.3	1.3	
		Ni	226.6	226.6	
		P	516	516	✓

Note:

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: AR
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 Al were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$4 = \frac{100mL\,(191.17529\,mg/L)}{0.956\,(1.01g)} = 19799.4\,mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	K	4070	4070	Y
		Se	0.37	0.37	
		Ag	0.15	0.15	
		Na	239	239	
		Sr	38.5	38.5	
		Tl	0.42	0.42	
		Sn	4.3	4.3	
		Ti	1480	1480	
		V	56.3	56.3	
		Zn	121	121	
		Zr	6.7	6.7	
	4	Al	19800	19800	
		Sb	0.34	0.34	
		As	7.8	7.8	
		Ba	144	144	
		Be	0.81	0.81	
		Cd	0.42	0.42	
		Ca	4280	4280	
		Cr	33.0	33.0	✓

Note:

LDC #: 26277D4

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 _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

See Previous Page

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	4	Co	12.0	12.0	Y
		Cu	17.5	17.5	
		Fe	27800	27800	
		Pb	11.8	11.8	
		Li	23.8	23.8	
		Mg	5850	5850	
		Mn	421	421	
		Mo	0.90	0.90	
		Ni	20.5	20.5	
		P	530	530	
		Se K	5630	5630	
		As Se	0.25	0.25	
		Ag As	0.044	0.044	
		Sr Na	90.7	90.7	
		Tl Sr	27.6	27.6	
		Sb Tl	0.42	0.42	
		V Sn	3.3	3.3	
		Y Ti	1500	1500	
		Zn V	55.3	55.3	
		Zr Zn	87.7	87.7	
			26 7.5	7.5	

Note: _____

LDC #: 26277D4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: AR
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 Hg were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{100mL\,(0.154\ ug/L)}{0.862\,(0.61g)(1000)} = 0.029\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	16	Al	33700	33700	Y
		Sb	0.30	0.30	
		As	6.8	6.8	
		Ba	143	143	
		Be	0.91	0.91	
		Cd	0.16	0.16	
		Ca	34600	34600	
		Cr	31.9	31.9	
		Co	6.5	6.5	
		Cu	31.5	31.5	
		Fe	32900	32900	
		~~Li~~ Pb	8.4	8.4	
		~~Mg~~ Li	31.8	31.8	
		~~Mn~~ Mg	7110	7110	
		~~Hg~~ Mn	210	210	
		~~Mo~~ Hg	0.029	0.029	
		~~Ni~~ Mo	0.59	0.59	
		~~P~~ Ni	19.8	19.8	
		~~K~~ P	271	271	
		~~Ag~~ K	3640	3640	

Note:

LDC #: 26277D4

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 _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation: See Previous Page

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	16	Ag	0.063	0.063	Y
		Na	688	688	
		Sb	54.3	54.3	
		Tl	0.28	0.28	
		Sn	3.4	3.4	
		Ti	1450	1450	
		V	51.1	51.1	
		Zn	67.7	67.7	
		Zr	8.6	8.6	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 6, 2011

Matrix: Soil/Water

Parameters: Herbicides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB13-SA5DN-SS-060311
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5MSD

Introduction

This data review covers 15 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 8151A for Herbicides.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No herbicide contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
PBLK15166	6/16/11	MCPP	150 ug/Kg	All soil samples in SDG DE173

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.

Sample EB13-SA5DN-SS-060311 was identified as an equipment 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 with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-156-SA5DN-SS-0.0-0.5	Not specified	2,4-Dichlorophenyl acetic acid	277 (36-156)	All TCL compounds	J (all detects)	A

VI. Matrix Spike/(Matrix Spike) Duplicate

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-155-SA5DN-SS-0.0-0.5MS/MSD (SL-155-SA5DN-SS-0.0-0.5)	2,4,5-T	-	-	36 (≤35)	J (all detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-153-SA5DN-SS-0.0-0.5	MCPA	62.86	J (all detects)	A
SL-157-SA5DN-SS-0.0-0.5	Dicamba	90.35	J (all detects)	A

Sample	Compound	RPD	Flag	A or P
SL-160-SA5DN-SS-0.0-0.5	MCPA	81.90	J (all detects)	A
SL-207-SA5DN-SS-0.0-0.5	MCPA	47.49	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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 DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-156-SA5DN-SS-0.0-0.5	All TCL compounds	J (all detects)	A	Surrogate spikes (%R) (S)
DE173	SL-155-SA5DN-SS-0.0-0.5	2,4,5-T	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE173	SL-153-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5	MCPA	J (all detects)	A	Compound quantitation and CRQLs (RPD) (*IX)
DE173	SL-157-SA5DN-SS-0.0-0.5	Dicamba	J (all detects)	A	Compound quantitation and CRQLs (RPD) (*IX)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB13-SA5DN-SS-060311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D5 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

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: 6/3/11
II	Initial calibration	A	%RSD ≤ 20, r²
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	SW	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	LCS ID
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates ND	~~SW~~	D = 4, ~~5~~ 13
XIII.	Field blanks	ND	EB = 14

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil & water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	PBLK15166	31	
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	PBLK18159	32	
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23		33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB13-SA5DN-SS-060311 W	24		34	
5	SL-156-SA5DN-SS-0.0-0.5	15	SL-155-SA5DN-SS-0.0-0.5MS	25		35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-155-SA5DN-SS-0.0-0.5MSD	26		36	
7	SL-158-SA5DN-SS-0.0-0.5	17		27		37	
8	SL-159-SA5DN-SS-0.0-0.5	18		28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19		29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20		30		40	

Notes:

DC #: M27705
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓	NA		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	✓			
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓		•	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.				
Target compounds were detected in the field duplicates.				
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141 (Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2.4.6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

LDC #: 26277D5

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a given method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction procedure was performed?
Y N N/A Was a method blank performed with each extraction batch?
Y N N/A Were any contaminants found in the method blanks? If yes, please see findings below.

Level IV/D Only

Y N N/A (Gasoline and aromatics only)Was a method blank analyzed with each 24 hour batch?
Y N N/A Was a method blank analyzed for each analytical / extraction batch of ≤20 samples?

Blank extraction date: 6/16/11 **Blank analysis date:** 6/18/11 **Associated samples:** All soils (ND)
Conc. units: ug/kg

Compound	Blank ID	Sample Identification						
	PBLK1516							
MCPA I	150							

Blank extraction date: ___ **Blank analysis date:** ___ **Associated samples:** ___
Conc. units: ___

Compound	Blank ID	Sample Identification						

ALL 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 #: 26277D5

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: __ GC __ HPLC

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	5	NS	Q	277 (36-156)	J/A det (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277D5

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ___ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15 & 16	C	( )	( )	36 (35)	4	J/A det (Q)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277D5
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 column Finding ± 40	Associated Samples	Qualifications
	J	62.86	2	J/A det *IX
	G	90.35	~~8~~ 6	↓
			~~8~~	
	J	81.90	~~8~~ 9	↓
	J	47.49	~~8~~ 12	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277D5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F?
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported 200.6/100.7 CF (std)	Recalculated 200.6/100.7 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/6/11	2,4-DB RTX cuP 1	7.68×10^{-2}	7.68×10^{-2}	7.65×10^{-2}	7.65×10^{-2}	6.3	6.3
			Dinoseb	3.70×10^{-1}	3.70×10^{-1}	4.14×10^{-1}	4.14×10^{-1}	16.4	16.4
2			↓ RTX cuP II	8.19×10^{-2}	8.19×10^{-2}	8.26×10^{-2}	8.26×10^{-2}	10.8	10.8
			↓	3.66×10^{-1}	3.66×10^{-1}	4.10×10^{-1}	4.10×10^{-1}	17.5	17.5
3	ICAL	6/16/11	↓ ZB-XLB	8.24×10^{-2}	8.24×10^{-2}	7.98×10^{-2}	7.98×10^{-2}	8.0	8.0
			↓	3.81×10^{-1}	3.81×10^{-1}	4.22×10^{-1}	4.22×10^{-1}	16.2	16.2
4			↓ ZB-35	8.71×10^{-2}	8.71×10^{-2}	8.46×10^{-2}	8.46×10^{-2}	7.1	7.1
			↓	3.60×10^{-1}	3.60×10^{-1}	3.99×10^{-1}	3.99×10^{-1}	13.4	13.4

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 #: 26277DS
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FD
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	2HI5157.64R	6/9/11	2,4-DB ZB-XLB	200.60	200.85	200.85	0.1	0.1
	22:17		Dinoseb	100.70	86.62	86.62	14.0	14.0
			ZB-35					
2			↓	200.60	193.73	193.73	3.4	3.4
				100.70	85.09	85.09	15.5	15.5
3	2HI5167.16R	6/17/11	↓	200.60	209.00	209.0	4.2	4.2
	23:29		↓	100.70	90.08	90.08	10.5	10.5
4			↓	200.60	209.73	209.73	4.6	4.6
			↓	100.70	94.37	94.37	6.3	6.3

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 #: 76277D5
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	2H15167.28R	6/18/11	2,4-DB ZB-X4B	200.60	192.34	192.34	4.1	4.1
	4:59		Dinoseb	100.70	84.27	84.27	16.3	16.3
2			↓	200.60	194.75	194.75	2.9	2.9
				100.70	88.80	88.80	11.8	11.8
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26217B3

SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: C

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4-DCAA	ZB-XLB	6.632	5.28553	80	80	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SA = Spike added SC = Sample concentration

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)	8.26	8.26	ND	6.3	7.32	76	76	88	88	15	15
Dinoseb (8151)	14.07	14.07	ND	1.94	2.26	14	14	16	16	15	15
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 #: 26 2 2 105
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ___HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 15166

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)	8.33	NA	7.42	NA	89	89				
Dinoseb (8151)	14.18	NA	2.57	NA	18	18	NA			
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 #: 26277D5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 2 Compound Name MCPA

Concentration = $\frac{(5836)(0.2)(2000)}{(78697)(5.74 \times 10^{-4})(60.4)(0.927)(2)}$

= 460 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: June 3, 2011

LDC Report Date: October 20, 2011

Matrix: Soil/Water

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-152-SA5DN-SS-0.0-0.5
SL-153-SA5DN-SS-0.0-0.5
SL-154-SA5DN-SS-0.0-0.5
SL-155-SA5DN-SS-0.0-0.5
SL-156-SA5DN-SS-0.0-0.5
SL-157-SA5DN-SS-0.0-0.5
SL-158-SA5DN-SS-0.0-0.5
SL-159-SA5DN-SS-0.0-0.5
SL-160-SA5DN-SS-0.0-0.5
SL-162-SA5DN-SS-0.0-0.5
SL-166-SA5DN-SS-0.0-0.5
SL-207-SA5DN-SS-0.0-0.5
DUP-13-SA5DN-QC-060311
EB14-SA5DN-SB-060311
EB13-SA5DN-SS-060311
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-052-SA5DN-SB-4.0-5.0
SL-052-SA5DN-SB-9.0-10.0
SL-155-SA5DN-SS-0.0-0.5MS
SL-155-SA5DN-SS-0.0-0.5DUP
SL-207-SA5DN-SS-0.0-0.5MS
SL-207-SA5DN-SS-0.0-0.5DUP
SL-166-SA5DN-SS-0.0-0.5DUP
SL-166-SA5DN-SS-0.0-0.5MS

Introduction

This data review covers 25 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Samples EB14-SA5DN-SB-060311 and EB13-SA5DN-SS-060311 were identified as equipment blanks. 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-155-SA5DN-SS-0.0-0.5MS (SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5)	Fluoride	56 (80-120)	J (all detects) UJ (all non-detects)	A
SL-166-SA5DN-SS-0.0-0.5MS (SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0)	Fluoride	48 (80-120)	J (all detects) UJ (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) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE173	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples SL-155-SA5DN-SS-0.0-0.5 and DUP-13-SA5DN-QC-060311 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-155-SA5DN-SS-0.0-0.5	DUP-13-SA5DN-QC-060311			
Fluoride	1.6	1.7	6 (≤50)	-	-
Hexavalent chromium	0.32	0.21U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE173

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Fluoride	J (all detects) UJ (all non-detects)	A	Matrix spike analysis (%R) (Q)
DE173	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
DE173	SL-155-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311	Hexavalent chromium	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D6
SDG #: DE173
Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10-5-11
Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: (Analyte) Cyanide (EPA SW846 Method 9012B), Nitrate-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
IIa.	Initial calibration	A	C3
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	MS
V	Duplicates	A	Dup
VI.	Laboratory control samples	A	LCS/D
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(4,13)
X	Field blanks	ND	EB = 14,15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil/water

1	SL-152-SA5DN-SS-0.0-0.5	11	SL-166-SA5DN-SS-0.0-0.5	21	SL-052-SA5DN-SB-9.0-10.0	31	
2	SL-153-SA5DN-SS-0.0-0.5	12	SL-207-SA5DN-SS-0.0-0.5	22	SL-155-SA5DN-SS-0.0-0.5MS	32	
3	SL-154-SA5DN-SS-0.0-0.5	13	DUP-13-SA5DN-QC-060311	23	SL-155-SA5DN-SS-0.0-0.5DUP	33	
4	SL-155-SA5DN-SS-0.0-0.5	14	EB14-SA5DN-SB-060311W	24	(#12) MS	34	
5	SL-156-SA5DN-SS-0.0-0.5	15	EB13-SA5DN-SS-060311 W	25	↓ Dup	35	
6	SL-157-SA5DN-SS-0.0-0.5	16	SL-019-SA5DN-SB-4.0-5.0	26	# 11 MS	36	
7	SL-158-SA5DN-SS-0.0-0.5	17	SL-019-SA5DN-SB-9.0-10.0	27	↓ Dup	37	
8	SL-159-SA5DN-SS-0.0-0.5	18	SL-027-SA5DN-SB-4.0-5.0	28		38	
9	SL-160-SA5DN-SS-0.0-0.5	19	SL-027-SA5DN-SB-14.0-15.0	29		39	
10	SL-162-SA5DN-SS-0.0-0.5	20	SL-052-SA5DN-SB-4.0-5.0	30		40	

Notes:

DC #: 262 1 1 V6

VALIDATION FINDINGS CHECKLIST

Reviewer: CC
2nd Reviewer: V

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 #: 26277D6

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
X. Field blanks				
Field blanks were identified in this SDG.	✓	~~✓~~		
Target analytes were detected in the field blanks.		✓		

LDC #: 26277D6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CE
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-11,13-15,20,21		pH TDS Cl (F) NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC (CR^{6+}) (ClO_4)
12,16-19		pH TDS Cl (F) (NO_3) NO_2 SO_4 PO_4 ALK (CN) NH_3 TKN TOC (CR^{6+}) (ClO_4)
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
QC: 22,23		pH TDS Cl (F) NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC (CR^{6+}) (ClO_4)
24,25		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK (CN) NH_3 TKN TOC CR^{6+} ClO_4
26,27		pH TDS Cl (F) NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

LDC #: 26276X

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method SOCOM

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~~ 80-120 (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
		22	S	F	56	~~All Soil~~ 1-10	J/UJ/A (1)
		26	S	F	48	11-13, 16-21,	

Comments:

LDC# 26277D6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: CR
2nd Reviewer: VC

Inorganics, Method See Cover

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/L)		RPD (≤50)	
	4	13		
Fluoride	1.6	1.7	6	
Hexavalent Chromium	0.32	0.21U	200	J/UJ/A (FD)

V:\FIELD DUPLICATES\FD_inorganic\26277D6.wpd

LDC #: 26277D6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: Inorganics, Method Cr6+ Seecalc

The correlation coefficient (r) for the calibration of Cr6+ was recalculated.Calibration date: 6/10/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	Cr6+	s1	0.0	0	*0.9994*	0.9993	Y
		s2	10	0.127661			
		s3	50	0.58			
		s4	100	1.18			
		s5	200	2.22			
		s6	300	3.50			
Calibration verification	F	CCV	1.5	1.5¢	106	106	
Calibration verification	NO_3		1.5	1.4419	96	96	
Calibration verification	CN		0.15	0.1447	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 #: [illegible]

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: QR
2nd Reviewer:

METHOD: Inorganics, Method See Cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

RPD = |S-D| / (S+D)/2 x 100 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	ClO4	103	100	103	-	Y
22	Matrix spike sample	ClO4	(SSR-SR) 547	500	109	109	
23	Duplicate sample	F	1.5	2.0	25	25	

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 #: 26277D6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: V

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/NO3/Cl reported with a positive detect were recalculated and verified using the following equation:

Concentration =

F: $y = 0.20188x - 0.0044$

NO_3: $y = 0.3309x - 0.013$

Cl: $y = 0.012x - 0.001$

Recalculation:

1: $F = \frac{0.03 + 0.0044}{0.2018} \times \frac{50\,mL}{4.985g\,(0.932)} = 1.8\,mg/kg$

12: $NO_3 = \frac{(0.125 + 0.013)(50mL)}{0.3309(5.04g)(0.93)} = 4.4\,mg/kg$

4: $Cl = \frac{(0.081181(86.83) - 0.118418)}{25.3(0.931)} = 0.29\,mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
0.932	1	F	1.8	1.8	Y
		Cl	0.65	0.66	
0.93	4	F	1.6	1.6	
		Cl	0.32	0.29	
0.931	12	F	3.8	3.8	
		NO_3	4.5	4.4	
		Cl	0.37	0.38	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 3, 2011
LDC Report Date:	October 5, 2011
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
TB-060311

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-060311 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

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 and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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 DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 TB-060311	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D7 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/4/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	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	N	TB = 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-019-SA5DN-SB-4.0-5.0	11 1	BLKGC	21		31	
2 1	SL-019-SA5DN-SB-9.0-10.0	12 2	BLKHF	22		32	
3 1	SL-027-SA5DN-SB-4.0-5.0	13		23		33	
4 1	SL-027-SA5DN-SB-14.0-15.0	14		24		34	
5 2	TB-060311	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

DC #: 2627707
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VII. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26277D7
SDG #: all cases

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26277D7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (220 std)	Recalculated CF (220 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/29/10	GRO	35488	35488	37329	37329	12.7	12.7
				(550)	(550)				
2	ICAL	5/14/10	GRO	8420	8420	8050	8050	5.2	5.2
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D7
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV	6/7/11 13:14	GRO	220.0	216.86	216.86	1.4	1.4
2	CCV	6/3/11 23:49	✓	550.0	515.38	515.38	6.3	6.3
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TFT	N5	760	565.74/69	74	74	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26277D /
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCSF5 / LCSDF8

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	11	11	9.16	10.42	83	83	95	95	13	13
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 #: 26277D7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

NP

#	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:	June 3, 2011
LDC Report Date:	October 5, 2011
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-019-SA5DN-SB-4.0-5.0MSD
SL-019-SA5DN-SB-4.0-5.0MSD

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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 DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-207-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D8 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/5/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	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	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
SOIL

1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK28158	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6	#2 MS	16		26		36	
7	#2 MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

DC #: 262708
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification.				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs.				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance.				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data.				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates.				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks.				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277P8
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (288 std)	Recalculated CF (288 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/28/11	C8-C40	20047.437	20047.4	20671-85	20671-85	5.1	5.1
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76277PS
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 5:40	6/10/11	C8-C40	288.00	313.74	313.74	8.9	8.9
2	CCV 10:38	6/10/11	↓	575.96	575.89	575.89	0	0
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
chlorobenzene	NS	1.0	0.954628	96	95.4	1
or thoterpheny!	↓	↓	1.027438	103	103	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: EZ
2nd Reviewer: CA

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 6 + 7

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (C8-C11)	0.83	083	ND	0.82	0.85	99	99	101	101	4	4

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 #: 26277#8
SDG #: #1 cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS28158

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
EFH (C8-C11)	0.84	NA	0.64	NA	76	76	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name C_{30}-C_{40}

Concentration = $\frac{34375107\ (1000)\ (10)}{20671.85\ (60.2)\ (0.931)\ (1000)}$

$= 296.7\ mg/kg$

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: [illegible]

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 10, 2011

Matrix: Soil

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

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 with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LCS08167	Nitrobenzene 2,4,6-Trinitrotoluene 4-Amino-2,6-dinitrotoluene 2-Amino-4,6-dinitrotoluene 2,6-Dinitrotoluene PETN	127 (80-120) 128 (80-120) 122 (80-120) 125 (80-120) 123 (80-120) 126 (80-120)	All samples in SDG DE173	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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.

LDC #: 26277D40 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/4/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer:

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	%D RSD ≤20, r²
III.	Calibration verification/ICV	A	%D ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	
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	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Soil

1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK08167	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

DC #: 26277040
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) < 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26277040
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141(Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2,4,6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

LDC #: 26277D4O

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS08167	F	127 (80-120)	( )	( )	All	J/Pdet (L)
		G	128 (80-120)	( )	( )		
		H	122 (↓)	( )	( )		
		I	125 (↓)	( )	( )		
		K	123 (↓)	( )	( )		
		PETN	126 (↓)	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			(

LDC #: 76277040
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: PD
2nd Reviewer:

METHOD: GC _____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (493/500.5 std)	Recalculated CF (493/500.5 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL chrompack	5/31/11	1,4-Dinitrobenzen	2.40×10^2	2.40×10^2	2.43×10^2	2.43×10^2	2.3	2.3
			2,6-Dinitrotoluene	1.22×10^2	1.22×10^2	1.23×10^2	1.23×10^2	2.4	2.4
2	capcell	5/31/11	↓	2.61×10^2	2.61×10^2	2.73×10^2	2.73×10^2	17.2	17.2
				3.31×10^2	3.31×10^2	3.32×10^2	3.32×10^2	7.0	7.0
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4U
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer: C

METHOD: GC_____ HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	6/18/11	1,4-Dinitrobenzene	493.00	499.83	499.83	1.4	1.4
	chrompack	5.04	2,6-Dinitro~~benzene~~ Toluene	500.50	513.64	513.64	2.6	2.6
2	capcell	↓	↓	493.00	480.19	480.19	2.6	2.6
				NA				
3	ccv	6/18/11	↓	493.00	501.34	501.34	1.7	1.7
	chrompack	22.02		500.50	517.67	517.67	3.4	3.4
4	capcell	↓	↓	493.00	475.39	475.39	3.6	3.6
				NA				

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

METHOD: ___ GC ✓ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2-nitro-m-xylene	chrompack	2000 1961	2341.8359	119	119	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 #: 26277D4U
SDG #: mw cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
2nd Reviewer: A

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS08167

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000	NA	2169.96	NA	108	108				
2,4,6-Trinitrotoluene (8330)	999.2	↓	2556.65	↓	128	128	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4O
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 3, 2011
LDC Report Date:	October 5, 2011
Matrix:	Soil
Parameters:	Terphenyls
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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 terphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-207-SA5DN-SS-0.0-0.5	n-Triacontane-d62	14 (50-150)	All TCL compounds	J (all detects) UJ (all non-detects)	P

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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.

LDC #: 26277D41 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/5/11
SDG #: DE173 Level IV Page: 1 of 2
Laboratory: Lancaster Laboratories Reviewer: JW
2nd Reviewer:

METHOD: GC Terphenyls (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

Soil

1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK37159	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

DC #: 26277041
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26277041
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277D4/

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: ^

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes___ or No___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	1	NS	Z	14 (50-150)	J/UJ/P (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	n-Triacontane-d62
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277D4J
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (3 std)	Recalculated CF (3 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/24/11	o-Terphenyl	17.741	17.741	2.20×10^4	2.20×10^4	2.18×10^4	2.18×10^4	1.6	1.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4J
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 17:47	6/14/11	o-Terphenyl	35.48	35.50	35.50	0.1	0.1
2	CCV 1:59	6/15/11	✓	35.48	34.49	34.49	2.8	2.8
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n-Triacontane-d62	NJ	0.326	0.045609	14	14	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 #: 26277B4/
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration
LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 37159

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
~~Gasoline (8015)~~ m-Terpheny	1.65	NA	1.42	NA	86	86	NA			
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
~~2,4,6-Trinitrotoluene (8330)~~										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26 27704/
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 5, 2011

Matrix: Soil

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0
SL-019-SA5DN-SB-4.0-5.0MSD
SL-019-SA5DN-SB-4.0-5.0MSD

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-207-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D43 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/5/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV|CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation (RL/LOQ/LODs)	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

	SOIL						
1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK38158	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6	#2MS	16		26		36	
7	#2MS	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

DC #: 26277043
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: F
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) < 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) < 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26277043
SDG #: all cancel

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277D43
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F?
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported sum CF (std)	Recalculated sum CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/19/11	methanol	2.82X10^0	2.82X10^0	2.95X10^0	2.95X10^0	10.3	10.3
2	ICAL	5/27/11	↓						
3	ICAL	5/26/11	↓	9.04X10^0	9.04X10^0	8.95X10^0	8.95X10^0	2.0	2.0
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICIO ISB

LDC #: 26277D43
SDG #: fw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 19:08	6/7/11	methanol	10000	9/31.12	9/31.12	8.7	8.7
	CCV 2236	6/7/11	↓	✓	9529.50	9529.50	4.7	4.7
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Acetone	NS	2500	2066.5978	83	83	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [illegible]
Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 6 + 7

Compound	Spike Added (ug/Kg)		Sample Conc. (ug/Kg)	Spike Sample Concentration (ug/Kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Methanol	2500	2500	NO	2034.94	2042.18	81	81	92	92	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277 W43
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 38158

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Methanol	2500	NA	2239-83	NA	90	90	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 3, 2011

LDC Report Date: October 5, 2011

Matrix: Soil

Parameters: Glycols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-207-SA5DN-SS-0.0-0.5 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D45 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/5/11
SDG #: DE173 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer:

METHOD: GC Glycols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
SOIL

1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK011157	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12		22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

.DC #: 46277045
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277D45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

4/

#	Standard ID	Calibration Date	Compound	Reported 191.6874 CF (std)	Recalculated 191.6874 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/6/11	Propylene Glycol	4.54×10^2	4.54×10^2	4.42×10^2	4.42×10^2	5.7	5.7
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4S
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv 11:55	6/7/11	propylene glycol	95.84	97.99	97.99	2.2	2.2
2	ccv 14:48	6/7/11	↓	↓	97.34	97.34	1.6	1.6
3	ccv 16:43	6/7/11	↓	↓	98.10	98.10	2.4	2.4
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 #: [illegible]
SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetramethylene glycol	NS	207	181.149673	87	87	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
[redacted]				Reported	Recalculated	

LDC #: 26271043
SDG #: all covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS0057

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Ethylene Glycol	225.43	NA	198.39	NA	88	88	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D4S
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

MD

#	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: June 3, 2011

LDC Report Date: October 5, 2011

Matrix: Soil

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE173

Sample Identification

SL-207-SA5DN-SS-0.0-0.5
SL-019-SA5DN-SB-4.0-5.0
SL-019-SA5DN-SB-9.0-10.0
SL-027-SA5DN-SB-4.0-5.0
SL-027-SA5DN-SB-14.0-15.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-019-SA5DN-SB-4.0-5.0	Not specified	Butyraldehyde	59 (64-126)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-027-SA5DN-SB-4.0-5.0	Not specified	Butyraldehyde	42 (64-126)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-027-SA5DN-SB-14.0-15.0	Not specified	Butyraldehyde	49 (64-126)	All TCL compounds	J (all detects) UJ (all non-detects)	A

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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.

LDC #: 26277D71 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/4/11

SDG #: DE173 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/3/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/~~CCV~~	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-207-SA5DN-SS-0.0-0.5	11	PBLK06159	21		31	
2	SL-019-SA5DN-SB-4.0-5.0	12	PBLK05171	22		32	
3	SL-019-SA5DN-SB-9.0-10.0	13		23		33	
4	SL-027-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-027-SA5DN-SB-14.0-15.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

DC #: 26277071
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Method: ✓ GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓	✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	✓			
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

DC #: 26277071
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓		•	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277D7/

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were surrogates spiked into all samples and blanks?

Y (N) N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	2	NS	~~59~~ *	59 (64-126)	J/UJ/A (S)
				( )	
				( )	
	4	↓	*	42 (↓)	↓
				( )	
	5	↓	*	49 (↓)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	*	Butyraldehyde
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277071
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC [illegible] HPLC [illegible]

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported 2002 CF (std)	Recalculated 2002 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/11/11	Formaldehyde	6.13 x10^1	6.13 x10^1	5.97x10^1	5.97x10^1	3.6	3.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277071
SDG #: pw conv

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC_____HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	6/11/11	Formaldehyde	2002.00	2018.13	2018.13	0.8	0.8
	18:49							
2	ccv	6/13/11	Formaldehyde	2002.06	2079.04	2079.04	3.8	3.8
	10:19							
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

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 Reported	Percent Recovery Recalculated	Percent Difference
Butyraldehyde	N5	.2000	3058.298/2	77	76	1

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 #: 26 [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 06159

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde	5010	NA	4527.14	NA	90	90	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76077D71
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name Formaldehyde

Concentration = $\frac{84733\ (200)\ (0.1)}{5.97 \times 10^{1}\ (20)\ (0.931)}$

= 1524 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:	June 3, 2011
LDC Report Date:	October 5, 2011
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE173

Sample Identification

SL-019-SA5DN-SB-4.0-5.0

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the limit of detection verification (LODV) calibration standard were less than or equal to 50.0% for perchlorate.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE173	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 DE173

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE173	SL-019-SA5DN-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG DE173

No Sample Data Qualified in this SDG

LDC #: 26277D87 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/4/11

SDG #: DE173 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: EJ

2nd Reviewer: CJ

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: 6/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r²
IV.	Continuing calibration/ICV	A	CCV/ICV ≤ 15/50 LODV ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: 501L

1	SL-019-SA5DN-SB-4.0-5.0	11	PBLK 22159	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26277B87

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer:

LCMS Perchlorate Method 6850

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. Calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ ~~25%~~ 15/50 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26277087

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation and CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #26277 D87
SDG# Sm Com

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: Method 6850

Parameter: perchlorate

Date	Column	Compound	y	x	
06/10/2011	LCMS	perchlorate	0.02	0.020	
			0.04	0.040	
			0.09	0.100	
			0.19	0.200	
			0.39	0.400	
			1.01	1.000	
			2.53	2.500	

Regression Output:		Regression Output:	Reported	
Constant		-0.00850		-8.5000E-003
Std Err of Y Est		0.00835		
R Squared		0.99993		0.99999
No. of Observations		7.00000		
Degrees of Freedom		5.00000		
X Coefficient(s)	1.016E+000		0.10160	
Std Err of Coef.	0.003785	0.04		

LDC #: 26277D87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv_21	6/10/11	~~Phenol (1st internal standard)~~ Perchlorate	0.4	0.431	0.431	8	8
			Naphthalene (2nd internal standard)					
	ccv_32	6/10/11	~~Fluorene (3rd internal standard)~~ ↓	4	4	4	0	0
			~~Pentachlorophenol (4th internal standard)~~					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277V8 /

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS 22159

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	10U	NA	101	NA	101	101	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277D87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_t	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____, _____:

Conc. = ( )( )( )( )( ) / ( )( )( )( )( )

= ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

SAMPLE DELIVERY GROUP

DE174

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	7471A	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8015B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8015M	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8315A	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	9012B	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8015M	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8260B	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8260B SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3050B	6010B	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3050B	6020	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3060A	7199	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8082	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8270C	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8270C SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	5035	8260B	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	5035	8260B SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	300.0	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	314.0	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	7471A	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3050B	6010B	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3050B	6020	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3060A	7199	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8082	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8270C	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8270C SIM	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	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
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	METHOD	314.0	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	METHOD	7471A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3050B	6010B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3050B	6020	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3060A	7199	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3546	1625C	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8015B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8082	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8270C	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8270C SIM	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8260B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8260B SIM	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	8330	8330A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	300.0	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	314.0	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	7471A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8015B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8315A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE174 Laboratory: LL

EDD Filename: PrepDE174_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.2		0.87	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	20.2		0.91	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.2		0.89	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	15.9		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 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	2.8		0.92	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E
Nitrate-NO3	1.5	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5530		6.63	MDL	21.6	PQL	mg/Kg	J	E
MANGANESE	245		0.0844	MDL	0.541	PQL	mg/Kg	J	E, E
POTASSIUM	2800		19.5	MDL	54.1	PQL	mg/Kg	J	Q
TIN	2.94	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.31	J	0.909	MDL	5.41	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	12300		7.00	MDL	22.8	PQL	mg/Kg	J	E
MANGANESE	327		0.0890	MDL	0.571	PQL	mg/Kg	J	E, E
POTASSIUM	3580		20.5	MDL	57.1	PQL	mg/Kg	J	Q
TIN	3.09	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.53	J	0.959	MDL	5.71	PQL	mg/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4770		6.77	MDL	22.1	PQL	mg/Kg	J	E
MANGANESE	300		0.0862	MDL	0.553	PQL	mg/Kg	J	E, E
POTASSIUM	3220		19.9	MDL	55.3	PQL	mg/Kg	J	Q
TIN	2.95	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	1.80	J	0.928	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	18000		7.18	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	242		0.0913	MDL	0.585	PQL	mg/Kg	J	E, E
POTASSIUM	3170		21.1	MDL	58.5	PQL	mg/Kg	J	Q
TIN	2.94	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	1.98	J	0.984	MDL	5.85	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 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
CALCIUM	3190		6.97	MDL	22.7	PQL	mg/Kg	J	E
MANGANESE	628		0.0887	MDL	0.568	PQL	mg/Kg	J	E, E
POTASSIUM	2580		20.5	MDL	56.8	PQL	mg/Kg	J	Q
TIN	3.00	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.88	J	0.955	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3660		6.99	MDL	22.8	PQL	mg/Kg	J	E
MANGANESE	175		0.0889	MDL	0.570	PQL	mg/Kg	J	E, E
POTASSIUM	2140		20.5	MDL	57.0	PQL	mg/Kg	J	Q
TIN	3.06	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.62	J	0.957	MDL	5.70	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	10200		6.94	MDL	22.7	PQL	mg/Kg	J	E
MANGANESE	685		0.0883	MDL	0.566	PQL	mg/Kg	J	E, E
POTASSIUM	2780		20.4	MDL	56.6	PQL	mg/Kg	J	Q
TIN	3.09	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	4.96	J	0.951	MDL	5.66	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0885	J	0.0630	MDL	0.210	PQL	mg/Kg	J	Z, Q
CHROMIUM	23.0		0.126	MDL	0.420	PQL	mg/Kg	J	A
LEAD	4.98		0.0109	MDL	0.210	PQL	mg/Kg	J	Q, E
SILVER	0.0549	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z
VANADIUM	35.8		0.0231	MDL	0.105	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory:** LL

EDD Filename: PrepDE174_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 ***Collected:*** 6/6/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.0168	U	0.0168	MDL	0.105	PQL	mg/Kg	UJ	Q

Sample ID: SL-022-SA5DN-SB-4.0-5.0 ***Collected:*** 6/6/2011 11:40:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0978	J	0.0443	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA5DN-SB-4.0-5.0 ***Collected:*** 6/6/2011 11:40:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.272		0.0665	MDL	0.222	PQL	mg/Kg	J	Q
BERYLLIUM	1.02		0.0177	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	34.1		0.133	MDL	0.443	PQL	mg/Kg	J	A
LEAD	10.7		0.0115	MDL	0.222	PQL	mg/Kg	J	Q, E
SILVER	0.0501	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	65.2		0.0244	MDL	0.111	PQL	mg/Kg	J	A

Sample ID: SL-053-SA5DN-SB-11.5-12.5 ***Collected:*** 6/6/2011 4:00:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0697	J	0.0442	MDL	0.442	PQL	mg/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-11.5-12.5 ***Collected:*** 6/6/2011 4:00:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.160	J	0.0663	MDL	0.221	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.735		0.0177	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.0887	J	0.0442	MDL	0.111	PQL	mg/Kg	J	Z
CHROMIUM	24.7		0.133	MDL	0.442	PQL	mg/Kg	J	A
LEAD	9.71		0.0115	MDL	0.221	PQL	mg/Kg	J	Q, E
SILVER	0.0286	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	47.1		0.0243	MDL	0.111	PQL	mg/Kg	J	A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-053-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 3:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.259		0.0703	MDL	0.234	PQL	mg/Kg	J	Q
BERYLLIUM	0.817		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CADMIUM	0.0861	J	0.0468	MDL	0.117	PQL	mg/Kg	J	Z
CHROMIUM	30.8		0.141	MDL	0.468	PQL	mg/Kg	J	A
LEAD	10.0		0.0122	MDL	0.234	PQL	mg/Kg	J	Q, E
SILVER	0.0428	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	53.4		0.0258	MDL	0.117	PQL	mg/Kg	J	A

Sample ID: **SL-079-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 12:05:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0560	J	0.0450	MDL	0.450	PQL	mg/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 12:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.155	J	0.0675	MDL	0.225	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.871		0.0180	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.0801	J	0.0450	MDL	0.113	PQL	mg/Kg	J	Z
CHROMIUM	21.1		0.135	MDL	0.450	PQL	mg/Kg	J	A
LEAD	8.14		0.0117	MDL	0.225	PQL	mg/Kg	J	Q, E
SILVER	0.0579	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	44.9		0.0248	MDL	0.113	PQL	mg/Kg	J	A

Sample ID: **SL-079-SA8N-SB-9.0-10.0** ***Collected:*** **6/6/2011 11:55:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0621	J	0.0460	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-9.0-10.0** ***Collected:*** **6/6/2011 11:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.135	J	0.0690	MDL	0.230	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.673		0.0184	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	21.7		0.138	MDL	0.460	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory:** LL

EDD Filename: PrepDE174_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	6.41		0.0120	MDL	0.230	PQL	mg/Kg	J	Q, E
SILVER	0.0280	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	42.5		0.0253	MDL	0.115	PQL	mg/Kg	J	A

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0498	J	0.0466	MDL	0.466	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.209	J	0.0700	MDL	0.233	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.835		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CADMIUM	0.106	J	0.0466	MDL	0.117	PQL	mg/Kg	J	Z
CHROMIUM	32.9		0.140	MDL	0.466	PQL	mg/Kg	J	A
LEAD	9.15		0.0121	MDL	0.233	PQL	mg/Kg	J	Q, E
SILVER	0.0337	J	0.0140	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	63.7		0.0257	MDL	0.117	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.58	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.35	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **7199** ***Matrix:*** **SO**

Sample ID: **SL-053-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 3:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.35	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 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
HEXAVALENT CHROMIUM	0.40	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-9.0-10.0** ***Collected:*** **6/6/2011 11:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.0	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: **SL-133-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 4:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: **METALS**

Method: **7471A** ***Matrix:*** **SO**

Sample ID: **SL-022-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0106	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: **SL-053-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 3:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0035	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: **SL-133-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 4:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0159	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory:** LL

EDD Filename: PrepDE174_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	53.1		18.0	MDL	36.1	PQL	ng/Kg	U	B

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 12:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	37.9	J	19.1	MDL	38.3	PQL	ng/Kg	U	B

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	52.8		19.6	MDL	39.1	PQL	ng/Kg	U	B

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 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
N-NITROSODIMETHYLAMINE	61.8		19.6	MDL	39.3	PQL	ng/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.78	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 12:05:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.85	J	0.46	MDL	1.4	PQL	mg/Kg	U	B
EFH (C30-C40)	2.0		0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.7		0.47	MDL	1.4	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	4.2		0.47	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.80	J	0.47	MDL	1.4	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.6	PQL	ug/Kg	UJ	E
Aroclor 5442	1.1	U	1.1	MDL	3.6	PQL	ug/Kg	UJ	E
Aroclor 5460	1.1	U	1.1	MDL	3.6	PQL	ug/Kg	UJ	E

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	E
Aroclor 5442	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	E
Aroclor 5460	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	E

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	E
Aroclor 5442	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	E
Aroclor 5460	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	E

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory:** LL

EDD Filename: PrepDE174_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5442	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E
Aroclor 5460	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E
Aroclor 5442	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E
Aroclor 5460	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 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
AROCLOR 1248	1.9	J	0.39	MDL	2.0	PQL	ug/Kg	J	Z
Aroclor 5432	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E
Aroclor 5442	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E
Aroclor 5460	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	E

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory:** LL

EDD Filename: PrepDE174_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 12:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.8	MDL	8.1	PQL	ug/Kg	U	B
CHLOROFORM	0.17	J	0.12	MDL	4.0	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	1.1	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.15	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-022-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.9**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.17	J	0.12	MDL	4.1	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	1.2	J	0.25	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: **SL-053-SA5DN-SB-4.0-5.0** ***Collected:*** **6/6/2011 3:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1.02**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.9		8.0	MDL	9.6	PQL	ug/Kg	U	B
CHLOROFORM	0.19	J	0.14	MDL	4.8	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	1.3	J	0.29	MDL	4.8	PQL	ug/Kg	U	B
TOLUENE	0.15	J	0.1	MDL	4.8	PQL	ug/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 12:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.86**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.0		6.6	MDL	7.9	PQL	ug/Kg	U	B
CHLOROFORM	0.16	J	0.12	MDL	4.0	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	0.99	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.22	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: **SL-079-SA8N-SB-9.0-10.0** ***Collected:*** **6/6/2011 11:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.92**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.9		7.3	MDL	8.7	PQL	ug/Kg	U	B
CHLOROFORM	0.19	J	0.13	MDL	4.3	PQL	ug/Kg	J	Z
TOLUENE	0.40	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z

Sample ID: **SL-133-SA8N-SB-4.0-5.0** ***Collected:*** **6/6/2011 4:15:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **0.88**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.5		6.9	MDL	8.3	PQL	ug/Kg	U	B
CHLOROFORM	0.16	J	0.12	MDL	4.1	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	1.2	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.17	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE174

Method Blank Outlier Report

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB16B261008	6/28/2011 10:08:00 AM	N-NITROSODIMETHYLAMINE	18.9 ng/Kg	SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-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-022-SA5DN-SB-15.0-16.0(RES)	N-NITROSODIMETHYLAMINE	53.1 ng/Kg	53.1U ng/Kg
SL-079-SA8N-SB-4.0-5.0(RES)	N-NITROSODIMETHYLAMINE	37.9 ng/Kg	38.3U ng/Kg
SL-079-SA8N-SB-9.0-10.0(RES)	N-NITROSODIMETHYLAMINE	52.8 ng/Kg	52.8U ng/Kg
SL-133-SA8N-SB-4.0-5.0(RES)	N-NITROSODIMETHYLAMINE	61.8 ng/Kg	61.8U ng/Kg

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15808BB220530	6/8/2011 5:30:00 AM	PHOSPHORUS TIN	1.09 mg/Kg 1.28 mg/Kg	SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-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-022-SA5DN-SB-15.0-16.0(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-022-SA5DN-SB-4.0-5.0(RES)	TIN	3.09 mg/Kg	3.09U mg/Kg
SL-053-SA5DN-SB-11.5-12.5(RES)	TIN	2.95 mg/Kg	2.95U mg/Kg
SL-053-SA5DN-SB-4.0-5.0(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-079-SA8N-SB-4.0-5.0(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-079-SA8N-SB-9.0-10.0(RES)	TIN	3.06 mg/Kg	3.06U mg/Kg
SL-133-SA8N-SB-4.0-5.0(RES)	TIN	3.09 mg/Kg	3.09U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15826DB220423A	6/11/2011 4:23:00 AM	COPPER LEAD	0.152 mg/Kg 0.0660 mg/Kg	SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P61613AB321415A	6/11/2011 2:15:00 PM	EFH (C21-C30) EFH (C30-C40)	0.43 mg/Kg 0.90 mg/Kg	SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-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-022-SA5DN-SB-4.0-5.0(REA2)	EFH (C30-C40)	0.78 mg/Kg	1.4U mg/Kg
SL-079-SA8N-SB-4.0-5.0(REA2)	EFH (C21-C30)	0.85 mg/Kg	1.4U mg/Kg
SL-079-SA8N-SB-4.0-5.0(REA2)	EFH (C30-C40)	2.0 mg/Kg	2.0U mg/Kg
SL-079-SA8N-SB-9.0-10.0(REA2)	EFH (C21-C30)	1.7 mg/Kg	1.7U mg/Kg
SL-079-SA8N-SB-9.0-10.0(REA2)	EFH (C30-C40)	4.2 mg/Kg	4.2U mg/Kg
SL-133-SA8N-SB-4.0-5.0(REA2)	EFH (C30-C40)	0.80 mg/Kg	1.4U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB78B211215A	6/8/2011 12:15:00 PM	ACETONE METHYLENE CHLORIDE	8.7 ug/Kg 1.0 ug/Kg	SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-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-022-SA5DN-SB-15.0-16.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-022-SA5DN-SB-15.0-16.0(RES)	METHYLENE CHLORIDE	1.1 ug/Kg	4.0U ug/Kg
SL-022-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	4.1U ug/Kg
SL-053-SA5DN-SB-4.0-5.0(RES)	ACETONE	9.9 ug/Kg	9.9U ug/Kg
SL-053-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.8U ug/Kg
SL-079-SA8N-SB-4.0-5.0(RES)	ACETONE	8.0 ug/Kg	8.0U ug/Kg
SL-079-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.99 ug/Kg	4.0U ug/Kg
SL-079-SA8N-SB-9.0-10.0(RES)	ACETONE	9.9 ug/Kg	9.9U ug/Kg
SL-133-SA8N-SB-4.0-5.0(RES)	ACETONE	8.5 ug/Kg	8.5U ug/Kg
SL-133-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	4.1U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-022-SA5DN-SB-4.0-5.0MS (SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0)	FLUORIDE	33	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-022-SA5DN-SB-4.0-5.0DUP (SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0)	FLUORIDE	22	20.00	J (all detects) UJ (all non-detects)
	Nitrate-NO3	21	20.00	NO3, No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11611AQ241711A P11611AY241652A (SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0)	Aroclor 5442	148	-	36.00-106.00	38 (30.00)	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P15826DQ220426A (SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0)	ANTIMONY	132	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P0LFLCSQ260127 (SL-022-SA5DN-SB-15.0-16.0 SL-022-SA5DN-SB-4.0-5.0 SL-053-SA5DN-SB-11.5-12.5 SL-053-SA5DN-SB-4.0-5.0 SL-079-SA8N-SB-4.0-5.0 SL-079-SA8N-SB-9.0-10.0 SL-133-SA8N-SB-4.0-5.0)	1,2-DICHLOROBENZENE	77	-	79.00-102.00	-	1,2-DICHLOROBENZENE	J(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-079-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	37.9	38.3	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-133-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-15.0-16.0	TIN Zirconium	J J	2.94 1.31	10.8 5.41	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-022-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	3.09 2.53	11.4 5.71	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-053-SA5DN-SB-11.5-12.5	TIN Zirconium	J J	2.95 1.80	11.1 5.53	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-053-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.94 1.98	11.7 5.85	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-079-SA8N-SB-4.0-5.0	TIN Zirconium	J J	3.00 2.88	11.4 5.68	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-079-SA8N-SB-9.0-10.0	TIN Zirconium	J J	3.06 2.62	11.4 5.70	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-133-SA8N-SB-4.0-5.0	TIN Zirconium	J J	3.09 4.96	11.3 5.66	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-15.0-16.0	ANTIMONY SILVER	J J	0.0885 0.0549	0.210 0.105	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-022-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.0978 0.0501	0.443 0.111	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-053-SA5DN-SB-11.5-12.5	ANTIMONY CADMIUM SELENIUM SILVER	J J J J	0.160 0.0887 0.0697 0.0286	0.221 0.111 0.442 0.111	PQL PQL PQL PQL	mg/Kg mg/Kg mg/Kg mg/Kg	J (all detects)
SL-053-SA5DN-SB-4.0-5.0	CADMIUM SILVER	J J	0.0861 0.0428	0.117 0.117	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-079-SA8N-SB-4.0-5.0	ANTIMONY CADMIUM SELENIUM SILVER	J J J J	0.155 0.0801 0.0560 0.0579	0.225 0.113 0.450 0.113	PQL PQL PQL PQL	mg/Kg mg/Kg mg/Kg mg/Kg	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-079-SA8N-SB-9.0-10.0	ANTIMONY	J	0.135	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0621	0.460	PQL	mg/Kg	
	SILVER	J	0.0280	0.115	PQL	mg/Kg	
SL-133-SA8N-SB-4.0-5.0	ANTIMONY	J	0.209	0.233	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.106	0.117	PQL	mg/Kg	
	SELENIUM	J	0.0498	0.466	PQL	mg/Kg	
	SILVER	J	0.0337	0.117	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-15.0-16.0	HEXAVALENT CHROMIUM	J	0.58	1.1	PQL	mg/Kg	J (all detects)
SL-022-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.35	1.1	PQL	mg/Kg	J (all detects)
SL-053-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.35	1.2	PQL	mg/Kg	J (all detects)
SL-079-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.40	1.1	PQL	mg/Kg	J (all detects)
SL-079-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	1.0	1.2	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.39	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-4.0-5.0	MERCURY	J	0.0106	0.111	PQL	mg/Kg	J (all detects)
SL-053-SA5DN-SB-4.0-5.0	MERCURY	J	0.0035	0.109	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-4.0-5.0	MERCURY	J	0.0159	0.111	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.78	1.4	PQL	mg/Kg	J (all detects)
SL-079-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	0.85	1.4	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.80	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: DE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-133-SA8N-SB-4.0-5.0	AROCLOR 1248	J	1.9	2.0	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA5DN-SB-15.0-16.0	CHLOROFORM	J	0.17	4.0	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	1.1	4.0	PQL	ug/Kg	
	TOLUENE	J	0.15	4.0	PQL	ug/Kg	
SL-022-SA5DN-SB-4.0-5.0	CHLOROFORM	J	0.17	4.1	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	1.2	4.1	PQL	ug/Kg	
SL-053-SA5DN-SB-4.0-5.0	CHLOROFORM	J	0.19	4.8	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	1.3	4.8	PQL	ug/Kg	
	TOLUENE	J	0.15	4.8	PQL	ug/Kg	
SL-079-SA8N-SB-4.0-5.0	CHLOROFORM	J	0.16	4.0	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	0.99	4.0	PQL	ug/Kg	
	TOLUENE	J	0.22	4.0	PQL	ug/Kg	
SL-079-SA8N-SB-9.0-10.0	CHLOROFORM	J	0.19	4.3	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.40	4.3	PQL	ug/Kg	
SL-133-SA8N-SB-4.0-5.0	CHLOROFORM	J	0.16	4.1	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	1.2	4.1	PQL	ug/Kg	
	TOLUENE	J	0.17	4.1	PQL	ug/Kg	

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-053-SA5DN-SB-11.5-12.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	370	PQL	ug/Kg	J (all detects)
SL-053-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	390	PQL	ug/Kg	J (all detects)

LDC #: 26277E4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/14

SDG #: DE174 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: MM

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Na, Fe
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	3 DE168
VII.	Duplicate Sample Analysis	SW	
VIII.	Laboratory Control Samples (LCS)	NA	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, V.
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-022-SA5DN-SB-4.0-5.0	11		21		31	
2	SL-022-SA5DN-SB-15.0-16.0	12		22		32	
3	SL-053-SA5DN-SB-4.0-5.0	13		23		33	
4	SL-053-SA5DN-SB-11.5-12.5	14		24		34	
5	SL-079-SA8N-SB-4.0-5.0	15		25		35	
6	SL-079-SA8N-SB-9.0-10.0	16		26		36	
7	SL-133-SA8N-SB-4.0-5.0	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

SAMPLE DELIVERY GROUP

DE175

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3050B	6010B	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3050B	6020	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3060A	7199	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3546	1625C	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3550B	8015B	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3550B	8015M	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3550B	8082	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3550B	8270C	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	3550B	8270C SIM	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	5035	8015M	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	5035	8260B	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	5035	8260B SIM	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	8330	8330A	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	300.0	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	314.0	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	7471A	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	8015B	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	8015M	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	8315A	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0	6309746	N	METHOD	9012B	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0DUP	P309746D271425B	DUP	METHOD	300.0	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0DUP	P309746D271635B	DUP	METHOD	314.0	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0MS	P309746R271439B	MS	METHOD	300.0	III
06-Jun-2011	SL-133-SA8N-SB-7.0-8.0MS	P309746R271658B	MS	METHOD	314.0	III
07-Jun-2011	TB-060711	6309747	TB	5030B	8015M	III
07-Jun-2011	TB-060711	6309747	TB	5030B	8260B	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
07-Jun-2011	TB-060711	6309747	TB	5030B	8260B SIM	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3050B	6010B	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3050B	6020	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3060A	7199	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3546	1625C	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3550B	8015B	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3550B	8015M	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3550B	8082	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3550B	8270C	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	3550B	8270C SIM	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	5035	8015M	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	5035	8260B	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	5035	8260B SIM	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	8330	8330A	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	300.0	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	314.0	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	7471A	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	8015B	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	8015M	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	8315A	III
07-Jun-2011	SL-071-SA8N-SB-2.0-3.0	6309743	N	METHOD	9012B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3050B	6010B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3050B	6020	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3060A	7199	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3546	1625C	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3550B	8015B	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
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3550B	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3550B	8082	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3550B	8270C	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	3550B	8270C SIM	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	5035	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	5035	8260B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	5035	8260B SIM	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	8330	8330A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	300.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	314.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	7471A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	8015B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	8315A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0	6309733	N	METHOD	9012B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3050B	6010B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3050B	6020	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3060A	7199	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3546	1625C	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3550B	8015B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3550B	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3550B	8082	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3550B	8270C	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	3550B	8270C SIM	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	5035	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	5035	8260B	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
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	5035	8260B SIM	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	8330	8330A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	300.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	314.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	7471A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	8015B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	8315A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0MS	6309734	MS	METHOD	9012B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	3050B	6010B	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	3050B	6020	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	3060A	7199	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	METHOD	300.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	METHOD	314.0	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	METHOD	7471A	III
07-Jun-2011	SL-024-SA5DN-SB-4.0-5.0DU	6309736	DUP	METHOD	9012B	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3050B	6010B	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3050B	6020	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3060A	7199	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3546	1625C	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3550B	8015B	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3550B	8015M	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3550B	8082	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3550B	8270C	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	3550B	8270C SIM	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	5035	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	5035	8260B	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	5035	8260B SIM	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	8330	8330A	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	300.0	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	314.0	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	7471A	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	8015B	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	8015M	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	8315A	III
07-Jun-2011	DUP13-SA5DN-QC-060711	6309742	FD	METHOD	9012B	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3050B	6010B	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3050B	6020	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3060A	7199	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3546	1625C	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3550B	8015B	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3550B	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3550B	8082	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3550B	8270C	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	3550B	8270C SIM	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	5035	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	5035	8260B	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	5035	8260B SIM	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	8330	8330A	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	300.0	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	314.0	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	7471A	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	8015B	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	8015M	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	8315A	III
07-Jun-2011	SL-024-SA5DN-SB-19.0-20.0	6309737	N	METHOD	9012B	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3050B	6010B	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3050B	6020	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3060A	7199	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3546	1625C	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3550B	8015B	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3550B	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3550B	8082	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3550B	8270C	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	3550B	8270C SIM	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	5035	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	5035	8260B	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	5035	8260B SIM	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	8330	8330A	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	300.0	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	314.0	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	7471A	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	8015B	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	8315A	III
07-Jun-2011	SL-026-SA5DN-SB-4.0-5.0	6309738	N	METHOD	9012B	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3050B	6020	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3060A	7199	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3546	1625C	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3550B	8015B	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3550B	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3550B	8082	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3550B	8270C	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	3550B	8270C SIM	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	5035	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	5035	8260B	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	5035	8260B SIM	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	8330	8330A	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	300.0	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	314.0	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	7471A	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	8015B	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	8015M	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	8315A	III
07-Jun-2011	SL-026-SA5DN-SB-17.0-18.0	6309739	N	METHOD	9012B	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	3510C	8015B	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	3510C	8015M	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	3520C	1625C	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	5030B	8015M	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	8330	8330A	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	Gen Prep	300.0	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	Gen Prep	8015B	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
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	Gen Prep	8015M	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	METHOD	8315A	III
07-Jun-2011	EB15-SA5DN-SB-060711	6309748	EB	METHOD	9012B	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3050B	6010B	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3050B	6020	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3060A	7199	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3546	1625C	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3550B	8015B	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3550B	8015M	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3550B	8082	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3550B	8270C	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	3550B	8270C SIM	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	5035	8015M	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	5035	8260B	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	5035	8260B SIM	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	8330	8330A	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	300.0	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	314.0	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	7471A	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	8015B	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	8015M	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	8315A	III
07-Jun-2011	SL-122-SA8N-SB-2.0-3.0	6309744	N	METHOD	9012B	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3050B	6010B	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3050B	6020	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3546	1625C	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3550B	8015B	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3550B	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3550B	8082	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3550B	8270C	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	3550B	8270C SIM	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	5035	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	5035	8260B	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	5035	8260B SIM	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	8330	8330A	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	300.0	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	314.0	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	6850	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	7471A	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	8015B	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	8315A	III
07-Jun-2011	SL-036-SA5DN-SB-4.0-5.0	6309740	N	METHOD	9012B	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3050B	6010B	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3050B	6020	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3060A	7199	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3546	1625C	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3550B	8015B	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3550B	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3550B	8082	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3550B	8270C	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
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	3550B	8270C SIM	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	5035	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	5035	8260B	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	5035	8260B SIM	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	8330	8330A	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	300.0	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	314.0	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	7471A	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	8015B	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	8015M	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	8315A	III
07-Jun-2011	SL-036-SA5DN-SB-9.0-10.0	6309741	N	METHOD	9012B	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3050B	6010B	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3050B	6020	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3060A	7199	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3546	1625C	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3550B	8015B	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3550B	8015M	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3550B	8082	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3550B	8270C	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	3550B	8270C SIM	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	5035	8015M	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	5035	8260B	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	5035	8260B SIM	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	8330	8330A	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	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
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	314.0	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	7471A	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	8015B	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	8015M	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	8315A	III
07-Jun-2011	SL-140-SA8N-SB-3.0-4.0	6309745	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	17.2		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-024-SA5DN-SB-19.0-20.0 *Collected:* 6/7/2011 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	4.4		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 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
FLUORIDE	15.6		0.91	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.91	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.6		0.87	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.5		0.96	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.96	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	13.1		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.7		0.92	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.86	U	0.86	MDL	1.1	PQL	mg/Kg	UJ	Q
Nitrate-NO3	1.2	J	0.86	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.4		0.92	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.8		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	8480		6.88	MDL	22.4	PQL	mg/Kg	J	E, E
MANGANESE	567		0.0875	MDL	0.561	PQL	mg/Kg	J	E, E
POTASSIUM	2930		20.2	MDL	56.1	PQL	mg/Kg	J	Q
TIN	2.80	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	4.86	J	0.942	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: SL-024-SA5DN-SB-19.0-20.0 *Collected:* 6/7/2011 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
CALCIUM	16200		6.68	MDL	21.8	PQL	mg/Kg	J	E, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-19.0-20.0 ***Collected:*** 6/7/2011 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
MANGANESE	135		0.0851	MDL	0.545	PQL	mg/Kg	J	E, E
POTASSIUM	2520		19.6	MDL	54.5	PQL	mg/Kg	J	Q
TIN	2.30	J	1.09	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.69	J	0.916	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-024-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 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
CALCIUM	13800		6.84	MDL	22.3	PQL	mg/Kg	J	E, E
MANGANESE	365		0.0871	MDL	0.558	PQL	mg/Kg	J	E, E
POTASSIUM	3130		20.1	MDL	55.8	PQL	mg/Kg	J	Q
TIN	2.60	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	3.58	J	0.938	MDL	5.58	PQL	mg/Kg	J	Z

Sample ID: SL-026-SA5DN-SB-17.0-18.0 ***Collected:*** 6/7/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3540		6.55	MDL	21.4	PQL	mg/Kg	J	E, E
MANGANESE	615		0.0834	MDL	0.535	PQL	mg/Kg	J	E, E
POTASSIUM	2080		19.2	MDL	53.5	PQL	mg/Kg	J	Q
TIN	2.75	J	1.07	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.26	J	0.898	MDL	5.35	PQL	mg/Kg	J	Z

Sample ID: SL-026-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 11:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	6520		7.27	MDL	23.7	PQL	mg/Kg	J	E, E
MANGANESE	491		0.0925	MDL	0.593	PQL	mg/Kg	J	E, E
POTASSIUM	3920		21.3	MDL	59.3	PQL	mg/Kg	J	Q
TIN	2.75	J	1.19	MDL	11.9	PQL	mg/Kg	U	B
Zirconium	2.93	J	0.996	MDL	5.93	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	19500		7.01	MDL	22.9	PQL	mg/Kg	J	E, E
MANGANESE	364		0.0892	MDL	0.572	PQL	mg/Kg	J	E, E
POTASSIUM	2900		20.6	MDL	57.2	PQL	mg/Kg	J	Q
TIN	2.56	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.20	J	0.961	MDL	5.72	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	19600		6.94	MDL	22.6	PQL	mg/Kg	J	E, E
MANGANESE	220		0.0883	MDL	0.566	PQL	mg/Kg	J	E, E
POTASSIUM	3090		20.4	MDL	56.6	PQL	mg/Kg	J	Q
TIN	2.70	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	3.62	J	0.951	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	1420		6.55	MDL	21.4	PQL	mg/Kg	J	E, E
MANGANESE	267		0.0834	MDL	0.535	PQL	mg/Kg	J	E, E
POTASSIUM	3050		19.2	MDL	53.5	PQL	mg/Kg	J	Q
SODIUM	69.6	J	39.9	MDL	107	PQL	mg/Kg	J	Z
TIN	2.53	J	1.07	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	2890		6.34	MDL	20.7	PQL	mg/Kg	J	E, E
MANGANESE	298		0.0807	MDL	0.518	PQL	mg/Kg	J	E, E
POTASSIUM	3520		18.6	MDL	51.8	PQL	mg/Kg	J	Q
SODIUM	61.0	J	38.6	MDL	104	PQL	mg/Kg	J	Z
TIN	2.41	J	1.04	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.16	J	0.869	MDL	5.18	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 6010B **Matrix:** SO

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5510		6.93	MDL	22.6	PQL	mg/Kg	J	E, E
MANGANESE	254		0.0882	MDL	0.565	PQL	mg/Kg	J	E, E
POTASSIUM	1960		20.4	MDL	56.5	PQL	mg/Kg	J	Q
TIN	2.87	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.76	J	0.950	MDL	5.65	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	2690		6.69	MDL	21.8	PQL	mg/Kg	J	E, E
MANGANESE	275		0.0851	MDL	0.546	PQL	mg/Kg	J	E, E
POTASSIUM	2680		19.6	MDL	54.6	PQL	mg/Kg	J	Q
SODIUM	75.3	J	40.7	MDL	109	PQL	mg/Kg	J	Z
TIN	2.42	J	1.09	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.19	J	0.917	MDL	5.46	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0730	J	0.0444	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.333		0.0555	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.271		0.0667	MDL	0.222	PQL	mg/Kg	J	Q
ARSENIC	7.52		0.0889	MDL	0.444	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.931		0.0178	MDL	0.111	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 ***Collected:*** 6/7/2011 9:20:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.344		0.0444	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	32.9		0.133	MDL	0.444	PQL	mg/Kg	J	Q, A
COBALT	12.6		0.0222	MDL	0.111	PQL	mg/Kg	J	Q, E
COPPER	17.7		0.0733	MDL	0.444	PQL	mg/Kg	J	Q
LEAD	13.2		0.0116	MDL	0.222	PQL	mg/Kg	J	Q
NICKEL	28.5		0.111	MDL	0.444	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0599	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.386		0.0333	MDL	0.111	PQL	mg/Kg	J	Q
VANADIUM	57.6		0.0244	MDL	0.111	PQL	mg/Kg	J	E, A

Sample ID: SL-024-SA5DN-SB-19.0-20.0 ***Collected:*** 6/7/2011 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	0.0758	J	0.0436	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: SL-024-SA5DN-SB-19.0-20.0 ***Collected:*** 6/7/2011 9:30:00 AM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.948		0.0545	MDL	0.109	PQL	mg/Kg	J	Q

Sample ID: SL-024-SA5DN-SB-19.0-20.0 ***Collected:*** 6/7/2011 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
ANTIMONY	0.252		0.0654	MDL	0.218	PQL	mg/Kg	J	Q
ARSENIC	10.5		0.0872	MDL	0.436	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.847		0.0174	MDL	0.109	PQL	mg/Kg	J	Q
CADMIUM	0.368		0.0436	MDL	0.109	PQL	mg/Kg	J	Q
CHROMIUM	28.6		0.131	MDL	0.436	PQL	mg/Kg	J	Q, A
COBALT	29.0		0.0218	MDL	0.109	PQL	mg/Kg	J	Q, E
COPPER	16.3		0.0720	MDL	0.436	PQL	mg/Kg	J	Q
LEAD	14.1		0.0113	MDL	0.218	PQL	mg/Kg	J	Q
NICKEL	35.8		0.109	MDL	0.436	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0212	J	0.0131	MDL	0.109	PQL	mg/Kg	J	Z, Q
THALLIUM	0.449		0.0327	MDL	0.109	PQL	mg/Kg	J	Q
VANADIUM	62.9		0.0240	MDL	0.109	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.119	J	0.0451	MDL	0.451	PQL	mg/Kg	J	Z

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.361		0.0564	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 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
ANTIMONY	0.255		0.0677	MDL	0.226	PQL	mg/Kg	J	Q
ARSENIC	7.61		0.0902	MDL	0.451	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.987		0.0180	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.429		0.0451	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	34.4		0.135	MDL	0.451	PQL	mg/Kg	J	Q, A
COBALT	16.7		0.0226	MDL	0.113	PQL	mg/Kg	J	Q, E
COPPER	19.5		0.0744	MDL	0.451	PQL	mg/Kg	J	Q
LEAD	13.5		0.0117	MDL	0.226	PQL	mg/Kg	J	Q
NICKEL	35.0		0.113	MDL	0.451	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0547	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.424		0.0338	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	56.6		0.0248	MDL	0.113	PQL	mg/Kg	J	E, A

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.288		0.0419	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0577	J	0.0419	MDL	0.419	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-026-SA5DN-SB-17.0-18.0 ***Collected:*** 6/7/2011 11:45:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.411		0.0524	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-026-SA5DN-SB-17.0-18.0 ***Collected:*** 6/7/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.110	J	0.0629	MDL	0.210	PQL	mg/Kg	J	Z, Q
ARSENIC	8.49		0.0839	MDL	0.419	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.700		0.0168	MDL	0.105	PQL	mg/Kg	J	Q
CHROMIUM	19.2		0.126	MDL	0.419	PQL	mg/Kg	J	Q, A
COBALT	10.3		0.0210	MDL	0.105	PQL	mg/Kg	J	Q, E
COPPER	11.1		0.0692	MDL	0.419	PQL	mg/Kg	J	Q
LEAD	8.35		0.0109	MDL	0.210	PQL	mg/Kg	J	Q
NICKEL	23.1		0.105	MDL	0.419	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0167	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z, Q
THALLIUM	0.323		0.0315	MDL	0.105	PQL	mg/Kg	J	Q
VANADIUM	41.6		0.0231	MDL	0.105	PQL	mg/Kg	J	E, A

Sample ID: SL-026-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 11:35:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.199	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z

Sample ID: SL-026-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 11:35:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.524		0.0587	MDL	0.117	PQL	mg/Kg	J	Q

Sample ID: SL-026-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 11:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.229	J	0.0704	MDL	0.235	PQL	mg/Kg	J	Z, Q
ARSENIC	6.42		0.0939	MDL	0.470	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.987		0.0188	MDL	0.117	PQL	mg/Kg	J	Q
CADMIUM	0.333		0.0470	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	30.6		0.141	MDL	0.470	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-026-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 11:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	10.7		0.0235	MDL	0.117	PQL	mg/Kg	J	Q, E
COPPER	16.3		0.0775	MDL	0.470	PQL	mg/Kg	J	Q
LEAD	11.5		0.0122	MDL	0.235	PQL	mg/Kg	J	Q
NICKEL	24.5		0.117	MDL	0.470	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0595	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z, Q
THALLIUM	0.430		0.0352	MDL	0.117	PQL	mg/Kg	J	Q
VANADIUM	48.2		0.0258	MDL	0.117	PQL	mg/Kg	J	E, A

Sample ID: SL-036-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 2:35:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0464	J	0.0453	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 2:35:00 PM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.246		0.0566	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-036-SA5DN-SB-4.0-5.0 ***Collected:*** 6/7/2011 2:35:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.185	J	0.0680	MDL	0.227	PQL	mg/Kg	J	Z, Q
ARSENIC	5.64		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, E
BERYLLIUM	1.21		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.255		0.0453	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	27.5		0.136	MDL	0.453	PQL	mg/Kg	J	Q, A
COBALT	7.89		0.0227	MDL	0.113	PQL	mg/Kg	J	Q, E
COPPER	12.2		0.0747	MDL	0.453	PQL	mg/Kg	J	Q
LEAD	10.7		0.0118	MDL	0.227	PQL	mg/Kg	J	Q
NICKEL	21.6		0.113	MDL	0.453	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0368	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.345		0.0340	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	43.6		0.0249	MDL	0.113	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.336		0.0566	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.270		0.0679	MDL	0.226	PQL	mg/Kg	J	Q
ARSENIC	6.92		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.959		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.128		0.0453	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	32.3		0.136	MDL	0.453	PQL	mg/Kg	J	Q, A
COBALT	8.54		0.0226	MDL	0.113	PQL	mg/Kg	J	Q, E
COPPER	15.9		0.0747	MDL	0.453	PQL	mg/Kg	J	Q
LEAD	8.54		0.0118	MDL	0.226	PQL	mg/Kg	J	Q
NICKEL	22.2		0.113	MDL	0.453	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0712	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.362		0.0340	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	50.7		0.0249	MDL	0.113	PQL	mg/Kg	J	E, A

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.962		0.0524	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.135	J	0.0629	MDL	0.210	PQL	mg/Kg	J	Z, Q
ARSENIC	6.79		0.0839	MDL	0.419	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.786		0.0168	MDL	0.105	PQL	mg/Kg	J	Q
CADMIUM	0.168		0.0419	MDL	0.105	PQL	mg/Kg	J	Q
CHROMIUM	19.6		0.126	MDL	0.419	PQL	mg/Kg	J	Q, A
COBALT	7.01		0.0210	MDL	0.105	PQL	mg/Kg	J	Q, E
COPPER	8.79		0.0692	MDL	0.419	PQL	mg/Kg	J	Q
LEAD	9.46		0.0109	MDL	0.210	PQL	mg/Kg	J	Q
NICKEL	14.4		0.105	MDL	0.419	PQL	mg/Kg	J	Q, Q, E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0615	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z, Q
THALLIUM	0.386		0.0315	MDL	0.105	PQL	mg/Kg	J	Q
VANADIUM	41.7		0.0231	MDL	0.105	PQL	mg/Kg	J	E, A

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.159	J	0.0422	MDL	0.422	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.426		0.0528	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0967	J	0.0633	MDL	0.211	PQL	mg/Kg	J	Z, Q
ARSENIC	6.03		0.0844	MDL	0.422	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.655		0.0169	MDL	0.106	PQL	mg/Kg	J	Q
CADMIUM	0.191		0.0422	MDL	0.106	PQL	mg/Kg	J	Q
CHROMIUM	18.9		0.127	MDL	0.422	PQL	mg/Kg	J	Q, A
COBALT	7.05		0.0211	MDL	0.106	PQL	mg/Kg	J	Q, E
COPPER	10.4		0.0697	MDL	0.422	PQL	mg/Kg	J	Q
LEAD	9.15		0.0110	MDL	0.211	PQL	mg/Kg	J	Q
NICKEL	15.3		0.106	MDL	0.422	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0650	J	0.0127	MDL	0.106	PQL	mg/Kg	J	Z, Q
THALLIUM	0.336		0.0317	MDL	0.106	PQL	mg/Kg	J	Q
VANADIUM	37.6		0.0232	MDL	0.106	PQL	mg/Kg	J	E, A

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0507	J	0.0448	MDL	0.448	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.238		0.0560	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.198	J	0.0672	MDL	0.224	PQL	mg/Kg	J	Z, Q
ARSENIC	7.56		0.0896	MDL	0.448	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.873		0.0179	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.0793	J	0.0448	MDL	0.112	PQL	mg/Kg	J	Z, Q
CHROMIUM	21.6		0.134	MDL	0.448	PQL	mg/Kg	J	Q, A
COBALT	6.64		0.0224	MDL	0.112	PQL	mg/Kg	J	Q, E
COPPER	10.6		0.0739	MDL	0.448	PQL	mg/Kg	J	Q
LEAD	10.0		0.0116	MDL	0.224	PQL	mg/Kg	J	Q
NICKEL	15.4		0.112	MDL	0.448	PQL	mg/Kg	J	Q, Q, E
SILVER	0.130		0.0134	MDL	0.112	PQL	mg/Kg	J	Q
THALLIUM	0.346		0.0336	MDL	0.112	PQL	mg/Kg	J	Q
VANADIUM	45.9		0.0246	MDL	0.112	PQL	mg/Kg	J	E, A

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.295	J	0.0437	MDL	0.437	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.803		0.0546	MDL	0.109	PQL	mg/Kg	J	Q

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.146	J	0.0655	MDL	0.218	PQL	mg/Kg	J	Z, Q
ARSENIC	6.96		0.0873	MDL	0.437	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.669		0.0175	MDL	0.109	PQL	mg/Kg	J	Q
CADMIUM	0.133		0.0437	MDL	0.109	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	21.1		0.131	MDL	0.437	PQL	mg/Kg	J	Q, A
COBALT	7.26		0.0218	MDL	0.109	PQL	mg/Kg	J	Q, E
COPPER	7.98		0.0720	MDL	0.437	PQL	mg/Kg	J	Q
LEAD	7.61		0.0114	MDL	0.218	PQL	mg/Kg	J	Q
NICKEL	14.8		0.109	MDL	0.437	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0370	J	0.0131	MDL	0.109	PQL	mg/Kg	J	Z, Q
THALLIUM	0.328		0.0327	MDL	0.109	PQL	mg/Kg	J	Q
VANADIUM	42.8		0.0240	MDL	0.109	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.23	U	0.23	MDL	1.1	PQL	mg/Kg	UJ	FD

Sample ID: SL-024-SA5DN-SB-19.0-20.0 *Collected:* 6/7/2011 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
HEXAVALENT CHROMIUM	0.30	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 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
HEXAVALENT CHROMIUM	0.44	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z, FD

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.41	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.60	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.30	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.33	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0033	U	0.0033	MDL	0.114	PQL	mg/Kg	UJ	FD

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 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
MERCURY	0.0048	J	0.0031	MDL	0.108	PQL	mg/Kg	J	Z, FD

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0278	J	0.0033	MDL	0.117	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7471A Matrix: SO

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0044	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0117	J	0.0031	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0070	J	0.0030	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0108	J	0.0031	MDL	0.107	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C Matrix: AQ

Sample ID: EB15-SA5DN-SB-060711 *Collected:* 6/7/2011 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
N-NITROSODIMETHYLAMINE	1.71		0.526	MDL	1.05	PQL	ng/L	UJ	B, S

Method Category: SVOA

Method: 1625C Matrix: SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 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
N-NITROSODIMETHYLAMINE	65.1		19.0	MDL	38.0	PQL	ng/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 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
N-NITROSODIMETHYLAMINE	18.9	U	18.9	MDL	37.8	PQL	ng/Kg	UJ	FD

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	27.1	J	18.1	MDL	36.2	PQL	ng/Kg	J	Z

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	20.4	J	19.8	MDL	39.5	PQL	ng/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 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
N-NITROSODIMETHYLAMINE	29.3	J	19.4	MDL	38.9	PQL	ng/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 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
N-NITROSODIMETHYLAMINE	23.9	J	19.1	MDL	38.2	PQL	ng/Kg	J	Z

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 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
N-NITROSODIMETHYLAMINE	33.0	J	17.8	MDL	35.5	PQL	ng/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 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
N-NITROSODIMETHYLAMINE	26.6	J	17.7	MDL	35.3	PQL	ng/Kg	J	Z

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 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
N-NITROSODIMETHYLAMINE	24.7	J	18.6	MDL	37.2	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA
Method: 1625C **Matrix:** SO

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.0	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.7	U	5.7	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.7	U	5.7	MDL	11	PQL	mg/Kg	UJ	Q
Propylene glycol	5.7	U	5.7	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.68	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.2	J	0.95	MDL	2.9	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.51	J	0.47	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.50	J	0.46	MDL	1.4	PQL	mg/Kg	U	B
EFH (C30-C40)	0.85	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.51	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.54	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.87	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.73	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.54	J	0.47	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.4	J	1.1	MDL	3.8	PQL	ug/Kg	J	Z, L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-024-SA5DN-SB-19.0-20.0 *Collected:* 6/7/2011 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 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
1,2,4-TRICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q, L
1,3-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
1,4-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2,4,5-TRICHLOROPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
2,4,6-TRICHLOROPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
2,4-DICHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2,4-DIMETHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	R	Q
2,4-DINITROTOLUENE	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
2-CHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	570	PQL	ug/Kg	R	Q
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
4-CHLORO-3-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
4-CHLOROPHENYL-PHENYLETHER	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
4-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	Q
BENZIDINE	1300	U	1300	MDL	3800	PQL	ug/Kg	UJ	Q
BIS(2-CHLOROETHOXY)METHANE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
DIBENZOFURAN	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
HEXACHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
HEXACHLOROBUTADIENE	76	U	76	MDL	190	PQL	ug/Kg	UJ	Q
HEXACHLOROETHANE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
ISOPHORONE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 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
NITROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
N-NITROSODIPHENYLAMINE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 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
1,2-DICHLOROBENZENE	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

Sample ID: SL-036-SA5DN-SB-9.0-10.0 *Collected:* 6/7/2011 2:45:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-071-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 9:05:00 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 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
ACENAPHTHYLENE	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	Q
Dimethylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	Q

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *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	0.74	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA8N-SB-2.0-3.0 *Collected:* 6/7/2011 2:00:00 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
NAPHTHALENE	0.90	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-133-SA8N-SB-7.0-8.0 *Collected:* 6/6/2011 5:15:00 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
ANTHRACENE	0.42	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	0.82	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: PrepDE175_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-140-SA8N-SB-3.0-4.0 *Collected:* 6/7/2011 3:20:00 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	0.76	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.96	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	0.53	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.0	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.0	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	0.87	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B **Matrix:** AQ

Sample ID: EB15-SA5DN-SB-060711 *Collected:* 6/7/2011 1:00:00 PM *Analysis Type:* REA4 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	230	J	200	MDL	1000	PQL	ug/L	J	Z

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.7	U	1.7	MDL	4.0	PQL	mg/Kg	UJ	Q

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP13-SA5DN-QC-060711 *Collected:* 6/7/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.0		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.4	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.16	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-024-SA5DN-SB-19.0-20.0 *Collected:* 6/7/2011 9:30:00 AM *Analysis Type:* RES *Dilution:* 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.1		6.2	MDL	7.4	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.3	J	0.22	MDL	3.7	PQL	ug/Kg	U	B
TOLUENE	0.14	J	0.07	MDL	3.7	PQL	ug/Kg	U	B

Sample ID: SL-024-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 9:10:00 AM *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	11		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.7	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.20	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-026-SA5DN-SB-17.0-18.0 *Collected:* 6/7/2011 11:45:00 *Analysis Type:* RES *Dilution:* 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.9		6.8	MDL	8.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.3	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.15	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-026-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 11:35:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.9	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.17	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-036-SA5DN-SB-4.0-5.0 *Collected:* 6/7/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.5		6.9	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.1	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.11	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory:** LL

EDD Filename: PrepDE175_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-036-SA5DN-SB-9.0-10.0 ***Collected:*** 6/7/2011 2:45:00 PM ***Analysis Type:*** RES ***Dilution:*** 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.4		7.2	MDL	8.6	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.26	MDL	4.3	PQL	ug/Kg	U	B
TOLUENE	0.14	J	0.09	MDL	4.3	PQL	ug/Kg	U	B

Sample ID: SL-071-SA8N-SB-2.0-3.0 ***Collected:*** 6/7/2011 9:05:00 AM ***Analysis Type:*** RES ***Dilution:*** 0.98

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	12		7.1	MDL	8.5	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.5	J	0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.13	J	0.08	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-122-SA8N-SB-2.0-3.0 ***Collected:*** 6/7/2011 2:00:00 PM ***Analysis Type:*** RES ***Dilution:*** 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.3		6.9	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.24	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-133-SA8N-SB-7.0-8.0 ***Collected:*** 6/6/2011 5:15:00 PM ***Analysis Type:*** RES ***Dilution:*** 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.7		7.0	MDL	8.4	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.7	J	0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.19	J	0.08	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-140-SA8N-SB-3.0-4.0 ***Collected:*** 6/7/2011 3:20:00 PM ***Analysis Type:*** RES ***Dilution:*** 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.7		6.3	MDL	7.6	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.5	J	0.23	MDL	3.8	PQL	ug/Kg	U	B
TOLUENE	0.22	J	0.08	MDL	3.8	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE175

Method Blank Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWB15B261608	6/21/2011 4:08:00 PM	N-NITROSODIMETHYLAMINE	1.84 ng/L	EB15-SA5DN-SB-060711

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
EB15-SA5DN-SB-060711(RES)	N-NITROSODIMETHYLAMINE	1.71 ng/L	1.71U ng/L

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16008CB221116	6/14/2011 11:16:00 AM	PHOSPHORUS TIN	1.82 mg/Kg 1.75 mg/Kg	DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0
P16008CB221207	6/15/2011 12:07:00 PM	BORON	0.406 mg/Kg	DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-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
DUP13-SA5DN-QC-060711(RES)	TIN	2.80 mg/Kg	2.80U mg/Kg
SL-024-SA5DN-SB-19.0-20.0(RES)	TIN	2.30 mg/Kg	2.30U mg/Kg
SL-024-SA5DN-SB-4.0-5.0(RES)	TIN	2.60 mg/Kg	2.60U mg/Kg
SL-026-SA5DN-SB-17.0-18.0(RES)	TIN	2.75 mg/Kg	2.75U mg/Kg
SL-026-SA5DN-SB-4.0-5.0(RES)	TIN	2.75 mg/Kg	2.75U mg/Kg
SL-036-SA5DN-SB-4.0-5.0(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-036-SA5DN-SB-9.0-10.0(RES)	TIN	2.70 mg/Kg	2.70U mg/Kg
SL-071-SA8N-SB-2.0-3.0(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-122-SA8N-SB-2.0-3.0(RES)	TIN	2.41 mg/Kg	2.41U mg/Kg
SL-133-SA8N-SB-7.0-8.0(RES)	TIN	2.87 mg/Kg	2.87U mg/Kg
SL-140-SA8N-SB-3.0-4.0(RES)	TIN	2.42 mg/Kg	2.42U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16026CB220837A	6/11/2011 8:37:00 AM	LEAD VANADIUM	0.0160 mg/Kg 0.0337 mg/Kg	DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P61613AB321415A	6/11/2011 2:15:00 PM	EFH (C21-C30) EFH (C30-C40)	0.43 mg/Kg 0.90 mg/Kg	DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-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
DUP13-SA5DN-QC-060711(REA2)	EFH (C30-C40)	1.0 mg/Kg	1.4U mg/Kg
SL-024-SA5DN-SB-4.0-5.0(REA2)	EFH (C30-C40)	0.68 mg/Kg	1.4U mg/Kg
SL-036-SA5DN-SB-4.0-5.0(REA2)	EFH (C30-C40)	0.51 mg/Kg	1.4U mg/Kg
SL-036-SA5DN-SB-9.0-10.0(REA2)	EFH (C21-C30)	0.50 mg/Kg	1.4U mg/Kg
SL-036-SA5DN-SB-9.0-10.0(REA2)	EFH (C30-C40)	0.85 mg/Kg	1.4U mg/Kg
SL-133-SA8N-SB-7.0-8.0(REA2)	EFH (C30-C40)	0.87 mg/Kg	1.4U mg/Kg
SL-140-SA8N-SB-3.0-4.0(REA2)	EFH (C30-C40)	0.73 mg/Kg	1.4U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB80B211220A	6/13/2011 12:20:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	9.9 ug/Kg 2.8 ug/Kg 0.10 ug/Kg	DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-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
DUP13-SA5DN-QC-060711(RES)	ACETONE	9.0 ug/Kg	9.0U ug/Kg
DUP13-SA5DN-QC-060711(RES)	METHYLENE CHLORIDE	1.4 ug/Kg	4.0U ug/Kg
DUP13-SA5DN-QC-060711(RES)	TOLUENE	0.16 ug/Kg	4.0U ug/Kg
SL-024-SA5DN-SB-19.0-20.0(RES)	ACETONE	8.1 ug/Kg	8.1U ug/Kg
SL-024-SA5DN-SB-19.0-20.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	3.7U ug/Kg
SL-024-SA5DN-SB-19.0-20.0(RES)	TOLUENE	0.14 ug/Kg	3.7U ug/Kg
SL-024-SA5DN-SB-4.0-5.0(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-024-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.0U ug/Kg
SL-024-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.20 ug/Kg	4.0U ug/Kg
SL-026-SA5DN-SB-17.0-18.0(RES)	ACETONE	8.9 ug/Kg	8.9U ug/Kg
SL-026-SA5DN-SB-17.0-18.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.0U ug/Kg
SL-026-SA5DN-SB-17.0-18.0(RES)	TOLUENE	0.15 ug/Kg	4.0U ug/Kg
SL-026-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-026-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.1U ug/Kg
SL-026-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.17 ug/Kg	4.1U ug/Kg
SL-036-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.5 ug/Kg	8.5U ug/Kg
SL-036-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.1 ug/Kg	4.1U ug/Kg
SL-036-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.11 ug/Kg	4.1U ug/Kg
SL-036-SA5DN-SB-9.0-10.0(RES)	ACETONE	9.4 ug/Kg	9.4U ug/Kg
SL-036-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.3U ug/Kg
SL-036-SA5DN-SB-9.0-10.0(RES)	TOLUENE	0.14 ug/Kg	4.3U ug/Kg
SL-071-SA8N-SB-2.0-3.0(RES)	ACETONE	12 ug/Kg	12U ug/Kg
SL-071-SA8N-SB-2.0-3.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.2U ug/Kg
SL-071-SA8N-SB-2.0-3.0(RES)	TOLUENE	0.13 ug/Kg	4.2U ug/Kg
SL-122-SA8N-SB-2.0-3.0(RES)	ACETONE	8.3 ug/Kg	8.3U ug/Kg
SL-122-SA8N-SB-2.0-3.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.1U ug/Kg
SL-122-SA8N-SB-2.0-3.0(RES)	TOLUENE	0.24 ug/Kg	4.1U ug/Kg
SL-133-SA8N-SB-7.0-8.0(RES)	ACETONE	8.7 ug/Kg	8.7U ug/Kg
SL-133-SA8N-SB-7.0-8.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.2U ug/Kg
SL-133-SA8N-SB-7.0-8.0(RES)	TOLUENE	0.19 ug/Kg	4.2U ug/Kg
SL-140-SA8N-SB-3.0-4.0(RES)	ACETONE	7.7 ug/Kg	7.7U ug/Kg
SL-140-SA8N-SB-3.0-4.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	3.8U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: DE175_v1 eQAPP Name: CDM_SSFL_110509

Method: 8260B
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-140-SA8N-SB-3.0-4.0(RES)	TOLUENE	0.22 ug/Kg	3.8U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN -SB-4.0-5.0MS SL-024-SA5DN -SB-4.0-5.0MSD (SL-024-SA5DN -SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	45 - -	27 48 53	59.00-109.00 63.00-107.00 63.00-107.00	49 (20.00) 34 (20.00) 33 (20.00)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects) UJ (all non-detects)
SL-024-SA5DN -SB-4.0-5.0MSD (SL-024-SA5DN -SB-4.0-5.0)	EFH (C21-C30)	-	-	49.00-123.00	25 (20.00)	EFH (C21-C30)	J(all detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN -SB-4.0-5.0MSD (SL-024-SA5DN -SB-4.0-5.0)	PETN	-	128	80.00-121.00	-	PETN	J(all detects)

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN -SB-4.0-5.0MS SL-024-SA5DN -SB-4.0-5.0MSD (SL-024-SA5DN -SB-4.0-5.0)	m-Terphenyl	68	66	75.00-125.00	-	m-Terphenyl	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN -SB-4.0-5.0MSD (DUP13 -SA5DN -QC-060711 SL -024-SA5DN -SB-19.0-20.0 SL -024-SA5DN -SB-4.0-5.0 SL -026-SA5DN -SB-17.0-18.0 SL -026-SA5DN -SB-4.0-5.0 SL -036-SA5DN -SB-4.0-5.0 SL -036-SA5DN -SB-9.0-10.0 SL -071-SA8N -SB-2.0-3.0 SL -122-SA8N -SB-2.0-3.0 SL -133-SA8N -SB-7.0-8.0 SL -140-SA8N -SB-3.0-4.0)	BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD SILVER THALLIUM	- - - - - - - -	133 140 160 128 136 215 141 143	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	- - - - - - - -	BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD SILVER THALLIUM	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS SL-024-SA5DN-SB-4.0-5.0MSD (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	ANTIMONY ARSENIC NICKEL VANADIUM ZINC	61 - 54 61 51	- 214 160 223 190	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- 21 (20.00) 24 (20.00) 24 (20.00) -	ANTIMONY ARSENIC NICKEL VANADIUM ZINC	J(all detects) UJ(all non-detects) V, Zn, No Qual %R, >4x
SL-024-SA5DN-SB-4.0-5.0MSD (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	MOLYBDENUM	-	135	75.00-125.00	-	MOLYBDENUM	J(all detects)
SL-024-SA5DN-SB-4.0-5.0MS SL-024-SA5DN-SB-4.0-5.0MSD (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	BARIUM	-65	-249	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS SL-024-SA5DN-SB-4.0-5.0MSD (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	ALUMINUM IRON MAGNESIUM POTASSIUM	5628 2370 616 167	5203 2376 442 156	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM IRON MAGNESIUM POTASSIUM	J(all detects) Al, Fe, Mg, No Qual, >4x

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS **SL-024-SA5DN-SB-4.0-5.0MSD** (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	CALCIUM	-586	-1127	75.00-125.00	24 (20.00)	CALCIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x
SL-024-SA5DN-SB-4.0-5.0MS **SL-024-SA5DN-SB-4.0-5.0MSD** (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	MANGANESE	231	539	75.00-125.00	29 (20.00)	MANGANESE	J(all detects) UJ(all non-detects) No Qual %R, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS **SL-024-SA5DN-SB-4.0-5.0MSD** (SL-024-SA5DN-SB-4.0-5.0)	2,4-DINITROPHENOL 4,6-DINITRO-2-METHYLPHENOL	0 0	0 0	20.00-143.00 24.00-116.00	- -	2,4-DINITROPHENOL 4,6-DINITRO-2-METHYLPHEN	J(all detects) R(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS SL-024-SA5DN-SB-4.0-5.0MSD (SL-024-SA5DN-SB-4.0-5.0)	1,2,4-TRICHLOROBENZENE	61	58	72.00-115.00	-	1,2,4-TRICHLOROBENZENE	J(all detects) UJ(all non-detects)
	1,2-DICHLOROBENZENE	55	52	66.00-108.00	-	1,2-DICHLOROBENZENE	
	1,3-DICHLOROBENZENE	52	50	63.00-109.00	-	1,3-DICHLOROBENZENE	
	1,4-DICHLOROBENZENE	52	50	70.00-100.00	-	1,4-DICHLOROBENZENE	
	1-METHYLNAPHTHALENE	67	68	73.00-112.00	-	1-METHYLNAPHTHALENE	
	2,4,5-TRICHLOROPHENOL	71	71	78.00-109.00	-	2,4,5-TRICHLOROPHENOL	
	2,4,6-TRICHLOROPHENOL	72	74	77.00-115.00	-	2,4,6-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	72	73	78.00-117.00	-	2,4-DICHLOROPHENOL	
	2,4-DIMETHYLPHENOL	70	69	78.00-110.00	-	2,4-DIMETHYLPHENOL	
	2,4-DINITROTOLUENE	69	72	73.00-113.00	-	2,4-DINITROTOLUENE	
	2-CHLOROPHENOL	-	71	73.00-121.00	-	2-CHLOROPHENOL	
	2-METHYLNAPHTHALENE	63	63	76.00-114.00	-	2-METHYLNAPHTHALENE	
	2-METHYLPHENOL	70	69	75.00-111.00	-	2-METHYLPHENOL	
	2-NITROPHENOL	53	55	74.00-115.00	-	2-NITROPHENOL	
	4-BROMOPHENYL-PHENYLETH	66	-	67.00-129.00	-	4-BROMOPHENYL-PHENYLET	
	4-CHLORO-3-METHYLPHENOL	73	74	76.00-110.00	-	4-CHLORO-3-METHYLPHENOL	
	4-CHLOROPHENYL-PHENYLET	67	69	80.00-109.00	-	4-CHLOROPHENYL-PHENYLE	
	4-METHYLPHENOL	65	64	71.00-111.00	-	4-METHYLPHENOL	
	ACENAPHTHENE	70	72	75.00-115.00	-	ACENAPHTHENE	
	ACENAPHTHYLENE	72	73	81.00-110.00	-	ACENAPHTHYLENE	
	ANTHRACENE	71	74	75.00-115.00	-	ANTHRACENE	
	BENZIDINE	18	22	35.00-141.00	-	BENZIDINE	
	BIS(2-CHLOROETHOXY)METHA	65	67	75.00-104.00	-	BIS(2-CHLOROETHOXY)METH	
	DIBENZOFURAN	70	-	71.00-112.00	-	DIBENZOFURAN	
	FLUORANTHENE	69	72	73.00-112.00	-	FLUORANTHENE	
	FLUORENE	72	74	77.00-111.00	-	FLUORENE	
	HEXACHLOROBENZENE	70	73	77.00-114.00	-	HEXACHLOROBENZENE	
	HEXACHLOROBUTADIENE	56	55	62.00-120.00	-	HEXACHLOROBUTADIENE	
	HEXACHLOROETHANE	49	46	57.00-109.00	-	HEXACHLOROETHANE	
	ISOPHORONE	68	69	73.00-102.00	-	ISOPHORONE	
	NAPHTHALENE	62	62	72.00-116.00	-	NAPHTHALENE	
	NITROBENZENE	68	67	72.00-106.00	-	NITROBENZENE	
	N-NITROSODIPHENYLAMINE	69	70	86.00-145.00	-	N-NITROSODIPHENYLAMINE	

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MS SL-024-SA5DN-SB-4.0-5.0MSD (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	TITANIUM	173	355	75.00-125.00	-	TITANIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 Laboratory: LL

EDD Filename: DE175_v1 eQAPP Name: CDM_SSFL_110509

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-024-SA5DN-SB-4.0-5.0MSD (SL-024-SA5DN-SB-4.0-5.0)	ACENAPHTHYLENE Dimethylphthalate	- -	63 73	67.00-114.00 74.00-118.00	- -	ACENAPHTHYLENE Dimethylphthalate	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-024-SA5DN-SB-4.0-5.0MS (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-140-SA8N-SB-3.0-4.0)	FLUORIDE	52	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-133-SA8N-SB-7.0-8.0MS (SL-133-SA8N-SB-7.0-8.0)	FLUORIDE	69	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-133-SA8N-SB-7.0-8.0DUP (SL-133-SA8N-SB-7.0-8.0)	FLUORIDE	22	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-024-SA5DN-SB-4.0-5.0DUP (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	CALCIUM	51	20.00	J(all detects) UJ(all non-detects)
	MANGANESE	37	20.00	
	Zirconium	48	20.00	Zr, No Qual, OK by Difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-024-SA5DN-SB-4.0-5.0DUP (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	COBALT	24	20.00	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-024-SA5DN-SB-4.0-5.0DUP (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	MERCURY	73	20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11601AQ321314A (EB15-SA5DN-SB-060711)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	135 130 130	- - -	78.00-126.00 80.00-124.00 80.00-120.00	- - -	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11626AQ240817A P11626AY240758A (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	Aroclor 5442	109	113	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16008CQ221119 (DUP13-SA5DN-QC-060711 SL-024-SA5DN-SB-19.0-20.0 SL-024-SA5DN-SB-4.0-5.0 SL-026-SA5DN-SB-17.0-18.0 SL-026-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-4.0-5.0 SL-036-SA5DN-SB-9.0-10.0 SL-071-SA8N-SB-2.0-3.0 SL-122-SA8N-SB-2.0-3.0 SL-133-SA8N-SB-7.0-8.0 SL-140-SA8N-SB-3.0-4.0)	ALUMINUM	79	-	80.00-120.00	-	ALUMINUM	No Qual, SRM within QC Limits

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: PrepDE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P0LFLCSQ260127 (DUP13 -SA5DN -QC-060711 SL -024-SA5DN -SB-19.0-20.0 SL -024-SA5DN -SB-4.0-5.0 SL -026-SA5DN -SB-17.0-18.0 SL -026-SA5DN -SB-4.0-5.0 SL -036-SA5DN -SB-4.0-5.0 SL -036-SA5DN -SB-9.0-10.0 SL -071-SA8N -SB-2.0-3.0 SL -122-SA8N -SB-2.0-3.0 SL -133-SA8N -SB-7.0-8.0 SL -140-SA8N -SB-3.0-4.0)	1,2-DICHLOROBENZENE	77	-	79.00-102.00	-	1,2-DICHLOROBENZENE	J(all detects) UJ(all non-detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB15-SA5DN-SB-060711	N-Nitrosodimethylamine-d6	162	50.00-150.00	All Target Analytes	J (all detects)

Method: **8315A**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-026-SA5DN-SB-4.0-5.0	Butyraldehyde	149	64.00-126.00	All Target Analytes	J(all detects)
SL-071-SA8N-SB-2.0-3.0	Butyraldehyde	147	64.00-126.00	All Target Analytes	J(all detects)
SL-122-SA8N-SB-2.0-3.0	Butyraldehyde	135	64.00-126.00	All Target Analytes	J(all detects)
SL-140-SA8N-SB-3.0-4.0	Butyraldehyde	131	64.00-126.00	All Target Analytes	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
MOISTURE	12.2	12.6	3		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
N-NITROSODIMETHYLAMINE	37.8 U	65.1	200	50.00	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
FLUORIDE	15.6	17.2	10	50.00	No Qualifiers Applied
Nitrate-NO3	1.5	1.9	24	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
ALUMINUM	25300	27800	9	50.00	No Qualifiers Applied
BORON	12.7	15.1	17	50.00	
CALCIUM	13800	8480	48	50.00	
IRON	34600	36000	4	50.00	
LITHIUM	24.8	26.2	5	50.00	
MAGNESIUM	7490	7090	5	50.00	
MANGANESE	365	567	43	50.00	
PHOSPHORUS	357	413	15	50.00	
POTASSIUM	3130	2930	7	50.00	
SODIUM	438	476	8	50.00	
STRONTIUM	45.3	43.6	4	50.00	
TIN	2.60	2.80	7	50.00	
TITANIUM	1410	1250	12	50.00	
Zirconium	3.58	4.86	30	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
ANTIMONY	0.255	0.271	6	50.00	No Qualifiers Applied
ARSENIC	7.61	7.52	1	50.00	
BARIUM	201	180	11	50.00	
BERYLLIUM	0.987	0.931	6	50.00	
CADMIUM	0.429	0.344	22	50.00	
CHROMIUM	34.4	32.9	4	50.00	
COBALT	16.7	12.6	28	50.00	
COPPER	19.5	17.7	10	50.00	
LEAD	13.5	13.2	2	50.00	
MOLYBDENUM	0.361	0.333	8	50.00	
NICKEL	35.0	28.5	20	50.00	
SELENIUM	0.119	0.0730	48	50.00	
SILVER	0.0547	0.0599	9	50.00	
THALLIUM	0.424	0.386	9	50.00	
VANADIUM	56.6	57.6	2	50.00	
ZINC	86.6	80.0	8	50.00	

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
HEXAVALENT CHROMIUM	0.44	1.1 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
MERCURY	0.0048	0.114 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
EFH (C30-C40)	0.68	1.0	38	50.00	No Qualifiers Applied

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
ACETONE	11	9.0	20	50.00	No Qualifiers Applied
METHYLENE CHLORIDE	1.7	1.4	19	50.00	
TOLUENE	0.20	0.16	22	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-024-SA5DN-SB-4.0-5.0	DUP13-SA5DN-QC-060711			
PH	8.81	8.43	4	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB15-SA5DN-SB-060711	METHANOL	J	230	1000	PQL	ug/L	J (all detects)

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-026-SA5DN-SB-17.0-18.0	N-NITROSODIMETHYLAMINE	J	27.1	36.2	PQL	ng/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	20.4	39.5	PQL	ng/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	29.3	38.9	PQL	ng/Kg	J (all detects)
SL-036-SA5DN-SB-9.0-10.0	N-NITROSODIMETHYLAMINE	J	23.9	38.2	PQL	ng/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	N-NITROSODIMETHYLAMINE	J	33.0	35.5	PQL	ng/Kg	J (all detects)
SL-122-SA8N-SB-2.0-3.0	N-NITROSODIMETHYLAMINE	J	26.6	35.3	PQL	ng/Kg	J (all detects)
SL-140-SA8N-SB-3.0-4.0	N-NITROSODIMETHYLAMINE	J	24.7	37.2	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-024-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)
SL-036-SA5DN-SB-9.0-10.0	Nitrate-NO3	J	1.2	1.7	PQL	mg/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	Nitrate-NO3	J	1.2	1.6	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	Nitrate-NO3	J	1.4	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP13-SA5DN-QC-060711	TIN Zirconium	J J	2.80 4.86	11.2 5.61	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-024-SA5DN-SB-19.0-20.0	TIN Zirconium	J J	2.30 2.69	10.9 5.45	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-024-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.60 3.58	11.2 5.58	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-026-SA5DN-SB-17.0-18.0	TIN Zirconium	J J	2.75 2.26	10.7 5.35	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.75 2.93	11.9 5.93	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.56 3.20	11.4 5.72	PQL PQL	mg/Kg mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA5DN-SB-9.0-10.0	TIN	J	2.70	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.62	5.66	PQL	mg/Kg	
SL-071-SA8N-SB-2.0-3.0	SODIUM	J	69.6	107	PQL	mg/Kg	J (all detects)
	TIN	J	2.53	10.7	PQL	mg/Kg	
SL-122-SA8N-SB-2.0-3.0	SODIUM	J	61.0	104	PQL	mg/Kg	J (all detects)
	TIN	J	2.41	10.4	PQL	mg/Kg	
	Zirconium	J	2.16	5.18	PQL	mg/Kg	
SL-133-SA8N-SB-7.0-8.0	TIN	J	2.87	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.76	5.65	PQL	mg/Kg	
SL-140-SA8N-SB-3.0-4.0	SODIUM	J	75.3	109	PQL	mg/Kg	J (all detects)
	TIN	J	2.42	10.9	PQL	mg/Kg	
	Zirconium	J	2.19	5.46	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP13-SA5DN-QC-060711	SELENIUM	J	0.0730	0.444	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0599	0.111	PQL	mg/Kg	
SL-024-SA5DN-SB-19.0-20.0	SELENIUM	J	0.0758	0.436	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0212	0.109	PQL	mg/Kg	
SL-024-SA5DN-SB-4.0-5.0	SELENIUM	J	0.119	0.451	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0547	0.113	PQL	mg/Kg	
SL-026-SA5DN-SB-17.0-18.0	ANTIMONY	J	0.110	0.210	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0577	0.419	PQL	mg/Kg	
	SILVER	J	0.0167	0.105	PQL	mg/Kg	
SL-026-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.229	0.235	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.199	0.470	PQL	mg/Kg	
	SILVER	J	0.0595	0.117	PQL	mg/Kg	
SL-036-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.185	0.227	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0464	0.453	PQL	mg/Kg	
	SILVER	J	0.0368	0.113	PQL	mg/Kg	
SL-036-SA5DN-SB-9.0-10.0	SILVER	J	0.0712	0.113	PQL	mg/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	ANTIMONY	J	0.135	0.210	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0615	0.105	PQL	mg/Kg	
SL-122-SA8N-SB-2.0-3.0	ANTIMONY	J	0.0967	0.211	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.159	0.422	PQL	mg/Kg	
	SILVER	J	0.0650	0.106	PQL	mg/Kg	
SL-133-SA8N-SB-7.0-8.0	ANTIMONY	J	0.198	0.224	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0793	0.112	PQL	mg/Kg	
	SELENIUM	J	0.0507	0.448	PQL	mg/Kg	
SL-140-SA8N-SB-3.0-4.0	ANTIMONY	J	0.146	0.218	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.295	0.437	PQL	mg/Kg	
	SILVER	J	0.0370	0.109	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-024-SA5DN-SB-19.0-20.0	HEXAVALENT CHROMIUM	J	0.30	1.1	PQL	mg/Kg	J (all detects)
SL-024-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.44	1.1	PQL	mg/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.41	1.2	PQL	mg/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.60	1.2	PQL	mg/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	HEXAVALENT CHROMIUM	J	0.30	1.1	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	HEXAVALENT CHROMIUM	J	0.33	1.2	PQL	mg/Kg	J (all detects)
SL-140-SA8N-SB-3.0-4.0	HEXAVALENT CHROMIUM	J	0.54	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-024-SA5DN-SB-4.0-5.0	MERCURY	J	0.0048	0.108	PQL	mg/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	MERCURY	J	0.0278	0.117	PQL	mg/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	MERCURY	J	0.0044	0.111	PQL	mg/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	MERCURY	J	0.0117	0.106	PQL	mg/Kg	J (all detects)
SL-122-SA8N-SB-2.0-3.0	MERCURY	J	0.0070	0.105	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	MERCURY	J	0.0108	0.107	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP13-SA5DN-QC-060711	EFH (C30-C40)	J	1.0	1.4	PQL	mg/Kg	J (all detects)
SL-024-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.68	1.4	PQL	mg/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	EFH (C15-C20)	J	1.2	2.9	PQL	mg/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.51	1.4	PQL	mg/Kg	J (all detects)
SL-036-SA5DN-SB-9.0-10.0	EFH (C21-C30) EFH (C30-C40)	J J	0.50 0.85	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	EFH (C15-C20)	J	0.51	1.3	PQL	mg/Kg	J (all detects)
SL-122-SA8N-SB-2.0-3.0	EFH (C15-C20)	J	0.54	1.3	PQL	mg/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	EFH (C30-C40)	J	0.87	1.4	PQL	mg/Kg	J (all detects)
SL-140-SA8N-SB-3.0-4.0	EFH (C30-C40)	J	0.73	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE175 **Laboratory: LL**

EDD Filename: DE175_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-026-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.54	2.0	PQL	ug/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	Aroclor 5460	J	1.4	3.8	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP13-SA5DN-QC-060711	METHYLENE CHLORIDE TOLUENE	J J	1.4 0.16	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-024-SA5DN-SB-19.0-20.0	METHYLENE CHLORIDE TOLUENE	J J	1.3 0.14	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-024-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.7 0.20	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-026-SA5DN-SB-17.0-18.0	METHYLENE CHLORIDE TOLUENE	J J	1.3 0.15	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-026-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.17	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-036-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.1 0.11	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-036-SA5DN-SB-9.0-10.0	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.14	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-071-SA8N-SB-2.0-3.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.13	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-122-SA8N-SB-2.0-3.0	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.24	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	METHYLENE CHLORIDE TOLUENE	J J	1.7 0.19	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-140-SA8N-SB-3.0-4.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.22	3.8 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-026-SA5DN-SB-17.0-18.0	CHRYSENE	J	0.74	1.8	PQL	ug/Kg	J (all detects)
SL-122-SA8N-SB-2.0-3.0	NAPHTHALENE	J	0.90	1.8	PQL	ug/Kg	J (all detects)
SL-133-SA8N-SB-7.0-8.0	ANTHRACENE NAPHTHALENE	J J	0.42 0.82	1.9 1.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-140-SA8N-SB-3.0-4.0	BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE FLUORANTHENE NAPHTHALENE PYRENE	J J J J J J	0.76 0.96 0.53 1.0 1.0 0.87	1.9 1.9 1.9 1.9 1.9 1.9	PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)

LDC #: 26277F4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11

SDG #: DE175 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: MY

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	~~A~~ N	
III.	Calibration	N	
IV.	Blanks	A	M fuel
V.	ICP Interference Check Sample (ICS) Analysis	N	RPD out RPD out RPD out.
VI.	Matrix Spike Analysis	N	Al, Ba, Ca, Fe, Mg, Mn, Ti, V, Zn 7Y, Na fuel %R
VII.	Duplicate Sample Analysis	N	Hg, Zn <5X
VIII.	Laboratory Control Samples (LCS)	N A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, V
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-024-SA5DN-SB4.0-5.0	11	SL-133-SA8N-SB-7.0-8.0	21		31	
2	SL-024-SA5DN-SB19.0-20.0	12	SL-024-SA5DN-SB4.0-5.0MS	22		32	
3	SL-026-SA5DN-SB4.0-5.0	13	SL-024-SA5DN-SB4.0-5.0MSD	23		33	
4	SL-026-SA5DN-SB17.0-18.0	14	SL-024-SA5DN-SB4.0-5.0DUP	24		34	
5	SL-036-SA5DN-SB4.0-5.0	15		25		35	
6	SL-036-SA5DN-SB9.0-10.0	16		26		36	
7	DUP13-SA5DN-QC-060711	17		27		37	
8	SL-071-SA8N-SB-2.0-3.0	18		28		38	
9	SL-122-SA8N-SB-2.0-3.0	19		29		39	
10	SL-140-SA8N-SB-3.0-4.0	20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE175
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6309733BKG Matrix Spike Lab Sample ID: 6309734MS Matrix Spike Duplicate Lab Sample ID: 6309735MSD
% Solids for Sample: 87.8
Batch Id(s): P16008C, P16026C, P15911F, P16608A

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		25340.2675		38034.1641		36959.0167		225.5351	223.3240	MG/KG	5628		5203		3			20	P
Antimony	121	0.2549		1.0828		1.3159		1.3532	1.3142	MG/KG	61	N	81		19		75 - 125	20	MS
Arsenic	75	7.6118		9.9596		12.3051		2.2554	2.1903	MG/KG	104		214	N	21	*	75 - 125	20	MS
Barium	137	201.2450		193.9602		173.9640		11.2768	10.9515	MG/KG	-65		-249		11			20	MS
Beryllium	9	0.9872		1.9315		2.1546		0.9021	0.8761	MG/KG	105		133	N	11		75 - 125	20	MS
Boron		12.7183		234.0400		228.4638		225.5351	223.3240	MG/KG	98		97		2		84 - 115	20	P
Cadmium	111	0.4294		1.7368		1.9660		1.1277	1.0951	MG/KG	116		140	N	12		75 - 125	20	MS
Calcium		13806.7254		11165.0714		8775.0190		451.0702	446.6479	MG/KG	-586		-1127		24	*		20	P
Chromium	52	34.3715		43.4381		51.9099		11.2768	10.9515	MG/KG	80		160	N	18		75 - 125	20	MS
Cobalt	59	16.6873		70.8631		86.6261		56.3838	54.7573	MG/KG	96		128	N	20		75 - 125	20	MS
Copper	63	19.5201		28.6430		34.4095		11.2768	10.9515	MG/KG	81		136	N	18		75 - 125	20	MS
Iron		34636.6966		37309.4285		37289.7126		112.7675	111.6620	MG/KG	2370		2376		0			20	P
Lead	208	13.4915		16.8655		20.5559		3.3830	3.2854	MG/KG	100		215		20		75 - 125		MS
Lithium		24.7834		145.0698		142.5030		112.7675	111.6620	MG/KG	107		105		2		82 - 114	20	P
Magnesium		7488.8025		8878.6644		8474.8314		225.5351	223.3240	MG/KG	616		442		5			20	P
Manganese		365.2028		495.4397		666.0536		56.3838	55.8310	MG/KG	231		539		29	*		20	P
Mercury		0.0048	B	0.1720		0.1868		0.1760	0.1850	MG/KG	95		98		8		65 - 135	20	CV
Molybdenum	98	0.3613		13.8050		15.1809		11.2768	10.9515	MG/KG	119		135	N	9		75 - 125	20	MS
Nickel	60	34.9579		41.0248		52.4575		11.2768	10.9515	MG/KG	54	N	160	N	24	*	75 - 125	20	MS
Phosphorus		356.5345		494.7507		493.7335		112.7675	111.6620	MG/KG	123		123		0		75 - 125	20	P
Potassium		3131.8583		5011.7109		4872.8862		1127.6754	1116.6198	MG/KG	167	N	156	N	3		75 - 125	20	P
Selenium	78	0.1193	B	2.5440		2.6393		2.2554	2.1903	MG/KG	108		115		4		75 - 125	20	MS
Silver	107	0.0547	B	14.0734		15.4832		11.2768	10.9515	MG/KG	124		141	N	10		75 - 125	20	MS
Sodium		437.5341		1544.6706		1525.7895		1127.6754	1116.6198	MG/KG	98		97		1		75 - 125	20	P
Strontium		45.3124		155.0757		150.0357		112.7675	111.6620	MG/KG	97		94		3		75 - 115	20	P
Thallium	203	0.4236		0.9400		1.0507		0.4511	0.4381	MG/KG	114		143	N	11		75 - 125	20	MS
Tin		2.6040	B	391.6428		385.7899		451.0702	446.6479	MG/KG	86		86		2		80 - 110	20	P
Titanium		1412.3677		1605.7807		1817.1344		111.6620	113.8952	MG/KG	173		355		12			20	P
Vanadium	51	56.5642		63.3979		80.9970		11.2768	10.9515	MG/KG	61		223		24	*		20	MS
Zinc	66	86.5829		92.3792		107.3681		11.2768	10.9515	MG/KG	51		190		15			20	MS
Zirconium		3.5776	B	117.9797		115.6840		112.7675	111.6620	MG/KG	101		100		2		75 - 125	20	P

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:
N = Matrix Spike OOS, * = Duplicate OOS

SAMPLE DELIVERY GROUP

DE176

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	TB-060811	6310784	TB	5030B	8015M	IV
08-Jun-2011	TB-060811	6310784	TB	5030B	8260B	IV
08-Jun-2011	TB-060811	6310784	TB	5030B	8260B SIM	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3050B	6010B	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3050B	6020	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3060A	7199	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3546	1625C	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3550B	8015B	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3550B	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3550B	8082	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3550B	8270C	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	3550B	8270C SIM	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	5035	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	5035	8260B	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	5035	8260B SIM	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	8330	8330A	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	300.0	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	314.0	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	7471A	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	8015B	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	8315A	IV
08-Jun-2011	SL-025-SA5DN-SB-4.0-5.0	6310769	N	METHOD	9012B	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3050B	6010B	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3050B	6020	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3060A	7199	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
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3546	1625C	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3550B	8015B	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3550B	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3550B	8082	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3550B	8270C	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	3550B	8270C SIM	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	5035	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	5035	8260B	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	5035	8260B SIM	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	8330	8330A	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	300.0	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	314.0	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	7471A	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	8015B	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	8015M	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	8315A	IV
08-Jun-2011	SL-025-SA5DN-SB-23.0-24.0	6310770	N	METHOD	9012B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3050B	6010B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3050B	6020	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3060A	7199	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3546	1625C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3550B	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3550B	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3550B	8082	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3550B	8270C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	3550B	8270C SIM	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	5035	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	5035	8260B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	5035	8260B SIM	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	8330	8330A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	300.0	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	314.0	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	7471A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	8315A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0	6310775	N	METHOD	9012B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3050B	6010B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3050B	6020	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3060A	7199	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3546	1625C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3550B	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3550B	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3550B	8082	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3550B	8270C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	3550B	8270C SIM	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	5035	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	5035	8260B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	5035	8260B SIM	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	8330	8330A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	300.0	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	314.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	7471A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	8315A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MS	6310776	MS	METHOD	9012B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3050B	6010B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3050B	6020	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3546	1625C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3550B	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3550B	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3550B	8082	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3550B	8270C	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	3550B	8270C SIM	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	5035	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	5035	8260B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	5035	8260B SIM	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	8330	8330A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	METHOD	7471A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	METHOD	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	METHOD	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0MSD	6310777	MSD	METHOD	8315A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	3050B	6010B	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	3050B	6020	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	3060A	7199	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	METHOD	300.0	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	METHOD	314.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	METHOD	7471A	IV
08-Jun-2011	SL-076-SA8N-SB-4.0-5.0DUP	6310778	DUP	METHOD	9012B	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3050B	6010B	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3050B	6020	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3060A	7199	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3546	1625C	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3550B	8015B	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3550B	8015M	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3550B	8082	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3550B	8270C	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	3550B	8270C SIM	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	5035	8015M	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	5035	8260B	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	5035	8260B SIM	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	8330	8330A	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	300.0	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	314.0	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	7471A	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	8015B	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	8015M	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	8315A	IV
08-Jun-2011	DUP10-SA8N-QC-060811	6310783	FD	METHOD	9012B	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3050B	6010B	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3050B	6020	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3060A	7199	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3546	1625C	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
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3550B	8015B	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3550B	8015M	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3550B	8082	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3550B	8270C	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	3550B	8270C SIM	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	5035	8015M	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	5035	8260B	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	5035	8260B SIM	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	8330	8330A	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	300.0	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	314.0	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	7471A	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	8015B	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	8015M	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	8315A	IV
08-Jun-2011	SL-023-SA5DN-SB-4.0-5.0	6310767	N	METHOD	9012B	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3050B	6010B	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3050B	6020	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3060A	7199	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3546	1625C	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3550B	8015B	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3550B	8015M	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3550B	8082	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3550B	8270C	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	3550B	8270C SIM	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	5035	8015M	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	5035	8260B	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	5035	8260B SIM	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	8330	8330A	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	300.0	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	314.0	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	6850	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	7471A	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	8015B	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	8015M	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	8315A	IV
08-Jun-2011	SL-023-SA5DN-SB-20.0-21.0	6310768	N	METHOD	9012B	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	3005A	6010B	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	3020A	6020	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	3510C	8082	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	3510C	8270C	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	3510C	8270C SIM	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	5030B	8260B	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	5030B	8260B SIM	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	Gen Prep	300.0	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	Gen Prep	314.0	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	Gen Prep	7199	IV
08-Jun-2011	EB16-SA8N-SB-060811	6310785	EB	METHOD	7470A	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3050B	6010B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3050B	6020	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3060A	7199	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3546	1625C	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
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3550B	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3550B	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3550B	8082	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3550B	8270C	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	3550B	8270C SIM	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	5035	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	5035	8260B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	5035	8260B SIM	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	8330	8330A	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	300.0	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	314.0	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	7471A	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	8015B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	8015M	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	8315A	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5	6310779	N	METHOD	9012B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5DUP	P310779D270824A	DUP	METHOD	9012B	IV
08-Jun-2011	SL-076-SA8N-SB-7.5-8.5MS	P310779R270825A	MS	METHOD	9012B	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3050B	6010B	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3050B	6020	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3060A	7199	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3546	1625C	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3550B	8015B	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3550B	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3550B	8082	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3550B	8270C	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	3550B	8270C SIM	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	5035	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	5035	8260B	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	5035	8260B SIM	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	8330	8330A	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	300.0	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	314.0	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	6850	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	7471A	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	8015B	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	8315A	IV
08-Jun-2011	SL-028-SA5DN-SB-4.0-5.0	6310771	N	METHOD	9012B	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3050B	6010B	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3050B	6020	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3060A	7199	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3546	1625C	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3550B	8015B	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3550B	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3550B	8082	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3550B	8270C	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	3550B	8270C SIM	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	5035	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	5035	8260B	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	5035	8260B SIM	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	8330	8330A	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	300.0	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	314.0	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	7471A	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	8015B	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	8015M	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	8315A	IV
08-Jun-2011	SL-028-SA5DN-SB-11.5-12.5	6310772	N	METHOD	9012B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3050B	6010B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3050B	6020	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3060A	7199	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3546	1625C	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3550B	8015B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3550B	8015M	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3550B	8082	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3550B	8270C	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	3550B	8270C SIM	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	5035	8015M	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	5035	8260B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	5035	8260B SIM	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	8330	8330A	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	300.0	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	314.0	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	7471A	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	8015B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	8015M	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	8315A	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
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5	6310780	N	METHOD	9012B	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3050B	6010B	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3050B	6020	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3060A	7199	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3546	1625C	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3550B	8015B	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3550B	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3550B	8082	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3550B	8270C	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	3550B	8270C SIM	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	5035	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	5035	8260B	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	5035	8260B SIM	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	8330	8330A	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	300.0	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	314.0	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	7471A	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	8015B	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	8315A	IV
08-Jun-2011	SL-109-SA8N-SB-4.0-5.0	6310781	N	METHOD	9012B	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5DUP	P310780D271933B	DUP	METHOD	300.0	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5DUP	P310780D272103B	DUP	METHOD	314.0	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5MS	P310780R271948B	MS	METHOD	300.0	IV
08-Jun-2011	SL-106-SA8N-SB-2.5-3.5MS	P310780R272150B	MS	METHOD	314.0	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3050B	6010B	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3050B	6020	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3060A	7199	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3546	1625C	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3550B	8015B	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3550B	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3550B	8082	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3550B	8270C	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	3550B	8270C SIM	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	5035	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	5035	8260B	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	5035	8260B SIM	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	8330	8330A	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	300.0	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	314.0	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	7471A	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	8015B	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	8315A	IV
08-Jun-2011	SL-051-SA5DN-SB-4.0-5.0	6310773	N	METHOD	9012B	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3050B	6010B	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3050B	6020	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3060A	7199	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3546	1625C	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3550B	8015B	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3550B	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3550B	8082	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3550B	8270C	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	3550B	8270C SIM	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	5035	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	5035	8260B	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	5035	8260B SIM	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	8330	8330A	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	300.0	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	314.0	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	7471A	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	8015B	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	8015M	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	8315A	IV
08-Jun-2011	SL-051-SA5DN-SB-14.0-15.0	6310774	N	METHOD	9012B	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3050B	6010B	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3050B	6020	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3060A	7199	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3546	1625C	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3550B	8015B	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3550B	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3550B	8082	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3550B	8270C	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	3550B	8270C SIM	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	5035	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	5035	8260B	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	5035	8260B SIM	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	8330	8330A	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	300.0	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	314.0	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	7471A	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	8015B	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	8015M	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	8315A	IV
08-Jun-2011	SL-109-SA8N-SB-9.0-10.0	6310782	N	METHOD	9012B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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	2.6		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	2.0		0.90	MDL	1.7	PQL	mg/Kg	J	Q

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.0		0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	7.1		0.91	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.6	J	0.91	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-025-SA5DN-SB-23.0-24.0 *Collected:* 6/8/2011 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	2.6		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-025-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 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	18.9		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-028-SA5DN-SB-11.5-12.5 *Collected:* 6/8/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-028-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.1		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.6		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	18.4		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 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
FLUORIDE	2.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SB-7.5-8.5 ***Collected:*** 6/8/2011 2:00:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.92	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA8N-SB-2.5-3.5 ***Collected:*** 6/8/2011 3:20:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.1		0.92	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	3.9		0.92	MDL	1.7	PQL	mg/Kg	J	Q

Sample ID: SL-109-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:20:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.1		0.92	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z, Q

Sample ID: SL-109-SA8N-SB-9.0-10.0 ***Collected:*** 6/8/2011 3:55:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.0		0.92	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: PrepDE176_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.54	J	0.395	MDL	5.49	PQL	mg/Kg	J	Z
MANGANESE	230		0.0395	MDL	0.549	PQL	mg/Kg	J	E
TIN	2.82	J	0.351	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.14	J	0.505	MDL	5.49	PQL	mg/Kg	J	Z

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	259		0.0384	MDL	0.533	PQL	mg/Kg	J	E
TIN	2.48	J	0.341	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	3.18	J	0.491	MDL	5.33	PQL	mg/Kg	J	Z

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	362		0.0408	MDL	0.567	PQL	mg/Kg	J	E
TIN	2.71	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	4.26	J	0.522	MDL	5.67	PQL	mg/Kg	J	Z

Sample ID: SL-025-SA5DN-SB-23.0-24.0 *Collected:* 6/8/2011 9:40:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.75	J	0.384	MDL	5.34	PQL	mg/Kg	J	Z
MANGANESE	128		0.0384	MDL	0.534	PQL	mg/Kg	J	E
TIN	2.51	J	0.342	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.32	J	0.491	MDL	5.34	PQL	mg/Kg	J	Z

Sample ID: SL-025-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 9:30:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	660		0.0403	MDL	0.559	PQL	mg/Kg	J	E
TIN	2.59	J	0.358	MDL	11.2	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 9:30:00 AM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	3.61	J	0.515	MDL	5.59	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	330		0.0391	MDL	0.544	PQL	mg/Kg	J	E
TIN	2.45	J	0.348	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.69	J	0.500	MDL	5.44	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	434		0.0413	MDL	0.573	PQL	mg/Kg	J	E
TIN	2.84	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	2.07	J	0.527	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	203		0.0399	MDL	0.554	PQL	mg/Kg	J	E
TIN	2.50	J	0.355	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.85	J	0.510	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	592		0.0408	MDL	0.567	PQL	mg/Kg	J	E
TIN	2.66	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	3.18	J	0.522	MDL	5.67	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 10:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.48	J	0.398	MDL	5.53	PQL	mg/Kg	J	Z
MANGANESE	280		0.0398	MDL	0.553	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 10:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.85	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.47	J	0.509	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SB-7.5-8.5 ***Collected:*** 6/8/2011 2:00:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.81	J	0.402	MDL	5.59	PQL	mg/Kg	J	Z
MANGANESE	156		0.0402	MDL	0.559	PQL	mg/Kg	J	E
TIN	3.00	J	0.358	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	3.24	J	0.514	MDL	5.59	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA8N-SB-2.5-3.5 ***Collected:*** 6/8/2011 3:20:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.39	J	0.404	MDL	5.61	PQL	mg/Kg	J	Z
MANGANESE	137		0.0404	MDL	0.561	PQL	mg/Kg	J	E
TIN	3.19	J	0.359	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.94	J	0.516	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: SL-109-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:20:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.38	J	0.413	MDL	5.73	PQL	mg/Kg	J	Z
MANGANESE	276		0.0413	MDL	0.573	PQL	mg/Kg	J	E
SODIUM	85.2	J	6.82	MDL	115	PQL	mg/Kg	J	Z
TIN	3.03	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	3.42	J	0.528	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-109-SA8N-SB-9.0-10.0 ***Collected:*** 6/8/2011 3:55:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.53	J	0.412	MDL	5.72	PQL	mg/Kg	J	Z
MANGANESE	298		0.0412	MDL	0.572	PQL	mg/Kg	J	E
TIN	2.76	J	0.366	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.38	J	0.527	MDL	5.72	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** AQ

Sample ID: EB16-SA8N-SB-060811 *Collected:* 6/8/2011 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
LEAD	0.000066	J	0.000052	MDL	0.0010	PQL	mg/L	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.201	J	0.0821	MDL	0.222	PQL	mg/Kg	J	Z, Q
ARSENIC	11.5		0.0887	MDL	0.444	PQL	mg/Kg	J	E
BERYLLIUM	1.07		0.0177	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.113		0.0488	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	22.3		0.133	MDL	0.444	PQL	mg/Kg	J	Q, A
COBALT	8.70		0.0222	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	12.6		0.0887	MDL	0.444	PQL	mg/Kg	J	Q, A
LEAD	9.71		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, E
NICKEL	20.0		0.111	MDL	0.444	PQL	mg/Kg	J	Q
SILVER	0.0883	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.406		0.0333	MDL	0.111	PQL	mg/Kg	J	Q
VANADIUM	49.0		0.0244	MDL	0.111	PQL	mg/Kg	J	Q, A

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.128	J	0.0643	MDL	0.444	PQL	mg/Kg	J	Z, Q

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.45		0.0555	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.323		0.0790	MDL	0.213	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-023-SA5DN-SB-20.0-21.0 ***Collected:*** 6/8/2011 11:30:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.43		0.0854	MDL	0.427	PQL	mg/Kg	J	E
BERYLLIUM	1.06		0.0171	MDL	0.107	PQL	mg/Kg	J	Q
CHROMIUM	34.5		0.128	MDL	0.427	PQL	mg/Kg	J	Q, A
COBALT	17.3		0.0213	MDL	0.107	PQL	mg/Kg	J	Q
COPPER	21.8		0.0854	MDL	0.427	PQL	mg/Kg	J	Q, A
LEAD	11.1		0.0109	MDL	0.213	PQL	mg/Kg	J	Q, E
NICKEL	31.2		0.107	MDL	0.427	PQL	mg/Kg	J	Q
SILVER	0.104	J	0.0151	MDL	0.107	PQL	mg/Kg	J	Z, Q
THALLIUM	0.480		0.0320	MDL	0.107	PQL	mg/Kg	J	Q
VANADIUM	59.0		0.0235	MDL	0.107	PQL	mg/Kg	J	Q, A

Sample ID: SL-023-SA5DN-SB-20.0-21.0 ***Collected:*** 6/8/2011 11:30:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.135		0.0469	MDL	0.107	PQL	mg/Kg	J	Q

Sample ID: SL-023-SA5DN-SB-20.0-21.0 ***Collected:*** 6/8/2011 11:30:00 ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.763		0.0533	MDL	0.107	PQL	mg/Kg	J	Q

Sample ID: SL-023-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 11:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.361		0.0815	MDL	0.220	PQL	mg/Kg	J	Q
ARSENIC	9.03		0.0881	MDL	0.440	PQL	mg/Kg	J	E
BERYLLIUM	1.06		0.0176	MDL	0.110	PQL	mg/Kg	J	Q
CADMIUM	0.320		0.0484	MDL	0.110	PQL	mg/Kg	J	Q
CHROMIUM	35.4		0.132	MDL	0.440	PQL	mg/Kg	J	Q, A
COBALT	12.6		0.0220	MDL	0.110	PQL	mg/Kg	J	Q
COPPER	20.5		0.0881	MDL	0.440	PQL	mg/Kg	J	Q, A
LEAD	12.6		0.0112	MDL	0.220	PQL	mg/Kg	J	Q, E
NICKEL	26.7		0.110	MDL	0.440	PQL	mg/Kg	J	Q
SILVER	0.0545	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z, Q
THALLIUM	0.400		0.0330	MDL	0.110	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-023-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 11:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	64.2		0.0242	MDL	0.110	PQL	mg/Kg	J	Q, A

Sample ID: SL-023-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 11:15:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.119	J	0.0638	MDL	0.440	PQL	mg/Kg	J	Z, Q

Sample ID: SL-023-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 11:15:00 ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.592		0.0550	MDL	0.110	PQL	mg/Kg	J	Q

Sample ID: SL-025-SA5DN-SB-23.0-24.0 ***Collected:*** 6/8/2011 9:40:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.140	J	0.0805	MDL	0.218	PQL	mg/Kg	J	Z, Q
ARSENIC	5.77		0.0870	MDL	0.435	PQL	mg/Kg	J	E
BERYLLIUM	0.590		0.0174	MDL	0.109	PQL	mg/Kg	J	Q
CADMIUM	0.0864	J	0.0479	MDL	0.109	PQL	mg/Kg	J	Z, Q
CHROMIUM	20.8		0.131	MDL	0.435	PQL	mg/Kg	J	Q, A
COBALT	4.17		0.0218	MDL	0.109	PQL	mg/Kg	J	Q
COPPER	13.3		0.0870	MDL	0.435	PQL	mg/Kg	J	Q, A
LEAD	5.61		0.0111	MDL	0.218	PQL	mg/Kg	J	Q, E
NICKEL	13.6		0.109	MDL	0.435	PQL	mg/Kg	J	Q
SILVER	0.0450	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z, Q
THALLIUM	0.288		0.0326	MDL	0.109	PQL	mg/Kg	J	Q
VANADIUM	38.1		0.0239	MDL	0.109	PQL	mg/Kg	J	Q, A

Sample ID: SL-025-SA5DN-SB-23.0-24.0 ***Collected:*** 6/8/2011 9:40:00 AM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.245		0.0544	MDL	0.109	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 9:30:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.465		0.0828	MDL	0.224	PQL	mg/Kg	J	Q
ARSENIC	10.5		0.0895	MDL	0.448	PQL	mg/Kg	J	E
BERYLLIUM	1.57		0.0179	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.324		0.0492	MDL	0.112	PQL	mg/Kg	J	Q
CHROMIUM	42.5		0.134	MDL	0.448	PQL	mg/Kg	J	Q, A
COBALT	23.6		0.0224	MDL	0.112	PQL	mg/Kg	J	Q
COPPER	24.3		0.0895	MDL	0.448	PQL	mg/Kg	J	Q, A
LEAD	14.8		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, E
NICKEL	45.0		0.112	MDL	0.448	PQL	mg/Kg	J	Q
SILVER	0.0468	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z, Q
THALLIUM	0.468		0.0336	MDL	0.112	PQL	mg/Kg	J	Q
VANADIUM	75.0		0.0246	MDL	0.112	PQL	mg/Kg	J	Q, A

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 9:30:00 AM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0811	J	0.0649	MDL	0.448	PQL	mg/Kg	J	Z, Q

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 9:30:00 AM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.559		0.0559	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.405		0.0797	MDL	0.215	PQL	mg/Kg	J	Q
ARSENIC	7.50		0.0861	MDL	0.431	PQL	mg/Kg	J	E
BERYLLIUM	0.714		0.0172	MDL	0.108	PQL	mg/Kg	J	Q
CADMIUM	0.207		0.0474	MDL	0.108	PQL	mg/Kg	J	Q
CHROMIUM	32.2		0.129	MDL	0.431	PQL	mg/Kg	J	Q, A
COBALT	8.61		0.0215	MDL	0.108	PQL	mg/Kg	J	Q
COPPER	20.7		0.0861	MDL	0.431	PQL	mg/Kg	J	Q, A
LEAD	8.14		0.0110	MDL	0.215	PQL	mg/Kg	J	Q, E
NICKEL	21.6		0.108	MDL	0.431	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0501	J	0.0153	MDL	0.108	PQL	mg/Kg	J	Z, Q
THALLIUM	0.317		0.0323	MDL	0.108	PQL	mg/Kg	J	Q
VANADIUM	79.6		0.0237	MDL	0.108	PQL	mg/Kg	J	Q, A

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.130	J	0.0625	MDL	0.431	PQL	mg/Kg	J	Z, Q

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.11		0.0538	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.731		0.0865	MDL	0.234	PQL	mg/Kg	J	Q
ARSENIC	8.54		0.0936	MDL	0.468	PQL	mg/Kg	J	E
BERYLLIUM	1.06		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CADMIUM	0.414		0.0515	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	48.2		0.140	MDL	0.468	PQL	mg/Kg	J	Q, A
COBALT	14.9		0.0234	MDL	0.117	PQL	mg/Kg	J	Q
COPPER	53.1		0.0936	MDL	0.468	PQL	mg/Kg	J	Q, A
LEAD	13.4		0.0119	MDL	0.234	PQL	mg/Kg	J	Q, E
NICKEL	38.9		0.117	MDL	0.468	PQL	mg/Kg	J	Q
SILVER	0.108	J	0.0166	MDL	0.117	PQL	mg/Kg	J	Z, Q
THALLIUM	0.483		0.0351	MDL	0.117	PQL	mg/Kg	J	Q
VANADIUM	65.6		0.0257	MDL	0.117	PQL	mg/Kg	J	Q, A

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 PM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.247	J	0.0678	MDL	0.468	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 PM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	2.30		0.0585	MDL	0.117	PQL	mg/Kg	J	Q

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.316		0.0828	MDL	0.224	PQL	mg/Kg	J	Q
ARSENIC	7.26		0.0895	MDL	0.448	PQL	mg/Kg	J	E
BERYLLIUM	0.883		0.0179	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.335		0.0492	MDL	0.112	PQL	mg/Kg	J	Q
CHROMIUM	31.9		0.134	MDL	0.448	PQL	mg/Kg	J	Q, A
COBALT	12.5		0.0224	MDL	0.112	PQL	mg/Kg	J	Q
COPPER	17.6		0.0895	MDL	0.448	PQL	mg/Kg	J	Q, A
LEAD	9.94		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, E
NICKEL	28.8		0.112	MDL	0.448	PQL	mg/Kg	J	Q
SILVER	0.0477	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z, Q
THALLIUM	0.425		0.0336	MDL	0.112	PQL	mg/Kg	J	Q
VANADIUM	56.7		0.0246	MDL	0.112	PQL	mg/Kg	J	Q, A

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 PM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.606		0.0560	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.442		0.0839	MDL	0.227	PQL	mg/Kg	J	Q
ARSENIC	10.6		0.0907	MDL	0.454	PQL	mg/Kg	J	E
BERYLLIUM	1.82		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.427		0.0499	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	42.9		0.136	MDL	0.454	PQL	mg/Kg	J	Q, A
COBALT	17.8		0.0227	MDL	0.113	PQL	mg/Kg	J	Q
COPPER	22.4		0.0907	MDL	0.454	PQL	mg/Kg	J	Q, A
LEAD	15.2		0.0116	MDL	0.227	PQL	mg/Kg	J	Q, E
NICKEL	40.2		0.113	MDL	0.454	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0596	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.500		0.0340	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	75.3		0.0249	MDL	0.113	PQL	mg/Kg	J	Q, A

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.119	J	0.0658	MDL	0.454	PQL	mg/Kg	J	Z, Q

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.488		0.0567	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 10:05:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.275		0.0835	MDL	0.226	PQL	mg/Kg	J	Q
ARSENIC	9.52		0.0903	MDL	0.451	PQL	mg/Kg	J	E
BERYLLIUM	0.872		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.0781	J	0.0497	MDL	0.113	PQL	mg/Kg	J	Z, Q
CHROMIUM	18.8		0.135	MDL	0.451	PQL	mg/Kg	J	Q, A
COBALT	6.63		0.0226	MDL	0.113	PQL	mg/Kg	J	Q
COPPER	10.2		0.0903	MDL	0.451	PQL	mg/Kg	J	Q, A
LEAD	7.66		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, E
NICKEL	16.0		0.113	MDL	0.451	PQL	mg/Kg	J	Q
SILVER	0.0697	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.333		0.0339	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	40.1		0.0248	MDL	0.113	PQL	mg/Kg	J	Q, A

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 10:05:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.127	J	0.0655	MDL	0.451	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 10:05:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.18		0.0564	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.169	J	0.0843	MDL	0.228	PQL	mg/Kg	J	Z, Q
ARSENIC	11.6		0.0911	MDL	0.456	PQL	mg/Kg	J	E
BERYLLIUM	0.791		0.0182	MDL	0.114	PQL	mg/Kg	J	Q
CADMIUM	0.0512	J	0.0501	MDL	0.114	PQL	mg/Kg	J	Z, Q
CHROMIUM	20.0		0.137	MDL	0.456	PQL	mg/Kg	J	Q, A
COBALT	7.48		0.0228	MDL	0.114	PQL	mg/Kg	J	Q
COPPER	8.54		0.0911	MDL	0.456	PQL	mg/Kg	J	Q, A
LEAD	8.54		0.0116	MDL	0.228	PQL	mg/Kg	J	Q, E
NICKEL	15.0		0.114	MDL	0.456	PQL	mg/Kg	J	Q
SILVER	0.130		0.0162	MDL	0.114	PQL	mg/Kg	J	Q
THALLIUM	0.295		0.0342	MDL	0.114	PQL	mg/Kg	J	Q
VANADIUM	42.8		0.0251	MDL	0.114	PQL	mg/Kg	J	Q, A

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.273	J	0.0661	MDL	0.456	PQL	mg/Kg	J	Z, Q

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.18		0.0570	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.177	J	0.0855	MDL	0.231	PQL	mg/Kg	J	Z, Q
ARSENIC	5.72		0.0924	MDL	0.462	PQL	mg/Kg	J	E
BERYLLIUM	0.690		0.0185	MDL	0.115	PQL	mg/Kg	J	Q
CADMIUM	0.0653	J	0.0508	MDL	0.115	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	21.6		0.139	MDL	0.462	PQL	mg/Kg	J	Q, A
COBALT	5.25		0.0231	MDL	0.115	PQL	mg/Kg	J	Q
COPPER	10.5		0.0924	MDL	0.462	PQL	mg/Kg	J	Q, A
LEAD	7.72		0.0118	MDL	0.231	PQL	mg/Kg	J	Q, E
NICKEL	12.0		0.115	MDL	0.462	PQL	mg/Kg	J	Q
SILVER	0.0210	J	0.0164	MDL	0.115	PQL	mg/Kg	J	Z, Q
THALLIUM	0.288		0.0346	MDL	0.115	PQL	mg/Kg	J	Q
VANADIUM	36.0		0.0254	MDL	0.115	PQL	mg/Kg	J	Q, A

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.436		0.0577	MDL	0.115	PQL	mg/Kg	J	Q

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.214	J	0.0849	MDL	0.229	PQL	mg/Kg	J	Z, Q
ARSENIC	7.38		0.0917	MDL	0.459	PQL	mg/Kg	J	E
BERYLLIUM	0.765		0.0183	MDL	0.115	PQL	mg/Kg	J	Q
CADMIUM	0.161		0.0505	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	23.3		0.138	MDL	0.459	PQL	mg/Kg	J	Q, A
COBALT	8.83		0.0229	MDL	0.115	PQL	mg/Kg	J	Q
COPPER	14.5		0.0917	MDL	0.459	PQL	mg/Kg	J	Q, A
LEAD	7.63		0.0117	MDL	0.229	PQL	mg/Kg	J	Q, E
NICKEL	19.3		0.115	MDL	0.459	PQL	mg/Kg	J	Q
SILVER	0.0258	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z, Q
THALLIUM	0.336		0.0344	MDL	0.115	PQL	mg/Kg	J	Q
VANADIUM	45.3		0.0252	MDL	0.115	PQL	mg/Kg	J	Q, A

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.409		0.0573	MDL	0.115	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.216	J	0.0823	MDL	0.222	PQL	mg/Kg	J	Z, Q
ARSENIC	9.47		0.0889	MDL	0.445	PQL	mg/Kg	J	E
BERYLLIUM	0.870		0.0178	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.175		0.0489	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	26.1		0.133	MDL	0.445	PQL	mg/Kg	J	Q, A
COBALT	10.7		0.0222	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	16.3		0.0889	MDL	0.445	PQL	mg/Kg	J	Q, A
LEAD	11.2		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, E
NICKEL	21.8		0.111	MDL	0.445	PQL	mg/Kg	J	Q
SILVER	0.0633	J	0.0158	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.386		0.0333	MDL	0.111	PQL	mg/Kg	J	Q
VANADIUM	50.8		0.0245	MDL	0.111	PQL	mg/Kg	J	Q, A

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.476		0.0556	MDL	0.111	PQL	mg/Kg	J	Q

Method Category: METALS **Method:** 7199 **Matrix:** AQ

Sample ID: EB16-SA8N-SB-060811 *Collected:* 6/8/2011 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
HEXAVALENT CHROMIUM	5.0	U	5.0	MDL	10.0	PQL	ug/L	UJ	H

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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
HEXAVALENT CHROMIUM	0.48	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.48	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-025-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 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
HEXAVALENT CHROMIUM	0.48	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.62	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-14.0-15.0 *Collected:* 6/8/2011 3:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.63	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 3:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.35	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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
HEXAVALENT CHROMIUM	0.51	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.73	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.77	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7470A **Matrix:** AQ

Sample ID: EB16-SA8N-SB-060811 *Collected:* 6/8/2011 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
MERCURY	0.000060	J	0.000046	MDL	0.00020	PQL	mg/L	U	B

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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	0.0320	J	0.0077	MDL	0.110	PQL	mg/Kg	U	F

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0194	J	0.0077	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0085	J	0.0080	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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	0.0242	J	0.0075	MDL	0.107	PQL	mg/Kg	U	F

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: PrepDE176_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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
N-NITROSODIMETHYLAMINE	19.3	J	18.7	MDL	37.5	PQL	ng/Kg	J	Z, FD

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	34.3	J	18.7	MDL	37.4	PQL	ng/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-14.0-15.0 *Collected:* 6/8/2011 3:35:00 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
N-NITROSODIMETHYLAMINE	30.4	J	18.8	MDL	37.6	PQL	ng/Kg	J	Z

Sample ID: SL-051-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 3:25:00 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
N-NITROSODIMETHYLAMINE	29.0	J	18.8	MDL	37.5	PQL	ng/Kg	J	Z

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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
N-NITROSODIMETHYLAMINE	18.7	U	18.7	MDL	37.4	PQL	ng/Kg	UJ	Q, FD

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 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
N-NITROSODIMETHYLAMINE	22.5	J	19.1	MDL	38.2	PQL	ng/Kg	J	Z, S

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 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
N-NITROSODIMETHYLAMINE	31.0	J	19.1	MDL	38.1	PQL	ng/Kg	J	Z

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	190	U	190	MDL	380	PQL	ng/Kg	UJ	H

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: PrepDE176_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.54	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z, FD
EFH (C8-C11)	0.99	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.70	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.2	J	0.44	MDL	1.3	PQL	mg/Kg	U	B

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.47	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.3	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-025-SA5DN-SB-23.0-24.0 *Collected:* 6/8/2011 9:40:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.49	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.4		0.44	MDL	1.3	PQL	mg/Kg	U	B

Sample ID: SL-025-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 9:30:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.2	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.1	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-028-SA5DN-SB-11.5-12.5 *Collected:* 6/8/2011 2:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	1.1	J	0.45	MDL	1.3	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-028-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 2:10:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.57	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	0.99	J	0.47	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-051-SA5DN-SB-14.0-15.0 *Collected:* 6/8/2011 3:35:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.50	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.1	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-051-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 3:25:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.55	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.1	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 10:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.6	U	5.6	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.6	U	5.6	MDL	11	PQL	mg/Kg	UJ	Q
Propylene glycol	5.6	U	5.6	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 10:05:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.45	U	0.45	MDL	1.4	PQL	mg/Kg	UJ	FD
EFH (C21-C30)	2.1		0.45	MDL	1.4	PQL	mg/Kg	J	Q
EFH (C30-C40)	4.8		0.45	MDL	1.4	PQL	mg/Kg	J	Q, Q
EFH (C8-C11)	1.2	J	0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.49	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.1	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	1.2	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	1.2	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.95	J	0.46	MDL	1.4	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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
AROCLOR 1016	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1232	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
Aroclor 5460	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.6	PQL	ug/Kg	UJ	C

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-025-SA5DN-SB-23.0-24.0 ***Collected:*** 6/8/2011 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
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 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
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 PM ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1248	120		1.8	MDL	9.4	PQL	ug/Kg	J	*#
AROCLOR 1254	77		1.8	MDL	9.4	PQL	ug/Kg	J	*#
Aroclor 5432	5.6	U	5.6	MDL	18	PQL	ug/Kg	UJ	C

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 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
AROCLOR 1254	0.58	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z, *XIII
AROCLOR 1260	0.54	J	0.45	MDL	2.0	PQL	ug/Kg	J	Z
Aroclor 5432	1.2	U	1.2	MDL	3.8	PQL	ug/Kg	UJ	C

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 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
AROCLOR 1016	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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
AROCLOR 1232	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1260	3.4		0.44	MDL	1.9	PQL	ug/Kg	J	* XIII
Aroclor 5460	1.1	U	1.1	MDL	3.7	PQL	ug/Kg	UJ	C

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 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
AROCLOR 1016	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1232	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
Aroclor 5460	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	C

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 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
AROCLOR 1016	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1232	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
Aroclor 5460	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	C

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 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
AROCLOR 1016	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
AROCLOR 1232	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	C
Aroclor 5460	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	C

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 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
AROCLOR 1016	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1221	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
AROCLOR 1232	0.38	U	0.38	MDL	2.0	PQL	ug/Kg	UJ	C
Aroclor 5460	1.1	U	1.1	MDL	3.8	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: EB16-SA8N-SB-060811 *Collected:* 6/8/2011 1:45:00 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
2,6-DINITROTOLUENE	1	U	1	MDL	5	PQL	ug/L	UJ	L
2-NITROANILINE	1	U	1	MDL	5	PQL	ug/L	UJ	L

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	49	J	19	MDL	380	PQL	ug/Kg	UJ	B, FD

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
2-NITROPHENOL	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	370	PQL	ug/Kg	U	B

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	19	MDL	380	PQL	ug/Kg	U	B

Sample ID: SL-025-SA5DN-SB-23.0-24.0 *Collected:* 6/8/2011 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
2-NITROPHENOL	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-025-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-028-SA5DN-SB-11.5-12.5 ***Collected:*** 6/8/2011 2:20:00 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
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
2-NITROPHENOL	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	18	MDL	370	PQL	ug/Kg	U	B

Sample ID: SL-028-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 2:10:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-051-SA5DN-SB-14.0-15.0 ***Collected:*** 6/8/2011 3:35:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-051-SA5DN-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:25:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	19	MDL	370	PQL	ug/Kg	U	B

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
1,4-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2,4,5-TRICHLOROPHENOL	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-076-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 10:05:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DICHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2,4-DIMETHYLPHENOL	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
2,4-DINITROTOLUENE	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
2-CHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
2-METHYLPHENOL	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-CHLORO-3-METHYLPHENOL	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
4-CHLOROPHENYL-PHENYLETHER	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
4-METHYLPHENOL	37	U	37	MDL	190	PQL	ug/Kg	UJ	Q
BENZIDINE	1300	U	1300	MDL	3700	PQL	ug/Kg	R	Q
BENZYL ALCOHOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	Q
BIS(2-CHLOROETHOXY)METHANE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	19	MDL	370	PQL	ug/Kg	UJ	B, FD
HEXACHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q
N-NITROSODIPHENYLAMINE	19	U	19	MDL	190	PQL	ug/Kg	UJ	Q

Sample ID: SL-076-SA8N-SB-7.5-8.5 ***Collected:*** 6/8/2011 2:00:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	19	MDL	380	PQL	ug/Kg	U	B

Sample ID: SL-106-SA8N-SB-2.5-3.5 ***Collected:*** 6/8/2011 3:20:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-109-SA8N-SB-4.0-5.0 ***Collected:*** 6/8/2011 3:20:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	19	MDL	380	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 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
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	19	MDL	380	PQL	ug/Kg	U	B

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB16-SA8N-SB-060811 *Collected:* 6/8/2011 1:45:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	0.069	J	0.052	MDL	1.0	PQL	ug/L	U	B
Diethylphthalate	0.30	J	0.052	MDL	1.0	PQL	ug/L	J	Z, L
Di-n-butylphthalate	0.71	J	0.052	MDL	1.0	PQL	ug/L	J	Z, L
NAPHTHALENE	0.060		0.031	MDL	0.052	PQL	ug/L	J	L

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 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
NAPHTHALENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Butylbenzylphthalate	10	J	6.8	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-028-SA5DN-SB-11.5-12.5 *Collected:* 6/8/2011 2:20:00 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(A)ANTHRACENE	0.79	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.79	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.80	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
Butylbenzylphthalate	12	J	6.6	MDL	20	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-028-SA5DN-SB-11.5-12.5 *Collected:* 6/8/2011 2:20:00 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
PYRENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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
NAPHTHALENE	0.94	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 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
NAPHTHALENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	10	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8330A **Matrix:** SO

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 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
1,3,5-TRINITROBENZENE	44	U	44	MDL	130	PQL	ug/Kg	UJ	Q

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 10:05:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.7	U	1.7	MDL	4.0	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP10-SA8N-QC-060811 *Collected:* 6/8/2011 10:10:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.0		6.5	MDL	7.8	PQL	ug/Kg	UJ	B, FD
METHYLENE CHLORIDE	1.6	J	0.23	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.30	J	0.08	MDL	3.9	PQL	ug/Kg	U	B

Sample ID: SL-023-SA5DN-SB-20.0-21.0 *Collected:* 6/8/2011 11:30:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.3		6.5	MDL	7.8	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.5	J	0.24	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	3.9	PQL	ug/Kg	U	B

Sample ID: SL-023-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 11:15:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.3		6.6	MDL	7.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.3	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	L, B
TOLUENE	0.12	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-025-SA5DN-SB-23.0-24.0 *Collected:* 6/8/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 0.97

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.5		7.2	MDL	8.6	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.8	J	0.26	MDL	4.3	PQL	ug/Kg	UJ	L, B
TOLUENE	0.19	J	0.09	MDL	4.3	PQL	ug/Kg	U	B

Sample ID: SL-025-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 9:30:00 AM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.6	MDL	7.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.5	J	0.24	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.16	J	0.08	MDL	3.9	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-028-SA5DN-SB-11.5-12.5 *Collected:* 6/8/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1.01

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.5		7.6	MDL	9.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.7	J	0.27	MDL	4.5	PQL	ug/Kg	UJ	L, B
TOLUENE	0.14	J	0.09	MDL	4.5	PQL	ug/Kg	U	B

Sample ID: SL-028-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.5	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	L, B
TOLUENE	0.14	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-051-SA5DN-SB-14.0-15.0 *Collected:* 6/8/2011 3:35:00 PM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.8		6.6	MDL	7.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	L, B
TOLUENE	0.14	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-051-SA5DN-SB-4.0-5.0 *Collected:* 6/8/2011 3:25:00 PM *Analysis Type:* RES *Dilution:* 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.1		7.3	MDL	8.7	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.4	J	0.26	MDL	4.4	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.09	MDL	4.4	PQL	ug/Kg	U	B

Sample ID: SL-076-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 10:05:00 *Analysis Type:* RES *Dilution:* 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.3	U	6.3	MDL	7.5	PQL	ug/Kg	UJ	FD
METHYLENE CHLORIDE	1.3	J	0.22	MDL	3.7	PQL	ug/Kg	UJ	L, B
TOLUENE	0.28	J	0.07	MDL	3.7	PQL	ug/Kg	U	B

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	11		6.8	MDL	8.2	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory:** LL

EDD Filename: PrepDE176_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-076-SA8N-SB-7.5-8.5 *Collected:* 6/8/2011 2:00:00 PM *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.4	J	0.25	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.20	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-106-SA8N-SB-2.5-3.5 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 0.82

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.2		6.4	MDL	7.6	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.23	MDL	3.8	PQL	ug/Kg	UJ	L, B
TOLUENE	0.19	J	0.08	MDL	3.8	PQL	ug/Kg	U	B

Sample ID: SL-109-SA8N-SB-4.0-5.0 *Collected:* 6/8/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE (MEK)	2.5	J	1.2	MDL	8.1	PQL	ug/Kg	J	Z
ACETONE	27		6.8	MDL	8.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.0	J	0.24	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.12	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-109-SA8N-SB-9.0-10.0 *Collected:* 6/8/2011 3:55:00 PM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE (MEK)	2.5	J	1.2	MDL	8.1	PQL	ug/Kg	J	Z
ACETONE	32		6.8	MDL	8.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.7	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	L, B
TOLUENE	0.16	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*XIII	Compound Quantitation and CRQL
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE176

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE176 **Laboratory: LL**
EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199 **Preparation Method: 3546**
Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
EB16-SA8N-SB-060811 (RES)	Sampling To Analysis	24.50	24.00	HOURS	J(all detects) UJ(all non-detects)

Method: 1625C **Preparation Method: 3546**
Matrix: SO

Sample ID	Type	Actual	Criteria	Units	Flag
SL-109-SA8N-SB-9.0-10.0 (RES)	Sampling To Extraction	21.00	14.00	DAYS	J (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: DE176_v1 eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16048CB221243	6/10/2011 12:43:00 PM	MAGNESIUM	0.0195 mg/L	EB16-SA8N-SB-060811

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16708BB220702	6/18/2011 7:02:00 AM	CALCIUM	4.40 mg/Kg	DUP10-SA8N-QC-060811
		IRON	4.74 mg/Kg	SL-023-SA5DN-SB-20.0-21.0
		MAGNESIUM	1.04 mg/Kg	SL-023-SA5DN-SB-4.0-5.0
		PHOSPHORUS	1.62 mg/Kg	SL-025-SA5DN-SB-23.0-24.0
		TIN	1.79 mg/Kg	SL-025-SA5DN-SB-4.0-5.0
				SL-028-SA5DN-SB-11.5-12.5
				SL-028-SA5DN-SB-4.0-5.0
				SL-051-SA5DN-SB-14.0-15.0
				SL-051-SA5DN-SB-4.0-5.0
				SL-076-SA8N-SB-4.0-5.0
				SL-076-SA8N-SB-7.5-8.5
				SL-106-SA8N-SB-2.5-3.5
				SL-109-SA8N-SB-4.0-5.0
				SL-109-SA8N-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
DUP10-SA8N-QC-060811(REA2)	TIN	2.82 mg/Kg	2.82U mg/Kg
SL-023-SA5DN-SB-20.0-21.0(REA2)	TIN	2.48 mg/Kg	2.48U mg/Kg
SL-023-SA5DN-SB-4.0-5.0(REA2)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-025-SA5DN-SB-23.0-24.0(REA2)	TIN	2.51 mg/Kg	2.51U mg/Kg
SL-025-SA5DN-SB-4.0-5.0(REA2)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-028-SA5DN-SB-11.5-12.5(REA2)	TIN	2.45 mg/Kg	2.45U mg/Kg
SL-028-SA5DN-SB-4.0-5.0(REA2)	TIN	2.84 mg/Kg	2.84U mg/Kg
SL-051-SA5DN-SB-14.0-15.0(REA2)	TIN	2.50 mg/Kg	2.50U mg/Kg
SL-051-SA5DN-SB-4.0-5.0(REA2)	TIN	2.66 mg/Kg	2.66U mg/Kg
SL-076-SA8N-SB-4.0-5.0(REA2)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-076-SA8N-SB-7.5-8.5(REA2)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-106-SA8N-SB-2.5-3.5(REA2)	TIN	3.19 mg/Kg	3.19U mg/Kg
SL-109-SA8N-SB-4.0-5.0(REA2)	TIN	3.03 mg/Kg	3.03U mg/Kg
SL-109-SA8N-SB-9.0-10.0(REA2)	TIN	2.76 mg/Kg	2.76U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16726AB220905A	6/17/2011 9:05:00 AM	LEAD	0.0152 mg/Kg	DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0

Method: **7470A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16013BB221002	6/11/2011 10:02:00 AM	MERCURY	0.00012 mg/L	EB16-SA8N-SB-060811

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
EB16-SA8N-SB-060811(RES)	MERCURY	0.000060 mg/L	0.000060U mg/L

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P67671AB320809A	6/18/2011 8:09:00 AM	EFH (C8-C11)	1.1 mg/Kg	DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-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
DUP10-SA8N-QC-060811(REA2)	EFH (C8-C11)	0.99 mg/Kg	1.4U mg/Kg
SL-023-SA5DN-SB-20.0-21.0(REA2)	EFH (C8-C11)	1.2 mg/Kg	1.3U mg/Kg
SL-023-SA5DN-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.3 mg/Kg	1.4U mg/Kg
SL-025-SA5DN-SB-23.0-24.0(REA2)	EFH (C8-C11)	1.4 mg/Kg	1.4U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8015M**
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-025-SA5DN-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-028-SA5DN-SB-11.5-12.5(REA2)	EFH (C8-C11)	1.1 mg/Kg	1.3U mg/Kg
SL-028-SA5DN-SB-4.0-5.0(REA2)	EFH (C8-C11)	0.99 mg/Kg	1.4U mg/Kg
SL-051-SA5DN-SB-14.0-15.0(REA2)	EFH (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-051-SA5DN-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-076-SA8N-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-076-SA8N-SB-7.5-8.5(REA2)	EFH (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-106-SA8N-SB-2.5-3.5(REA2)	EFH (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-109-SA8N-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-109-SA8N-SB-9.0-10.0(REA2)	EFH (C8-C11)	0.95 mg/Kg	1.4U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB83B211315A	6/14/2011 1:15:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	8.3 ug/Kg 1.7 ug/Kg 0.14 ug/Kg	DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-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
DUP10-SA8N-QC-060811(RES)	ACETONE	8.0 ug/Kg	8.0U ug/Kg
DUP10-SA8N-QC-060811(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.9U ug/Kg
DUP10-SA8N-QC-060811(RES)	TOLUENE	0.30 ug/Kg	3.9U ug/Kg
SL-023-SA5DN-SB-20.0-21.0(RES)	ACETONE	8.3 ug/Kg	8.3U ug/Kg
SL-023-SA5DN-SB-20.0-21.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	3.9U ug/Kg
SL-023-SA5DN-SB-20.0-21.0(RES)	TOLUENE	0.15 ug/Kg	3.9U ug/Kg
SL-023-SA5DN-SB-4.0-5.0(RES)	ACETONE	9.3 ug/Kg	9.3U ug/Kg
SL-023-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.0U ug/Kg
SL-023-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.12 ug/Kg	4.0U ug/Kg
SL-025-SA5DN-SB-23.0-24.0(RES)	ACETONE	9.5 ug/Kg	9.5U ug/Kg
SL-025-SA5DN-SB-23.0-24.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.3U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE176 | Laboratory: LL

EDD Filename: DE176_v1 | eQAPP Name: CDM_SSFL_110509

Method: 8260B
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-025-SA5DN-SB-23.0-24.0(RES)	TOLUENE	0.19 ug/Kg	4.3U ug/Kg
SL-025-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-025-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	3.9U ug/Kg
SL-025-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.16 ug/Kg	3.9U ug/Kg
SL-028-SA5DN-SB-11.5-12.5(RES)	ACETONE	9.5 ug/Kg	9.5U ug/Kg
SL-028-SA5DN-SB-11.5-12.5(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.5U ug/Kg
SL-028-SA5DN-SB-11.5-12.5(RES)	TOLUENE	0.14 ug/Kg	4.5U ug/Kg
SL-028-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.0U ug/Kg
SL-028-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.14 ug/Kg	4.0U ug/Kg
SL-051-SA5DN-SB-14.0-15.0(RES)	ACETONE	8.8 ug/Kg	8.8U ug/Kg
SL-051-SA5DN-SB-14.0-15.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.0U ug/Kg
SL-051-SA5DN-SB-14.0-15.0(RES)	TOLUENE	0.14 ug/Kg	4.0U ug/Kg
SL-051-SA5DN-SB-4.0-5.0(RES)	ACETONE	9.1 ug/Kg	9.1U ug/Kg
SL-051-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.4 ug/Kg	4.4U ug/Kg
SL-051-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.15 ug/Kg	4.4U ug/Kg
SL-076-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	3.7U ug/Kg
SL-076-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.28 ug/Kg	3.7U ug/Kg
SL-076-SA8N-SB-7.5-8.5(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-076-SA8N-SB-7.5-8.5(RES)	METHYLENE CHLORIDE	1.4 ug/Kg	4.1U ug/Kg
SL-076-SA8N-SB-7.5-8.5(RES)	TOLUENE	0.20 ug/Kg	4.1U ug/Kg
SL-106-SA8N-SB-2.5-3.5(RES)	ACETONE	8.2 ug/Kg	8.2U ug/Kg
SL-106-SA8N-SB-2.5-3.5(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.8U ug/Kg
SL-106-SA8N-SB-2.5-3.5(RES)	TOLUENE	0.19 ug/Kg	3.8U ug/Kg
SL-109-SA8N-SB-4.0-5.0(RES)	ACETONE	27 ug/Kg	27U ug/Kg
SL-109-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.0 ug/Kg	4.1U ug/Kg
SL-109-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.12 ug/Kg	4.1U ug/Kg
SL-109-SA8N-SB-9.0-10.0(RES)	ACETONE	32 ug/Kg	32U ug/Kg
SL-109-SA8N-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.0U ug/Kg
SL-109-SA8N-SB-9.0-10.0(RES)	TOLUENE	0.16 ug/Kg	4.0U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB16B261536	6/23/2011 3:36:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	19 ug/Kg	DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-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
DUP10-SA8N-QC-060811(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	49 ug/Kg	380U ug/Kg
SL-023-SA5DN-SB-20.0-21.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	24 ug/Kg	370U ug/Kg
SL-023-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	25 ug/Kg	380U ug/Kg
SL-028-SA5DN-SB-11.5-12.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	25 ug/Kg	370U ug/Kg
SL-051-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	24 ug/Kg	370U ug/Kg
SL-076-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	22 ug/Kg	370U ug/Kg
SL-076-SA8N-SB-7.5-8.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	21 ug/Kg	380U ug/Kg
SL-109-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	19 ug/Kg	380U ug/Kg
SL-109-SA8N-SB-9.0-10.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	25 ug/Kg	380U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWK16B262329	6/16/2011 11:29:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	0.061 ug/L 0.065 ug/L	EB16-SA8N-SB-060811

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
EB16-SA8N-SB-060811(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.069 ug/L	1.0U ug/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: DE176_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS	DIETHYLENE GLYCOL	54	44	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-076-SA8N-SB-4.0-5.0MSD	ETHYLENE GLYCOL	-	56	63.00-107.00	22 (20.00)	ETHYLENE GLYCOL	
(SL-076-SA8N-SB-4.0-5.0)	Propylene glycol	-	59	63.00-107.00	23 (20.00)	Propylene glycol	

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MSD	1,3,5-TRINITROBENZENE	-	76	82.00-126.00	-	1,3,5-TRINITROBENZENE	J(all detects) UJ(all non-detects)
(SL-076-SA8N-SB-4.0-5.0)							

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS	m-Terphenyl	74	-	75.00-125.00	-	m-Terphenyl	J(all detects) UJ(all non-detects)
(SL-076-SA8N-SB-4.0-5.0)							

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS	EFH (C15-C20)	125	150	49.00-123.00	-	EFH (C15-C20)	J(all detects)
SL-076-SA8N-SB-4.0-5.0MSD	EFH (C21-C30)	-	158	49.00-123.00	-	EFH (C21-C30)	
(SL-076-SA8N-SB-4.0-5.0)	EFH (C30-C40)	-	240	49.00-123.00	51 (20.00)	EFH (C30-C40)	

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS	N-NITROSODIMETHYLAMINE	69	-	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)
(SL-076-SA8N-SB-4.0-5.0)							

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MSD (SL-076-SA8N-SB-4.0-5.0)	2,4-DINITROPHENOL	-	-	20.00-143.00	31 (30.00)	2,4-DINITROPHENOL	J(all detects)
SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD (SL-076-SA8N-SB-4.0-5.0)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)
SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD (SL-076-SA8N-SB-4.0-5.0)	1,4-DICHLOROBENZENE	68	68	70.00-100.00	-	1,4-DICHLOROBENZENE	J(all detects) UJ(all non-detects)
	2,4,5-TRICHLOROPHENOL	76	76	78.00-109.00	-	2,4,5-TRICHLOROPHENOL	
	2,4-DICHLOROPHENOL	74	72	78.00-117.00	-	2,4-DICHLOROPHENOL	
	2,4-DIMETHYLPHENOL	77	77	78.00-110.00	-	2,4-DIMETHYLPHENOL	
	2,4-DINITROTOLUENE	71	-	73.00-113.00	-	2,4-DINITROTOLUENE	
	2-CHLOROPHENOL	71	71	73.00-121.00	-	2-CHLOROPHENOL	
	2-METHYLNAPHTHALENE	68	68	76.00-114.00	-	2-METHYLNAPHTHALENE	
	2-METHYLPHENOL	68	68	75.00-111.00	-	2-METHYLPHENOL	
	4-CHLORO-3-METHYLPHENOL	72	71	76.00-110.00	-	4-CHLORO-3-METHYLPHENOL	
	4-CHLOROPHENYL-PHENYLET	75	76	80.00-109.00	-	4-CHLOROPHENYL-PHENYLE	
	4-METHYLPHENOL	65	63	71.00-111.00	-	4-METHYLPHENOL	
	ACENAPHTHYLENE	79	80	81.00-110.00	-	ACENAPHTHYLENE	
	BENZYL ALCOHOL	-	66	67.00-115.00	-	BENZYL ALCOHOL	
	BIS(2-CHLOROETHOXY)METHA	-	74	75.00-104.00	-	BIS(2-CHLOROETHOXY)METH	
	FLUORENE	76	-	77.00-111.00	-	FLUORENE	
	HEXACHLOROBENZENE	-	76	77.00-114.00	-	HEXACHLOROBENZENE	
	N-NITROSODIPHENYLAMINE	80	79	86.00-145.00	-	N-NITROSODIPHENYLAMINE	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	ARSENIC	243	198	75.00-125.00	-	ARSENIC	J(all detects)
	BERYLLIUM	126	144	75.00-125.00	-	BERYLLIUM	
	CADMIUM	151	141	75.00-125.00	-	CADMIUM	
	CHROMIUM	160	145	75.00-125.00	-	CHROMIUM	
	COBALT	147	138	75.00-125.00	-	COBALT	
	COPPER	160	153	75.00-125.00	-	COPPER	
	LEAD	205	179	75.00-125.00	-	LEAD	
	NICKEL	183	173	75.00-125.00	-	NICKEL	
	SILVER	150	137	75.00-125.00	-	SILVER	As, Zn, No Qual, >4x
	THALLIUM	162	155	75.00-125.00	-	THALLIUM	
	VANADIUM	204	189	75.00-125.00	-	VANADIUM	
	ZINC	260	240	75.00-125.00	-	ZINC	
SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	ANTIMONY	64	62	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-076-SA8N-SB-4.0-5.0MS (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	SELENIUM	136	-	75.00-125.00	-	SELENIUM	J(all detects)
SL-076-SA8N-SB-4.0-5.0MS **SL-076-SA8N-SB-4.0-5.0MSD** (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	MOLYBDENUM	153	141	75.00-125.00	-	MOLYBDENUM	J(all detects)
SL-076-SA8N-SB-4.0-5.0MS **SL-076-SA8N-SB-4.0-5.0MSD** (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	BARIUM	433	423	75.00-125.00	-	BARIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-076-SA8N-SB-4.0-5.0MS **SL-076-SA8N-SB-4.0-5.0MSD** (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	ALUMINUM CALCIUM IRON MAGNESIUM TITANIUM	2284 142 1221 257 207	2490 165 1275 256 303	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM CALCIUM IRON MAGNESIUM TITANIUM	No Qual, >4x
SL-076-SA8N-SB-4.0-5.0MS **SL-076-SA8N-SB-4.0-5.0MSD** (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	MANGANESE	32	12	75.00-125.00	-	MANGANESE	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-076-SA8N-SB-4.0-5.0MS (SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5)	FLUORIDE	29	-	80.00-120.00	-	FLUORIDE	J(all detects) R(all non-detects)
SL-106-SA8N-SB-2.5-3.5MS (DUP10-SA8N-QC-060811 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	FLUORIDE Nitrate-NO3	47 74	- -	80.00-120.00 80.00-120.00	- -	FLUORIDE Nitrate-NO3	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-076-SA8N-SB-4.0-5.0DUP	MANGANESE	92	20.00	
(DUP10-SA8N-QC-060811	Zirconium	49	20.00	
SL-023-SA5DN-SB-20.0-21.0				
SL-023-SA5DN-SB-4.0-5.0				
SL-025-SA5DN-SB-23.0-24.0				J (all detects)
SL-025-SA5DN-SB-4.0-5.0				UJ (all non-detects)
SL-028-SA5DN-SB-11.5-12.5				
SL-028-SA5DN-SB-4.0-5.0				
SL-051-SA5DN-SB-14.0-15.0				
SL-051-SA5DN-SB-4.0-5.0				
SL-076-SA8N-SB-4.0-5.0				Zr, No Qual,
SL-076-SA8N-SB-7.5-8.5				OK by Difference
SL-106-SA8N-SB-2.5-3.5				
SL-109-SA8N-SB-4.0-5.0				
SL-109-SA8N-SB-9.0-10.0)				

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-076-SA8N-SB-4.0-5.0DUP	ANTIMONY	69	20.00	
(DUP10-SA8N-QC-060811	ARSENIC	23	20.00	
SL-023-SA5DN-SB-20.0-21.0	LEAD	21	20.00	
SL-023-SA5DN-SB-4.0-5.0				
SL-025-SA5DN-SB-23.0-24.0				
SL-025-SA5DN-SB-4.0-5.0				J(all detects)
SL-028-SA5DN-SB-11.5-12.5				UJ(all non-detects)
SL-028-SA5DN-SB-4.0-5.0				
SL-051-SA5DN-SB-14.0-15.0				
SL-051-SA5DN-SB-4.0-5.0				Sb, No Qual,
SL-076-SA8N-SB-4.0-5.0				OK by Difference
SL-076-SA8N-SB-7.5-8.5				
SL-106-SA8N-SB-2.5-3.5				
SL-109-SA8N-SB-4.0-5.0				
SL-109-SA8N-SB-9.0-10.0)				

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-076-SA8N-SB-4.0-5.0DUP (DUP10-SA8N-QC-060811 SL-023-SA5DN-SB-20.0-21.0 SL-023-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-025-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0)	MERCURY	200	20.00	No Qual OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: DE176_v1 eQAPP Name: CDM_SSFL_110509

Method: 8082
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11655AQ241808A P11655AY241750A (EB16-SA8N-SB-060811)	Aroclor 5442	86	88	35.00-84.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P0WKLCSQ260002 P0WKLCSY260034 (EB16-SA8N-SB-060811)	1-METHYLNAPHTHALENE	134	119	71.00-117.00	-	1-METHYLNAPHTHALENE	J(all detects)
	2-METHYLNAPHTHALENE	118	-	75.00-115.00	-	2-METHYLNAPHTHALENE	
	ACENAPHTHENE	129	132	74.00-109.00	-	ACENAPHTHENE	
	ACENAPHTHYLENE	132	124	70.00-110.00	-	ACENAPHTHYLENE	
	ANTHRACENE	140	130	66.00-111.00	-	ANTHRACENE	
	BENZO(A)ANTHRACENE	129	129	72.00-114.00	-	BENZO(A)ANTHRACENE	
	BENZO(A)PYRENE	130	148	60.00-127.00	-	BENZO(A)PYRENE	
	BENZO(B)FLUORANTHENE	127	125	69.00-123.00	-	BENZO(B)FLUORANTHENE	
	BENZO(G,H,I)PERYLENE	-	136	57.00-131.00	-	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	135	138	59.00-130.00	-	BENZO(K)FLUORANTHENE	
	CHRYSENE	131	129	76.00-116.00	-	CHRYSENE	
	DIBENZO(A,H)ANTHRACENE	149	172	55.00-134.00	-	DIBENZO(A,H)ANTHRACENE	
	Diethylphthalate	137	-	57.00-134.00	-	Diethylphthalate	
	Di-n-butylphthalate	133	149	74.00-131.00	-	Di-n-butylphthalate	
	FLUORANTHENE	138	158	75.00-116.00	-	FLUORANTHENE	
	FLUORENE	157	128	75.00-114.00	-	FLUORENE	
	INDENO(1,2,3-CD)PYRENE	145	162	69.00-124.00	-	INDENO(1,2,3-CD)PYRENE	
	NAPHTHALENE	128	126	72.00-109.00	-	NAPHTHALENE	
	PHENANTHRENE	130	127	76.00-111.00	-	PHENANTHRENE	
	PYRENE	146	130	69.00-118.00	-	PYRENE	

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P0WLLCSQ261332 P0WLLCSY261358 (EB16-SA8N-SB-060811)	3,3'-DICHLOROBENZIDINE	127	121	49.00-111.00	-	3,3'-DICHLOROBENZIDINE	J(all detects)
	4-CHLOROANILINE	146	-	42.00-124.00	-	4-CHLOROANILINE	
	ANILINE	112	104	49.00-101.00	-	ANILINE	
	BENZIDINE	137	116	20.00-109.00	-	BENZIDINE	
P0WLLCSY261358 (EB16-SA8N-SB-060811)	2,6-DINITROTOLUENE	-	80	85.00-115.00	-	2,6-DINITROTOLUENE	J(all detects) UJ(all non-detects)
	2-NITROANILINE	-	81	83.00-116.00	-	2-NITROANILINE	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11627AQ242055A P11627AY242037A (DUP10 -SA8N -QC -060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	Aroclor 5442	144	120	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11648AQ242114A (DUP10 -SA8N -QC -060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	PETN	123	-	80.00-120.00	-	PETN	J(all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2LBLCSQ261602 (DUP10 -SA8N -QC -060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE INDENO(1,2,3-CD)PYRENE	126 114 123	- - -	24.00-101.00 10.00-110.00 64.00-119.00	- - -	3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE INDENO(1,2,3-CD)PYRENE	J(all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2LBLCSQ261602	1,2-DICHLOROBENZENE	77	-	79.00-102.00	-	1,2-DICHLOROBENZENE	J(all detects) UJ(all non-detects)
(DUP10 -SA8N -QC-060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	2-NITROPHENOL	80	-	81.00-114.00	-	2-NITROPHENOL	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16726AQ220908A (DUP10 -SA8N -QC-060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	ANTIMONY	143	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB83Q211403A	1,2-DIBROMO-3-CHLOROPROP	129	-	58.00-120.00	-	1,2-DIBROMO-3-CHLOROPRO	J(all detects)
(DUP10 -SA8N -QC-060811 SL -023-SA5DN -SB-20.0-21.0 SL -023-SA5DN -SB-4.0-5.0 SL -025-SA5DN -SB-23.0-24.0 SL -025-SA5DN -SB-4.0-5.0 SL -028-SA5DN -SB-11.5-12.5 SL -028-SA5DN -SB-4.0-5.0 SL -051-SA5DN -SB-14.0-15.0 SL -051-SA5DN -SB-4.0-5.0 SL -076-SA8N -SB-4.0-5.0 SL -076-SA8N -SB-7.5-8.5 SL -106-SA8N -SB-2.5-3.5 SL -109-SA8N -SB-4.0-5.0 SL -109-SA8N -SB-9.0-10.0)	METHYLENE CHLORIDE	125	-	76.00-124.00	-	METHYLENE CHLORIDE	

Surrogate Outlier Report

Lab Reporting Batch ID: DE176 Laboratory: LL

EDD Filename: DE176_v1 eQAPP Name: CDM_SSFL_110509

Method: 1625C
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-028-SA5DN-SB-11.5-12.5	N-Nitrosodimethylamine-d6	1044	50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-028-SA5DN-SB-4.0-5.0	N-Nitrosodimethylamine-d6	1071	50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-076-SA8N-SB-7.5-8.5	N-Nitrosodimethylamine-d6	151	50.00-150.00	All Target Analytes	J(all detects)

Method: 8015B
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-028-SA5DN-SB-4.0-5.0	n-Triacontane-d62	151	50.00-150.00	All Target Analytes	J(all detects)

Method: 8270C SIM
Matrix: AQ

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB16-SA8N-SB-060811	Nitrobenzene-d5	138	40.00-130.00	No Affected Compounds	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
MOISTURE	11.4	11.6	2		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
N-NITROSODIMETHYLAMINE	37.4 U	19.3	200	50.00	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
FLUORIDE	2.5	2.6	4	50.00	No Qualifiers Applied
Nitrate-NO3	1.5	2.0	29	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
ALUMINUM	24500	24700	1	50.00	No Qualifiers Applied
BORON	4.48	4.54	1	50.00	
CALCIUM	2430	2430	0	50.00	
IRON	23200	23100	0	50.00	
LITHIUM	31.3	31.4	0	50.00	
MAGNESIUM	4360	4370	0	50.00	
MANGANESE	280	230	20	50.00	
PHOSPHORUS	238	240	1	50.00	
POTASSIUM	2160	2150	0	50.00	
SODIUM	122	134	9	50.00	
STRONTIUM	16.8	16.9	1	50.00	
TIN	2.85	2.82	1	50.00	
TITANIUM	1210	1190	2	50.00	
Zirconium	3.47	3.14	10	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg) SL-076-SA8N-SB-4.0-5.0	Concentration (mg/Kg) DUP10-SA8N-QC-060811	Sample RPD	eQAPP RPD	Flag
ANTIMONY	0.275	0.201	31	50.00	No Qualifiers Applied
ARSENIC	9.52	11.5	19	50.00	
BARIUM	119	165	32	50.00	
BERYLLIUM	0.872	1.07	20	50.00	
CADMIUM	0.0781	0.113	37	50.00	
CHROMIUM	18.8	22.3	17	50.00	
COBALT	6.63	8.70	27	50.00	
COPPER	10.2	12.6	21	50.00	
LEAD	7.66	9.71	24	50.00	
MOLYBDENUM	1.18	1.45	21	50.00	
NICKEL	16.0	20.0	22	50.00	
SELENIUM	0.127	0.128	1	50.00	
SILVER	0.0697	0.0883	24	50.00	
THALLIUM	0.333	0.406	20	50.00	
VANADIUM	40.1	49.0	20	50.00	
ZINC	62.6	85.1	30	50.00	

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-076-SA8N-SB-4.0-5.0	Concentration (mg/Kg) DUP10-SA8N-QC-060811	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	0.51	0.48	6	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-076-SA8N-SB-4.0-5.0	Concentration (mg/Kg) DUP10-SA8N-QC-060811	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0242	0.0320	28	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-076-SA8N-SB-4.0-5.0	Concentration (mg/Kg) DUP10-SA8N-QC-060811	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	2.1	2.5	17	50.00	No Qualifiers Applied
EFH (C30-C40)	4.8	5.4	12	50.00	
EFH (C8-C11)	1.2	0.99	19	50.00	
EFH (C15-C20)	1.4 U	0.54	200	50.00	J(all detects) UJ(all non-detects)

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg) SL-076-SA8N-SB-4.0-5.0	Concentration (ug/Kg) DUP10-SA8N-QC-060811	Sample RPD	eQAPP RPD	Flag
AROCLOR 1260	3.4	2.4	34	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: PrepDE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
METHYLENE CHLORIDE	1.3	1.6	21	50.00	No Qualifiers Applied
TOLUENE	0.28	0.30	7	50.00	
ACETONE	7.5 U	8.0	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
NAPHTHALENE	0.94	1.2	24	50.00	No Qualifiers Applied

Method: 8270C
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
BIS(2-ETHYLHEXYL)PHTHALATE	22	49	76	50.00	J(all detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
PH	6.90	6.87	0	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB16-SA8N-SB-060811	LEAD	J	0.000066	0.0010	PQL	mg/L	J (all detects)

Method: 7470A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB16-SA8N-SB-060811	MERCURY	J	0.000060	0.00020	PQL	mg/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB16-SA8N-SB-060811	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.069	1.0	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.30	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.71	1.0	PQL	ug/L	

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	N-NITROSODIMETHYLAMINE	J	19.3	37.5	PQL	ng/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	34.3	37.4	PQL	ng/Kg	J (all detects)
SL-051-SA5DN-SB-14.0-15.0	N-NITROSODIMETHYLAMINE	J	30.4	37.6	PQL	ng/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	29.0	37.5	PQL	ng/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	N-NITROSODIMETHYLAMINE	J	22.5	38.2	PQL	ng/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	N-NITROSODIMETHYLAMINE	J	31.0	38.1	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-023-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.6	1.7	PQL	mg/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	BORON	J	4.54	5.49	PQL	mg/Kg	J (all detects)
	TIN	J	2.82	11.0	PQL	mg/Kg	
	Zirconium	J	3.14	5.49	PQL	mg/Kg	
SL-023-SA5DN-SB-20.0-21.0	TIN	J	2.48	10.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.18	5.33	PQL	mg/Kg	
SL-023-SA5DN-SB-4.0-5.0	TIN	J	2.71	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.26	5.67	PQL	mg/Kg	
SL-025-SA5DN-SB-23.0-24.0	BORON	J	3.75	5.34	PQL	mg/Kg	J (all detects)
	TIN	J	2.51	10.7	PQL	mg/Kg	
	Zirconium	J	2.32	5.34	PQL	mg/Kg	
SL-025-SA5DN-SB-4.0-5.0	TIN	J	2.59	11.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.61	5.59	PQL	mg/Kg	
SL-028-SA5DN-SB-11.5-12.5	TIN	J	2.45	10.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.69	5.44	PQL	mg/Kg	
SL-028-SA5DN-SB-4.0-5.0	TIN	J	2.84	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.07	5.73	PQL	mg/Kg	
SL-051-SA5DN-SB-14.0-15.0	TIN	J	2.50	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.85	5.54	PQL	mg/Kg	
SL-051-SA5DN-SB-4.0-5.0	TIN	J	2.66	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.18	5.67	PQL	mg/Kg	
SL-076-SA8N-SB-4.0-5.0	BORON	J	4.48	5.53	PQL	mg/Kg	J (all detects)
	TIN	J	2.85	11.1	PQL	mg/Kg	
	Zirconium	J	3.47	5.53	PQL	mg/Kg	
SL-076-SA8N-SB-7.5-8.5	BORON	J	3.81	5.59	PQL	mg/Kg	J (all detects)
	TIN	J	3.00	11.2	PQL	mg/Kg	
	Zirconium	J	3.24	5.59	PQL	mg/Kg	
SL-106-SA8N-SB-2.5-3.5	BORON	J	4.39	5.61	PQL	mg/Kg	J (all detects)
	TIN	J	3.19	11.2	PQL	mg/Kg	
	Zirconium	J	2.94	5.61	PQL	mg/Kg	
SL-109-SA8N-SB-4.0-5.0	BORON	J	5.38	5.73	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.2	115	PQL	mg/Kg	
	TIN	J	3.03	11.5	PQL	mg/Kg	
	Zirconium	J	3.42	5.73	PQL	mg/Kg	
SL-109-SA8N-SB-9.0-10.0	BORON	J	5.53	5.72	PQL	mg/Kg	J (all detects)
	TIN	J	2.76	11.4	PQL	mg/Kg	
	Zirconium	J	3.38	5.72	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	ANTIMONY	J	0.201	0.222	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.128	0.444	PQL	mg/Kg	
	SILVER	J	0.0883	0.111	PQL	mg/Kg	
SL-023-SA5DN-SB-20.0-21.0	SILVER	J	0.104	0.107	PQL	mg/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	SELENIUM	J	0.119	0.440	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0545	0.110	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-025-SA5DN-SB-23.0-24.0	ANTIMONY CADMIUM SILVER	J J J	0.140 0.0864 0.0450	0.218 0.109 0.109	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-025-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.0811 0.0468	0.448 0.112	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-028-SA5DN-SB-11.5-12.5	SELENIUM SILVER	J J	0.130 0.0501	0.431 0.108	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.247 0.108	0.468 0.117	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-051-SA5DN-SB-14.0-15.0	SILVER	J	0.0477	0.112	PQL	mg/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.119 0.0596	0.454 0.113	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	CADMIUM SELENIUM SILVER	J J J	0.0781 0.127 0.0697	0.113 0.451 0.113	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	ANTIMONY CADMIUM SELENIUM	J J J	0.169 0.0512 0.273	0.228 0.114 0.456	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	ANTIMONY CADMIUM SILVER	J J J	0.177 0.0653 0.0210	0.231 0.115 0.115	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	ANTIMONY SILVER	J J	0.214 0.0258	0.229 0.115	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	ANTIMONY SILVER	J J	0.216 0.0633	0.222 0.111	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	HEXAVALENT CHROMIUM	J	0.48	1.1	PQL	mg/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.48	1.1	PQL	mg/Kg	J (all detects)
SL-025-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.48	1.1	PQL	mg/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.62	1.2	PQL	mg/Kg	J (all detects)
SL-051-SA5DN-SB-14.0-15.0	HEXAVALENT CHROMIUM	J	0.63	1.1	PQL	mg/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.35	1.1	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.51	1.1	PQL	mg/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	HEXAVALENT CHROMIUM	J	0.73	1.2	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.54	1.1	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.77	1.2	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	MERCURY	J	0.0320	0.110	PQL	mg/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	MERCURY	J	0.0194	0.110	PQL	mg/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	MERCURY	J	0.0085	0.114	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	MERCURY	J	0.0242	0.107	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	EFH (C15-C20) EFH (C8-C11)	J J	0.54 0.99	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-023-SA5DN-SB-20.0-21.0	EFH (C30-C40) EFH (C8-C11)	J J	0.70 1.2	1.3 1.3	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	EFH (C21-C30) EFH (C8-C11)	J J	0.47 1.3	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-025-SA5DN-SB-23.0-24.0	EFH (C30-C40)	J	0.49	1.3	PQL	mg/Kg	J (all detects)
SL-025-SA5DN-SB-4.0-5.0	EFH (C30-C40) EFH (C8-C11)	J J	1.2 1.1	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-028-SA5DN-SB-11.5-12.5	EFH (C8-C11)	J	1.1	1.3	PQL	mg/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	EFH (C15-C20) EFH (C8-C11)	J J	0.57 0.99	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-051-SA5DN-SB-14.0-15.0	EFH (C15-C20) EFH (C8-C11)	J J	0.50 1.1	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	EFH (C15-C20) EFH (C8-C11)	J J	0.55 1.1	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	EFH (C8-C11)	J	1.2	1.4	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	EFH (C15-C20) EFH (C8-C11)	J J	0.49 1.1	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	EFH (C8-C11)	J	1.2	1.4	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	EFH (C8-C11)	J	1.2	1.4	PQL	mg/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	EFH (C8-C11)	J	0.95	1.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-028-SA5DN-SB-4.0-5.0	AROCLOR 1254 AROCLOR 1260	J J	0.58 0.54	2.0 2.0	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.30	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-023-SA5DN-SB-20.0-21.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.15	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.3 0.12	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-025-SA5DN-SB-23.0-24.0	METHYLENE CHLORIDE TOLUENE	J J	1.8 0.19	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-025-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.16	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-028-SA5DN-SB-11.5-12.5	METHYLENE CHLORIDE TOLUENE	J J	1.7 0.14	4.5 4.5	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-028-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.14	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-051-SA5DN-SB-14.0-15.0	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.14	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.4 0.15	4.4 4.4	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.3 0.28	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	METHYLENE CHLORIDE TOLUENE	J J	1.4 0.20	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.19	3.8 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	2-BUTANONE (MEK) METHYLENE CHLORIDE TOLUENE	J J J	2.5 1.0 0.12	8.1 4.1 4.1	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	2-BUTANONE (MEK) METHYLENE CHLORIDE TOLUENE	J J J	2.5 1.7 0.16	8.1 4.0 4.0	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	BIS(2-ETHYLHEXYL)PHTHALATE	J	49	380	PQL	ug/Kg	J (all detects)
SL-023-SA5DN-SB-20.0-21.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	380	PQL	ug/Kg	J (all detects)
SL-028-SA5DN-SB-11.5-12.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	370	PQL	ug/Kg	J (all detects)
SL-051-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)
SL-076-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	370	PQL	ug/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	380	PQL	ug/Kg	J (all detects)
SL-109-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	380	PQL	ug/Kg	J (all detects)
SL-109-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	380	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE176 **Laboratory: LL**

EDD Filename: DE176_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA8N-QC-060811	NAPHTHALENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
SL-023-SA5DN-SB-4.0-5.0	Butylbenzylphthalate	J	10	20	PQL	ug/Kg	J (all detects)
SL-028-SA5DN-SB-11.5-12.5	BENZO(A)ANTHRACENE	J	0.79	1.8	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.79	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.80	1.8	PQL	ug/Kg	
	Butylbenzylphthalate	J	12	20	PQL	ug/Kg	
	PYRENE	J	1.4	1.8	PQL	ug/Kg	
SL-076-SA8N-SB-4.0-5.0	NAPHTHALENE	J	0.94	1.9	PQL	ug/Kg	J (all detects)
SL-076-SA8N-SB-7.5-8.5	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
SL-106-SA8N-SB-2.5-3.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	10	21	PQL	ug/Kg	J (all detects)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: Volatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
TB-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
VBLKB83	6/14/11	Acetone Methylene chloride Toluene	8.3 ug/Kg 1.7 ug/Kg 0.14 ug/Kg	All soil samples in SDG DE176

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-023-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	9.3 ug/Kg 1.3 ug/Kg 0.12 ug/Kg	9.3U ug/Kg 4.0U ug/Kg 4.0U ug/Kg
SL-023-SA5DN-SB-20.0-21.0	Acetone Methylene chloride Toluene	8.3 ug/Kg 1.5 ug/Kg 0.15 ug/Kg	8.3U ug/Kg 3.9U ug/Kg 3.9U ug/Kg
SL-025-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	8.4 ug/Kg 1.5 ug/Kg 0.16 ug/Kg	8.4U ug/Kg 3.9U ug/Kg 3.9U ug/Kg
SL-025-SA5DN-SB-23.0-24.0	Acetone Methylene chloride Toluene	9.5 ug/Kg 1.8 ug/Kg 0.19 ug/Kg	9.5U ug/Kg 4.3U ug/Kg 4.3U ug/Kg
SL-028-SA5DN-SB-4.0-5.0	Methylene chloride Toluene	1.5 ug/Kg 0.14 ug/Kg	4.0U ug/Kg 4.0U ug/Kg
SL-028-SA5DN-SB-11.5-12.5	Acetone Methylene chloride Toluene	9.5 ug/Kg 1.7 ug/Kg 0.14 ug/Kg	9.5U ug/Kg 4.5U ug/Kg 4.5U ug/Kg
SL-051-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	9.1 ug/Kg 1.4 ug/Kg 0.15 ug/Kg	9.1U ug/Kg 4.4U ug/Kg 4.4U ug/Kg
SL-051-SA5DN-SB-14.0-15.0	Acetone Methylene chloride Toluene	8.8 ug/Kg 1.6 ug/Kg 0.14 ug/Kg	8.8U ug/Kg 4.0U ug/Kg 4.0U ug/Kg
SL-076-SA8N-SB-4.0-5.0	Methylene chloride Toluene	1.3 ug/Kg 0.28 ug/Kg	3.7U ug/Kg 3.7U ug/Kg
SL-076-SA8N-SB-7.5-8.5	Acetone Methylene chloride Toluene	11 ug/Kg 1.4 ug/Kg 0.20 ug/Kg	11U ug/Kg 4.1U ug/Kg 4.1U ug/Kg

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-106-SA8N-SB-2.5-3.5	Acetone Methylene chloride Toluene	8.2 ug/Kg 1.6 ug/Kg 0.19 ug/Kg	8.2U ug/Kg 3.8U ug/Kg 3.8U ug/Kg
SL-109-SA8N-SB-4.0-5.0	Acetone Methylene chloride Toluene	27 ug/Kg 1.0 ug/Kg 0.12 ug/Kg	27U ug/Kg 4.1U ug/Kg 4.1U ug/Kg
SL-109-SA8N-SB-9.0-10.0	Acetone Methylene chloride Toluene	32 ug/Kg 1.7 ug/Kg 0.16 ug/Kg	32U ug/Kg 4.0U ug/Kg 4.0U ug/Kg
DUP10-SA8N-QC-060811	Acetone Methylene chloride Toluene	8.0 ug/Kg 1.6 ug/Kg 0.30 ug/Kg	8.0U ug/Kg 3.9U ug/Kg 3.9U ug/Kg

Sample TB-060811 was identified as a trip blank. No volatile contaminants were found.

Sample EB16-SA8N-SB-060811 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS B83 (All soil samples in SDG DE176)	Methylene chloride 1,2-Dibromo-3-chloropropane	125 (76-124) 129 (58-120)	- -	- -	J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Methylene chloride	1.3	1.6	21 (≤50)	-	-
Toluene	0.28	0.30	7 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Acetone	7.5U	8.0	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	Methylene chloride 1,2-Dibromo-3-chloropropane	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 TB-060811 EB16-SA8N-SB-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and CRQLs (Z)
DE176	SL-076-SA8N-SB-4.0-5.0 DUP10-SA8N-QC-060811	Acetone	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Volatiles - Laboratory Blank Data Qualification Summary - SDG DE176

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE176	SL-023-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	9.3U ug/Kg 4.0U ug/Kg 4.0U ug/Kg	A	B
DE176	SL-023-SA5DN-SB-20.0-21.0	Acetone Methylene chloride Toluene	8.3U ug/Kg 3.9U ug/Kg 3.9U ug/Kg	A	B
DE176	SL-025-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	8.4U ug/Kg 3.9U ug/Kg 3.9U ug/Kg	A	B

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE176	SL-025-SA5DN-SB-23.0-24.0	Acetone Methylene chloride Toluene	9.5U ug/Kg 4.3U ug/Kg 4.3U ug/Kg	A	B
DE176	SL-028-SA5DN-SB-4.0-5.0	Methylene chloride Toluene	4.0U ug/Kg 4.0U ug/Kg	A	B
DE176	SL-028-SA5DN-SB-11.5-12.5	Acetone Methylene chloride Toluene	9.5U ug/Kg 4.5U ug/Kg 4.5U ug/Kg	A	B
DE176	SL-051-SA5DN-SB-4.0-5.0	Acetone Methylene chloride Toluene	9.1U ug/Kg 4.4U ug/Kg 4.4U ug/Kg	A	B
DE176	SL-051-SA5DN-SB-14.0-15.0	Acetone Methylene chloride Toluene	8.8U ug/Kg 4.0U ug/Kg 4.0U ug/Kg	A	B
DE176	SL-076-SA8N-SB-4.0-5.0	Methylene chloride Toluene	3.7U ug/Kg 3.7U ug/Kg	A	B
DE176	SL-076-SA8N-SB-7.5-8.5	Acetone Methylene chloride Toluene	11U ug/Kg 4.1U ug/Kg 4.1U ug/Kg	A	B
DE176	SL-106-SA8N-SB-2.5-3.5	Acetone Methylene chloride Toluene	8.2U ug/Kg 3.8U ug/Kg 3.8U ug/Kg	A	B
DE176	SL-109-SA8N-SB-4.0-5.0	Acetone Methylene chloride Toluene	27U ug/Kg 4.1U ug/Kg 4.1U ug/Kg	A	B
DE176	SL-109-SA8N-SB-9.0-10.0	Acetone Methylene chloride Toluene	32U ug/Kg 4.0U ug/Kg 4.0U ug/Kg	A	B
DE176	DUP10-SA8N-QC-060811	Acetone Methylene chloride Toluene	8.0U ug/Kg 3.9U ug/Kg 3.9U ug/Kg	A	B

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G1a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≥ 75
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9 + 14
XVII.	Field blanks	ND	TB = 15 EB = 16

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	VBLKB83	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	VBLK107	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	TB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	EB16-SA8N-SB-060811 W	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MS	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18	SL-076-SA8N-SB-4.0-5.0MSD	28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

DC #: 202776/a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of $\geq$ 0.990?	✓			
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26277G1a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26277G/a

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y/N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

(B)

Blank analysis date: 6/14/11
Conc. units: ug/kg
Associated Samples: All Soils

Compound	Blank ID	Sample Identification								
	VBLKB83	10X/5X	1	2	3	4	5	6	7	8
F	8.3	83	9.3/4	8.3/4	8.4/4	9.5/4	-	9.5/4	9.1/4	8.8/4
E	1.7	17	1.3/4.0U	1.5/3.9U	1.5/3.9U	1.8/4.3U	1.5/4.0U	1.7/4.5U	1.4/4.4U	1.6/4.0U
CC	0.14	0.70	0.12/4.0U	0.15/3.9U	0.16/3.9U	0.19/4.3U	0.14/4.0U	0.14/4.5U	0.15/4.4U	0.14/4.0U
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
		9	10	11	12	13	14			
		-	11/4	8.2/4	27/4	32/4	8.0/4			
		1.3/3.7U	1.4/4.1U	1.6/3.8U	1.0/4.1U	1.7/4.0U	1.6/3.9U			
		0.28/3.7U	0.20/4.1U	0.19/3.8U	0.12/4.1U	0.16/4.0U	0.30/3.9U			
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		LCS B83	E	125 (76-124)	( )	( )	All soils	J/Pdet (L)
			MM	129 (58-120	( )	( )	↓	L ↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		

LDC #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC __ HPLC

Y N N/A Were field duplicate pairs identified in this SDG?

Y N N/A Were target compounds detected in the field duplicate pairs?

(FD)

Compound	Concentration (ug/kg)		%RPD Limit ≤ 50	Qualification Parent only / All Samples
	9	14		
E	1.3	1.6	21	
CC	0.28	0.30	7	
F	7.54	8.0	200	J/UJ/A

Compound	Concentration ( )		%RPD Limit _____	Qualification Parent only / All Samples

LDC #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/24/11	C (1st internal standard)	0.3589	0.3589	0.3517	0.3517	7	7
			EE (2nd internal standard)	1.7255	1.7255	1.5871	1.5871	8	8
			JJJ (3rd internal standard)	1.4546	1.4546	1.3695	1.3695	6	6
			(4th internal standard)						
2	ICV2	4/21/11	C (1st internal standard)	0.3956	0.3956	0.4093	0.4093	4	4
			EE (2nd internal standard)	1.9473	1.9473	1.9438	1.9438	2	2
			JJJ (3rd internal standard)	1.6715	1.6715	1.6569	1.6569	3	3
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to 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 #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 12:08	6/14/11	C (1st internal standard)	0.3517	0.3242	0.3242	8	8
			EE (2nd internal standard)	1.5871	1.6998	1.6998	7	7
			JJJ (3rd internal standard)	1.3695	1.4229	1.4229	4	4
			(4th internal standard)					
2	CCV 07:24	6/14/11	C (1st internal standard)	0.4093	0.4022	0.4022	2	2
			EE (2nd internal standard)	1.9438	2.0373	2.0373	5	5
			JJJ (3rd internal standard)	1.6569	1.6867	1.6867	2	2
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	52.446	105	105	0
1,2-Dichloroethane-d4	↓	55.675	111	111	↓
Toluene-d8		49.233	98	98	
Bromofluorobenzene		47-80 J	96	96	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26277G1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 17 + 18

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	16.89	16.89	ND	19.2	19.3	114	114	115	115	1	1
Trichloroethene	↓	↓	↓	16.76	16.64	99	99	99	99	1	1
Benzene	↓	↓	↓	17.64	17.65	104	104	105	105	0	0
Toluene	↓	↓	0.25	16.76	16.95	98	98	100	100	1	1
Chlorobenzene	↓	↓	ND	16.16	16.22	96	96	97	97	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 22174J2

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: lcs 18483

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20	NA	22.59	NA	113	113				
Trichloroethene	↓	↓	21.12	↓	106	106				
Benzene			21.94		110	110				
Toluene			21.42		107	107				
Chlorobenzene			21.26		106	106	NA			

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 #: 26277G/a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, CC.

Conc. = $\frac{(1608)(50)(5)}{(75238)(0.8572)(5.74)(0.88)}$

=

0.123 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 7, 2011

Matrix: Soil/Water

Parameters: 1,4-Dioxane

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
TB-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for 1,4-Dioxane.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for 1,4-Dioxane.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-dioxane was found in the method blanks.

Sample TB-060811 was identified as a trip blank. No 1,4-dioxane was found.

Sample EB16-SA8N-SB-060811 was identified as an equipment blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No 1,4-dioxane was detected in any of the samples.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 TB-060811 EB16-SA8N-SB-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G1b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/7/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EF
2nd Reviewer: CF

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8260B-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 2x
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 9 a 14
XVII.	Field blanks	ND	TB = 15 EB = 16

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	VBLKE52	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	VBLKE54	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23	VBLKE50	33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	TB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	EB16-SA8N-SB-060811 W	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MS	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18	SL-076-SA8N-SB-4.0-5.0MSD	28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

LDC #: 26277G1b

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 26277G1b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?		✓		
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26277G1b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (5 std)	Recalculated RRF (5 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/7/10	1,4-Dioxane (1st internal standard)	1.3539	1.3539	1.3396	1.3396	2	2
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
2	ICAL	11/1/10	1,4-Dioxane (1st internal standard)	1.3359	1.3359	1.3219	1.3219	1	1
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G1b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 7:04	6/11/11	1,4-Dioxane (1st internal standard)	1.3396	1.4220	1.4220	6	6
			(2nd internal standard)					
			(3rd internal standard)					
	CCV 13:30	6/13/11	↓ (4th internal standard)	↓	1.4330	1.4330	7	7
2			(1st internal standard)					
	CCV 8:12	6/09/11	↓ (2nd internal standard)	↓	1.2253	1.2253	7	7
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26776b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8	10	9.539	95	95	0
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26277G1b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

RPD = | MSC - MSC | * 2/(MSC + MSDC)

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration; MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 17 + 18

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~1,1-Dichloroethene~~ 1,4 Dioxane	102.46	102.46	NR	97.93	106.41	96	96	100	100	8	8
Trichloroethene											
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS E52 Las ID

Compound	Spike Added (ng/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,4-Dioxane										
1,1-Dichloroethene	125	125	133.52	135.23	107	107	108	108	1	1
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										

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 #: 26277G1b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. _____ , _____:

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

=

ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples and one water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
SBLKB162	6/13/11	Bis(2-ethylhexyl)phthalate	19 ug/Kg	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-023-SA5DN-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	25 ug/Kg	380U ug/Kg
SL-023-SA5DN-SB-20.0-21.0	Bis(2-ethylhexyl)phthalate	24 ug/Kg	370U ug/Kg
SL-028-SA5DN-SB-11.5-12.5	Bis(2-ethylhexyl)phthalate	25 ug/Kg	370U ug/Kg
SL-051-SA5DN-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	24 ug/Kg	370U ug/Kg
SL-076-SA8N-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	22 ug/Kg	370U ug/Kg
SL-076-SA8N-SB-7.5-8.5	Bis(2-ethylhexyl)phthalate	21 ug/Kg	380U ug/Kg
SL-109-SA8N-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	19 ug/Kg	380U ug/Kg
SL-109-SA8N-SB-9.0-10.0	Bis(2-ethylhexyl)phthalate	25 ug/Kg	380U ug/Kg
DUP10-SA8N-QC-060811	Bis(2-ethylhexyl)phthalate	49 ug/Kg	380U ug/Kg

Sample EB16-SA8N-SB-060811 was identified as an equipment blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	2-Chlorophenol	71 (73-121)	71 (73-121)	-	J (all detects)	A
	1,4-Dichlorobenzene	68 (70-100)	68 (70-100)	-	UJ (all non-detects)	
	Benzyl alcohol	-	66 (67-115)	-		
	2-Methylphenol	68 (75-111)	68 (75-111)	-		
	4-Methylphenol	65 (71-111)	63 (71-111)	-		
	2,4-Dimethylphenol	77 (78-110)	77 (78-110)	-		
	bis(2-Chloroethoxy)methane	-	74 (75-104)	-		
	2,4-Dichlorophenol	74 (78-117)	72 (78-117)	-		
	4-Chloro-3-methylphenol	72 (76-110)	71 (76-110)	-		
	2-Methylnaphthalene	68 (76-114)	68 (76-114)	-		
	2,4,5-Trichlorophenol	76 (78-109)	76 (78-109)	-		
	Acenaphthylene	79 (81-110)	80 (81-110)	-		
	2,4-Dinitrotoluene	71 (73-113)	-	-		
	Fluorene	76 (77-111)	-	-		
	4-Chlorophenyl-phenylether	75 (80-109)	76 (80-109)	-		
	N-Nitrosodiphenylamine	80 (86-145)	79 (86-145)	-		
	Hexachlorobenzene	-	76 (77-114)	-		
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	2,4-Dinitrophenol	-	-	31 (≤30)	J (all detects)	A
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	Benzidine	0 (35-141)	0 (35-141)	-	J (all detects) R (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
160WLLCS/D (All water samples in SDG DE176)	Aniline	112 (49-101)	104 (49-101)	-	J (all detects)	P
	4-Chloroaniline	146 (42-124)	-	-	J (all detects)	
	3,3'-Dichlorobenzidine	127 (49-111)	121 (49-111)	-	J (all detects)	
	Benzidine	137 (34-117)	-	-	J (all detects)	
160WLLCS/D (All water samples in SDG DE176)	2-Nitroaniline	-	81 (83-116)	-	J (all detects)	P
				-	UJ (all non-detects)	
	2,6-Dinitrotoluene	-	80 (85-115)		J (all detects) UJ (all non-detects)	

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
162LBLCS (All soil samples in SDG DE176)	1,2-Dichlorobenzene	77 (79-102)	-	-	J (all detects) UJ (all non-detects)	P
	2-Nitrophenol	80 (81-114)	-	-	J (all detects) UJ (all non-detects)	
162LBLCS (All soil samples in SDG DE176)	4-Chloroaniline	114 (10-110)	-	-	J (all detects)	P
	3,3'-Dichlorobenzidine	126 (24-101)	-	-	J (all detects)	
	Indeno(1,2,3-cd)pyrene	123 (64-119)	-	-	J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Bis(2-ethylhexyl)phthalate	22	49	76 (≤50)	J (all detects)	A

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-076-SA8N-SB-4.0-5.0	2-Chlorophenol 1,4-Dichlorobenzene Benzyl alcohol 2-Methylphenol 4-Methylphenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2-Methylnaphthalene 2,4,5-Trichlorophenol Acenaphthylene 2,4-Dinitrotoluene Fluorene 4-Chlorophenyl-phenylether N-Nitrosodiphenylamine Hexachlorobenzene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-076-SA8N-SB-4.0-5.0	2,4-Dinitrophenol	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE176	SL-076-SA8N-SB-4.0-5.0	Benzidine	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	EB16-SA8N-SB-060811	Aniline 4-Chloroaniline 3,3'-Dichlorobenzidine Benzidine	J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE176	EB16-SA8N-SB-060811	2-Nitroaniline 2,6-Dinitrotoluene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	1,2-Dichlorobenzene 2-Nitrophenol	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	4-Chloroaniline 3,3'-Dichlorobenzidine Indeno(1,2,3-cd)pyrene	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 EB16-SA8N-SB-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE176	SL-076-SA8N-SB-4.0-5.0 DUP10-SA8N-QC-060811	Bis(2-ethylhexyl)phthalate	J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE176

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE176	SL-023-SA5DN-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	380U ug/Kg	A	B
DE176	SL-023-SA5DN-SB-20.0-21.0	Bis(2-ethylhexyl)phthalate	370U ug/Kg	A	B
DE176	SL-028-SA5DN-SB-11.5-12.5	Bis(2-ethylhexyl)phthalate	370U ug/Kg	A	B
DE176	SL-051-SA5DN-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	370U ug/Kg	A	B
DE176	SL-076-SA8N-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	370U ug/Kg	A	B
DE176	SL-076-SA8N-SB-7.5-8.5	Bis(2-ethylhexyl)phthalate	380U ug/Kg	A	B
DE176	SL-109-SA8N-SB-4.0-5.0	Bis(2-ethylhexyl)phthalate	380U ug/Kg	A	B

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE176	SL-109-SA8N-SB-9.0-10.0	Bis(2-ethylhexyl)phthalate	380U ug/Kg	A	B
DE176	DUP10-SA8N-QC-060811	Bis(2-ethylhexyl)phthalate	380U ug/Kg	A	B

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G2a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9, 14
XVII.	Field blanks	ND	EB = 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	SBLKLB162	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	SBLKWL160	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	EB16-SA8N-SB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MSD	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

LDC #: 20277G2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓	✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
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 #: 2627G2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XI. [illegible]				
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. [illegible]				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. [illegible]				
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. [illegible]				
System performance was found to be acceptable.	✓			
XV. [illegible]				
Overall assessment of data was found to be acceptable.	✓			
XVI. [illegible]				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. [illegible]				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 27762a

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

(B)

Blank extraction date: 6/13/11 **Blank analysis date:** 6/23/11
Conc. units: ug/kg Associated Samples: 1, 2, 6, 7, 9, 10, 12 → 14

Compound	Blank ID	Sample Identification							
	SBLKB162	1	2	6	7	9	10	12	13
EEE	19	25/380U	24/370U	25/370U	24/370U	22/370U	21/380U	19/380U	25/380U
			14						
↓	↓		49/380U						

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 method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277G2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		16 + 17	per following pages	( )	( )	( )	9	all J/UJ/A
				( )	( )	( )	except	HH = J/Adet
				( )	( )	( )		SSS = J/R/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: DE176
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

16 of 17

UNSPK: 6310775 MS: 6310776 MSD: 6310777 Analyte	Batch: 11162SLB026 (Sample number(s): 6310767-6310777, 6310779-6310783)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
N-Nitrosodimethylamine	1661.13	N.D.	1149.66	1151.3	69	70	47-116	0	30
Phenol	1661.13	N.D.	1123.1	1153.15	68	70	58-126	3	30
Aniline	1661.13	N.D.	867.62	806.55	52	49	35-95	7	30
bis(2-Chloroethyl)ether	1661.13	N.D.	1137.89	1140.13	69	69	60-116	0	30
2-Chlorophenol	1661.13	N.D.	1172.62	1171.57	71 *	71 *	73-121	0	30
1,3-Dichlorobenzene	1661.13	N.D.	1117.01	1144.8	67	69	63-109	2	30
1,4-Dichlorobenzene	1661.13	N.D.	1121.59	1118.24	68 *	68 *	70-100	0	30
Benzyl alcohol	1661.13	N.D.	1118.48	1086.	67	66 *	67-115	3	30
1,2-Dichlorobenzene	1661.13	N.D.	1121.69	1167.07	68	71	66-108	4	30
2-Methylphenol	1661.13	N.D.	1136.94	1117.51	68 *	68 *	75-111	2	30
bis(2-Chloroisopropyl)ether	1661.13	N.D.	1158.91	1137.88	70	69	55-142	2	30
4-Methylphenol	1661.13	N.D.	1086.49	1040.03	65 *	63 *	71-111	4	30
N-Nitroso-di-n-propylamine	1661.13	N.D.	1105.67	1098.6	67	67	60-116	1	30
Hexachloroethane	1661.13	N.D.	1147.26	1154.66	69	70	57-109	1	30
Nitrobenzene	1661.13	N.D.	1299.85	1301.89	78	79	72-106	0	30
Isophorone	1661.13	N.D.	1233.22	1232.95	74	75	73-102	0	30
2-Nitrophenol	1661.13	N.D.	1255.18	1234.9	76	75	74-115	2	30
2,4-Dimethylphenol	1661.13	N.D.	1275.77	1268.95	77 *	77 *	78-110	1	30
Benzoic acid	1661.13	N.D.	1098.4	1104.49	66	67	10-173	1	30
3,5-Dimethylphenol	1661.13	N.D.	1657.75	1627.54	100	99.	70-130	2	30
bis(2-Chloroethoxy)methane	1661.13	N.D.	1243.05	1217.93	75	74 *	75-104	2	30
2,4-Dichlorophenol	1661.13	N.D.	1224.21	1181.61	74 *	72 *	78-117	4	30
1,2,4-Trichlorobenzene	1661.13	N.D.	1260.82	1270.08	76	77	72-115	1	30
Naphthalene	1661.13	N.D.	1268.19	1251.04	76	76	72-116	1	30
4-Chloroaniline	1661.13	N.D.	838.09	834.99	50	51	23-95	0	30
Hexachlorobutadiene	1661.13	N.D.	1278.62	1265.5	77	77	62-120	1	30
4-Chloro-3-methylphenol	1661.13	N.D.	1202.48	1179.35	72 *	71 *	76-110	2	30
2-Methylnaphthalene	1661.13	N.D.	1136.38	1127.62	68 *	68 *	76-114	1	30
1-Methylnaphthalene	1661.13	N.D.	1240.09	1202.72	75	73	73-112	3	30
Hexachlorocyclopentadiene	3322.26	N.D.	2380.51	2306.53	72	70	10-153	3	30
2,4,6-Trichlorophenol	1661.13	N.D.	1294.81	1294.07	78	78	77-115	0	30
2,4,5-Trichlorophenol	1661.13	N.D.	1266.99	1262.37	76 *	76 *	78-109	0	30
2-Chloronaphthalene	1661.13	N.D.	1026.71	1045.42	62	63	50-141	2	30
2-Nitroaniline	1661.13	N.D.	1284.22	1294.47	77	78	67-125	1	30
Dimethylphthalate	1661.13	N.D.	1238.51	1239.43	75	75	64-118	0	30
2,6-Dinitrotoluene	1661.13	N.D.	1236.5	1289.36	74	78	69-123	4	30
Acenaphthylene	1661.13	N.D.	1318.86	1324.23	79 *	80 *	81-110	0	30
3-Nitroaniline	1661.13	N.D.	1133.64	1155.23	68	70	59-122	2	30
Acenaphthene	1661.13	N.D.	1285.45	1287.35	77	78	75-115	0	30
2,4-Dinitrophenol	3322.26	N.D.	1581.18	1157.47	48	35	20-143	31 *	30
4-Nitrophenol	1661.13	N.D.	1084.01	1208.46	65	73	54-113	11	30
2,4-Dinitrotoluene	1661.13	N.D.	1172.85	1264.89	71 *	77	73-113	8	30

Results are being reported on an as received basis.

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: DE176
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 6310775 MS: 6310776 MSD: 6310777 Analyte	Batch: **11162SLB026** (Sample number(s): 6310767-6310777, 6310779-6310783)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dibenzofuran	1661.13	N.D.	1278.65	1273.66	77	77	71-112	0	30
Diethylphthalate	1661.13	N.D.	1247.2	1176.16	75	71	66-118	6	30
Fluorene	1661.13	N.D.	1254.98	1268.09	76 *	77	77-111	1	30
4-Chlorophenyl-phenylether	1661.13	N.D.	1237.55	1251.14	75 *	76 *	80-109	1	30
4-Nitroaniline	1661.13	N.D.	897.75	893.99	54	54	52-112	0	30
4,6-Dinitro-2-methylphenol	1661.13	N.D.	982.31	820.7	59	50	24-116	18	30
N-Nitrosodiphenylamine	1661.13	N.D.	1327.26	1309.6	80 *	79 *	86-145	1	30
1,2-Diphenylhydrazine	1661.13	N.D.	1393.81	1352.97	84	82	71-129	3	30
4-Bromophenyl-phenylether	1661.13	N.D.	1244.39	1222.96	75	74	67-129	2	30
Hexachlorobenzene	1661.13	N.D.	1275.25	1253.86	77	76 *	77-114	2	30
Pentachlorophenol	1661.13	N.D.	1101.94	1163.69	66	71	28-127	5	30
Phenanthrene	1661.13	N.D.	1255.88	1258.2	76	76	65-125	0	30
Anthracene	1661.13	N.D.	1282.43	1276.75	77	77	75-115	0	30
Carbazole	1661.13	N.D.	1235.03	1284.87	74	78	64-120	4	30
Di-n-butylphthalate	1661.13	N.D.	1265.72	1192.51	76	72	67-123	6	30
Fluoranthene	1661.13	N.D.	1207.58	1274.06	73	77	73-112	5	30
Benzidine	8305.65	N.D.	N.D.	N.D.	0 *	0 *	35-141	0	30
Pyrene	1661.13	N.D.	1306.62	1289.65	79	78	74-126	1	30
Butylbenzylphthalate	1661.13	N.D.	1417.95	1320.65	85	80	73-134	7	30
bis(2-Ethylhexyl)phthalate	1661.13	19.32	1493.06	1347.33	89	80	63-122	10	30
3,3'-Dichlorobenzidine	1661.13	N.D.	980.35	949.9	59	58	16-119	3	30
Benzo(a)anthracene	1661.13	N.D.	1298.74	1285.18	78	78	65-122	1	30
Chrysene	1661.13	N.D.	1339.89	1336.14	81	81	62-128	0	30
Di-n-octylphthalate	1661.13	N.D.	1200.74	1125.2	72	68	56-126	6	30
Benzo(b)fluoranthene	1661.13	N.D.	1131.52	1113.05	68	67	59-125	2	30
Benzo(k)fluoranthene	1661.13	N.D.	1128.13	1107.11	68	67	56-132	2	30
Benzo(a)pyrene	1661.13	N.D.	1172.5	1151.01	71	70	57-126	2	30
Indeno(1,2,3-cd)pyrene	1661.13	N.D.	1301.55	1328.19	78	80	61-126	2	30
Dibenz(a,h)anthracene	1661.13	N.D.	1324.36	1315.03	80	80	65-125	1	30
Benzo(g,h,i)perylene	1661.13	N.D.	1264.31	1314.87	76	80	59-127	4	30

Results are being reported on an as received basis.

LDC #: 26277G2g

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		160WLLCS/D	NNN	112 (49-101)	104 (49-101)	( )	All waters	J/Pdet (L)
			T	146 (42-124)	( )	( )		J/UJ/P
			BB	( )	81 (83-116)	( )		J/Pdet
			SSS	137 (34-117)	( )	( )		J/UJ/P
			BBB	127 (49-111)	121 (49-111)	( )		
			EE	( )	80 (85-115)	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		162LBLCS	F	77 (79-102)	( )	( )	All soils	J/UJ/P (L)
			N	80 (81-114)	( )	( )		J/Pdet
			T	114 (10-110)	( )	( )		
			BBB	126 (24-101)	( )	( )		
			JJJ	123 (64-119)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 26277G2c

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

(FB)

Compound	Concentration (ug/kg)		RPD (≤ 50)
	9	14	
EEE	22	49	76 J/Adv

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26277G04

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 6 of 7
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/20/11	Phenol (1st internal standard)	2.878	2.878	2.803	2.803	7	7
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.520	0.520	0.518	0.518	3	3
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.423	0.423	0.401	0.401	8	8
			Pentachlorophenol (4th internal standard)	0.148	0.148	0.144	0.144	7	7
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.833	0.833	0.777	0.777	9	9
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.845	1.845	1.572	1.572	21	21
2	ICAL	6/22/11	Phenol (1st internal standard)	2.410	2.40	2.405	2.405	6	6
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.381	0.381	0.385	0.385	4	4
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.424	0.424	0.416	0.416	6	6
			Pentachlorophenol (4th internal standard)	0.147	0.147	0.146	0.146	1	1
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.935	0.935	0.919	0.910	6	6
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.632	1.632	1.607	1.607	8	8
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2s

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	FF093I	6/23/11	Phenol (1st internal standard)	2.803	2.801	2.801	0	0
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.518	0.531	0.531	2	2
			~~Fluorene~~ 2-Nitrophenol (3rd internal standard)	0.401	0.422	0.422	5	5
			Pentachlorophenol (4th internal standard)	0.144	0.398	0.398	1	1
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.777	0.846	0.846	9	9
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.572	1.654	1.654	9	9
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G29
SDG #: see Cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100	84.598	85	85	0
2-Fluorobiphenyl	↓	86.782	87	87	
Terphenyl-d14	↓	81.147	81	81	↓
Phenol-d5	200	153.785	77	77	
2-Fluorophenol	↓	159.443	80	80	
2,4,6-Tribromophenol	↓	162.808	81	81	↓
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 #: 26277Q2Q

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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 = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 16 + 17

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1661.13	1661.13	ND	1123.1	1153.15	68	68	70	70	3	3
N-Nitroso-di-n-propylamine				1105.67	1098.6	67	67	67	67	1	1
4-Chloro-3-methylphenol				1202.48	1179.35	72	72	71	71	2	2
Acenaphthene				1285.45	1287.35	77	77	78	78	0	0
Pentachlorophenol				1101.94	1163.69	66	66	71	71	5	5
Pyrene				1306.62	1289.65	79	79	78	78	1	1

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 #: 26277929

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 162 LBLCS

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	1433.33	NA	1153.14	NA	80	80				
N-Nitroso-di-n-propylamine	1666.67		1116.71		67	67				
4-Chloro-3-methylphenol	1466.67		1201.12		82	82				
Acenaphthene	↓		1245.03		85	85				
Pentachlorophenol	1366.67		1114.69		82	82				
Pyrene	1566.67	↓	1294.66	↓	83	83	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G29

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, EEE:

Conc. = $\frac{(6402)(40)(1000)(\quad)(\quad)}{(492163)(0.777)(30)(0.88)(\quad)}$

=

25 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 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 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

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 semivolatiles were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
SBLKWK160	6/9/11	Bis(2-ethylhexyl)phthalate Di-n-octylphthalate	0.061 ug/L 0.065 ug/L	All water samples in SDG DE176

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
EB16-SA8N-SB-060811	Bis(2-ethylhexyl)phthalate	0.069 ug/L	1.0U ug/L

Sample EB16-SA8N-SB-060811 was identified as an equipment blank. No semivolatiles were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB16-SA8N-SB-060811	6/8/11	Di-n-butylphthalate Diethylphthalate Naphthalene	0.71 ug/L 0.30 ug/L 0.060 ug/L	All soil samples in SDG DE176
EB16-SA8N-SB-060811	6/8/11	Bis(2-ethylhexyl)phthalate	0.069 ug/L	SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-106-SA8N-SB-2.5-3.5

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) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
160WKLCS/D (All water samples in SDG DE176)	1-Methylnaphthalene	134 (71-117)	119 (71-117)	-	J (all detects)	P
	Naphthalene	128 (72-109)	126 (72-109)	-	J (all detects)	
	2-Methylnaphthalene	118 (75-115)	-	-	J (all detects)	
	Acenaphthylene	132 (70-110)	124 (70-110)	-	J (all detects)	
	Acenaphthene	129 (74-109)	132 (74-109)	-	J (all detects)	
	Diethylphthalate	137 (57-134)	-	-	J (all detects)	
	Fluorene	157 (75-114)	128 (75-114)	-	J (all detects)	
	Phenanthrene	130 (76-111)	127 (76-111)	-	J (all detects)	
	Anthracene	140 (66-111)	130 (66-111)	-	J (all detects)	
	Di-n-butylphthalate	133 (74-131)	149 (74-131)	-	J (all detects)	
	Fluoranthene	138 (75-116)	158 (75-116)	-	J (all detects)	
	Pyrene	146 (69-118)	130 (69-118)	-	J (all detects)	
	Benzo(a)anthracene	129 (72-114)	129 (72-114)	-	J (all detects)	
	Chrysene	131 (76-116)	129 (76-116)	-	J (all detects)	
	Benzo(b)fluoranthene	127 (69-123)	125 (69-123)	-	J (all detects)	
	Benzo(k)fluoranthene	135 (59-130)	138 (59-130)	-	J (all detects)	
	Benzo(a)pyrene	130 (60-127)	148 (60-127)	-	J (all detects)	
	Indeno(1,2,3-cd)pyrene	145 (69-124)	162 (69-124)	-	J (all detects)	
	Dibenz(a,h)anthracene	149 (55-134)	172 (55-134)	-	J (all detects)	
	Benzo(g,h,i)perylene	-	136 (57-131)	-	J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Naphthalene	0.94	1.2	24 (≤50)	-	-

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	EB16-SA8N-SB-060811	1-Methylnaphthalene Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Diethylphthalate Fluorene Phenanthrene Anthracene Di-n-butylphthalate Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 EB16-SA8N-SB-060811	All TCL compounds	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE176

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE176	EB16-SA8N-SB-060811	Bis(2-ethylhexyl)phthalate	1.0U ug/L	A	B

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G2b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11

SDG #: DE176 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbons~~ SVOA (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	SW	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	LCS/LD
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9, 14
XVII.	Field blanks	SW	EB = 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	SBLKLJ167	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	SBLKWK160	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	EB16-SA8N-SB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MSD	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

LDC #: 26277G2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
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 #: 26277G36

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26277G2b

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

(B)

Blank extraction date: 6/9/11 **Blank analysis date:** 6/16/11
Conc. units: ug/L Associated Samples: all water

Compound	Blank ID	Sample Identification							
[redacted]	SBLKWK160	15							
EEE	0.061		0.069 / 1.04						
FFF	0.065		-						

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 method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26277G25

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

(F)

Blank units: ug/L **Associated sample units:** ug/kg
Sampling date: 6/8/11
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: All SOILS ND + > 5X, 10X

Compound	Blank ID	Sample Identification								
	15	5X/10X								
XX	0.71	7.1								
LL	0.30	3.0								
~~EEE~~	~~0.069~~	~~0.69~~								
S	0.060	0.3								
CRQL										

(F)

Blank units: ug/L **Associated sample units:** ug/kg
Sampling date: 6/8/11
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 3, 4, 5, 8, 11 (ND + > ~~10X~~)

Compound	Blank ID	Sample Identification								
	15									
EEE	0.069									
CRQL										

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 #: 26277G2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		15	NBZ	138 (40-130)	no qual
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)		QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114	S5 (2FP)= 2-Fluorophenol	25-121	21-100
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116	S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S3 (TPH) = Terphenyl-d14	18-137	33-141	S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S4 (PHL) = Phenol-d5	24-113	10-94	S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 27762h

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		160WK LCS/D	all	next page	( )	( )	All water	all J/Pdet (L)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: DE176
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

160WK LCS ID
all J/Pdet

LCS: 160WKLCS LCSD: 160WKLCSD Analyte	Batch: 11160WAK026 (Sample number(s): 6310785)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
N-Nitrosodimethylamine	1	.8	.62	80	62	36-89	26	30
1-Methylnaphthalene	1	1.34	1.19	134 *	119 *	71-117	12	30
Naphthalene	1	1.28	1.26	128 *	126 *	72-109	2	30
2-Methylnaphthalene	1	1.18	1	118 *	100	75-115	17	30
Acenaphthylene	1	1.32	1.24	132 *	124 *	70-110	6	30
Dimethylphthalate ✓	1	1.1	1.16	110	116	40-119	5	30
Acenaphthene	1	1.29	1.32	129 *	132 *	74-109	2	30
Diethylphthalate ✓	1	1.37	1.24	137 *	124	57-134	11	30
Fluorene	1	1.57	1.28	157 *	128 *	75-114	21	30
Phenanthrene	1	1.3	1.27	130 *	127 *	76-111	2	30
Anthracene	1	1.4	1.3	140 *	130 *	66-111	7	30
Di-n-butylphthalate ✓	1	1.33	1.49	133 *	149 *	74-131	12	30
Fluoranthene	1	1.38	1.58	138 *	158 *	75-116	14	30
Pyrene	1	1.46	1.3	146 *	130 *	69-118	12	30
Butylbenzylphthalate ✓	1	1.25	1.26	125	126	40-138	1	30
Bis(2-Ethylhexyl)phthalate ✓	1	1.26	1.24	126	124	57-154	2	30
Benzo(a)anthracene	1	1.29	1.29	129 *	129 *	72-114	0	30
Chrysene	1	1.31	1.29	131 *	129 *	76-116	2	30
Di-n-octylphthalate	1	1.36	1.25	136	125	57-145	8	30
Benzo(b)fluoranthene	1	1.27	1.25	127 *	125 *	69-123	2	30
Benzo(k)fluoranthene	1	1.35	1.38	135 *	138 *	59-130	3	30
Benzo(a)pyrene	1	1.3	1.48	130 *	148 *	60-127	12	30
Indeno(1,2,3-cd)pyrene	1	1.45	1.62	145 *	162 *	69-124	11	30
Dibenz(a,h)anthracene	1	1.49	1.72	149 *	172 *	55-134	14	30
Benzo(g,h,i)perylene	1	1.24	1.36	124	136 *	57-131	9	30

DE176 2149

LDC #: 26277G2b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

(FB)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (ug/kg)		± SD RPD
	9	14	
S	0.94	1.2	24

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26277026

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (/ std)	Recalculated RRF (/ std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/9/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.101	1.01	1.101	1.101	3	3
			Fluorene (3rd internal standard)	1.573	1.573	1.558	1.558	5	5
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.376	1.376	1.342	1.342	7	7
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.554	1.554	1.530	1.530	3	3
			Benzo(a)pyrene (6th internal standard)	1.393	1.393	1.370	1.370	5	5
2	ICAL	6/16/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.067	1.067	1.071	1.071	3	3
			Fluorene (3rd internal standard)	1.304	1.304	1.253	1.253	5	5
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.125	1.125	1.118	1.118	7	7
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.200	1.200	1.206	1.206	3	3
			Benzo(a)pyrene (6th internal standard)	1.083	1.083	1.076	1.076	4	4
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G26

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CF0571.d	6/24/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	1.101	1.060	1.060	4	4
			Fluorene (3rd internal standard)	1.558	1.461	1.461	6	6
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.342	1.328	1.328	1	1
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.530	1.499	1.499	2	2
			Benzo(a)pyrene (6th internal standard)	1.370	1.455	1.455	6	6
2	CF0591	6/26/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		1.051	1.051	5	5
			Fluorene (3rd internal standard)		1.453	1.453	7	7
			~~Pentachlorophenol~~ Anthracen (4th internal standard)		1.329	1.329	1	1
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)		1.529	1.529	0	0
			Benzo(a)pyrene (6th internal standard)		1.446	1.446	6	6
3	CF0609	6/27/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		1.075	1.075	2	2
			Fluorene (3rd internal standard)		1.478	1.478	5	5
			~~Pentachlorophenol~~ Anthracen (4th internal standard)		1.333	1.333	1	1
			~~Bis(2-ethylhexyl)phthalate~~ Chrysen (5th internal standard)		1.541	1.541	1	1
			Benzo(a)pyrene (6th internal standard)		1.471	1.471	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 #: 26277g2b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	1.0	1.053	105	105	0
2-Fluorobiphenyl	1.0	0.861	86	86	
Terphenyl-d14	1.0	1.005	100	101	↓
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 #: 26271940

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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 = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 16 + 17

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	33.22	33.22	ND	28.57	28.95	86	86	87	87	1	1
Pentachlorophenol											
Pyrene	↓	↓	ND	28.51	27.74	86	86	83	83	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2D

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 1671 LCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	33.33	NA	30.47	NA	91	91				
Pentachlorophenol										
Pyrene	33.33	↓	31.99	↓	96	96	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277926

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1 . Butylbenzylphthalate

Conc. = $\frac{(47538)(1.0)(1000)(\quad)(\quad)}{(229437)(0.760)(30)(0.88)(\quad)}$

=

10.3 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil

Parameters: N-Nitrosodimethylamine

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Compound	Total Days From Sample Collection Until Extraction	Required Holding Time (in Days) From Sample Collection Until Extraction	Flag	A or P
SL-109-SA8N-SB-9.0-10.0	N-Nitrosodimethylamine	21	14	J (all detects) UJ (all non-detects)	A

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 check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% .

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0% .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-nitrosodimethylamine was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-076-SA8N-SB-7.5-8.5	N-Nitrosodimethylamine-d6	151 (50-150)	N-Nitrosodimethylamine	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	N-Nitrosodimethylamine	69 (70-130)	-	-	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No N-nitrosodimethylamine was detected in any of the samples with the following exceptions:

Compound	Concentration (ng/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
N-Nitrosodimethylamine	37.4U	19.3	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-109-SA8N-SB-9.0-10.0	N-Nitrosodimethylamine	J (all detects) UJ (all non-detects)	A	Technical holding time (H)
DE176	SL-076-SA8N-SB-7.5-8.5	N-Nitrosodimethylamine	J (all detects)	P	Surrogate spikes (%R) (S)
DE176	SL-076-SA8N-SB-4.0-5.0	N-Nitrosodimethylamine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE176	SL-076-SA8N-SB-4.0-5.0 DUP10-SA8N-QC-060811	N-Nitrosodimethylamine	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G2c **VALIDATION COMPLETENESS WORKSHEET** Date: 10/10/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 6/8/11
II.	GC/MS Instrument performance check	N	Not Required
III.	Initial calibration	A	%D ≤ 30
IV.	Continuing calibration/ICV	A	ICV ≤ 30 CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 9 & 14
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	SBLKLF161	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	SBLKLC179	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

LDC #: 26277G2C

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 20 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
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 #: 26277G2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT
2nd Reviewer: A

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : GC/MS BNA (EPA SW 846 Method 8270)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
13	SOIL	✱	6/8/11	6/29/11	7/2/11	21	J/UJ/R (H)

TECHNICAL HOLDING TIME CRITERIA

Water: Extracted within 7 days, analyzed within 40 days.
Soil: Extracted within 14 days, analyzed within 40 days.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS ~~BNA (EPA SW 846 Method 8270)~~ 1625C

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y (N) N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		5, 6	surrogate	out side limit ( )	no qual 10X DL
				( )	
				( )	
				( )	
				( )	
				( )	
		10	*	157 (30-150)	J/Pdet (5)
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
		* N-Nitrosodimethylamine-d6		( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)		QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114	S5 (2FP)= 2-Fluorophenol	25-121	21-100
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116	S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S3 (TPH) = Terphenyl-d14	18-137	33-141	S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S4 (PHL) = Phenol-d5	24-113	10-94	S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: GC~~/MS BNA (EPA SW-846 Method 8270).~~ 1625C

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		15 + 16	000	69 (70-130)	( )	( )	9	J/UJ/A (Q)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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LDC #: 26277Q2C

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

(FD)

Compound	Concentration (ng/kg)		RPD (≤ 50)
	9	14	
000	37.44	19.3	200 J/UJ/A

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/09/11	~~Phenol (1st internal standard)~~ NDMA	1.142	1.142	1.176	1.176	10	10
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 14:54	6/29/11	~~Phenol (1st internal standard)~~ NDMA	1.17602	1.09173	1.09173	7.16703	7.167
			Naphthalene (2nd internal standard)					
	CCV 18:17	6/29/11	Fluorene (3rd internal standard) ↓	↓	1.00833	1.00833	14.25861	14.258
			Pentachlorophenol (4th internal standard)					
	CCV 21:38	6/29/11	Bis(2-ethylhexyl)phthalate (5th internal standard) ↓	↓	1.00055	1.00055	14.92058	14.921
			~~Benzo(a)pyrene (6th internal standard)~~					
2	CCV 19:40	7/01/11	~~Phenol (1st internal standard)~~ ↓	↓	1.01203	1.01203	13.94456	13.946
			Naphthalene (2nd internal standard)					
	CCV 23:01	7/01/11	Fluorene (3rd internal standard) ↓	↓	1.09263	1.09263	7.09027	7.09027
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
N-Nitrosodimethylamine-d6 / Nitrobenzene-d5	25	29.437	118	118	0
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26d1/92c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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 = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/Kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											
NDMA	827.81	827.81	ND	571.98	571.79	69	69	70	70	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 161LFLCS

Compound	Spike Added (ng/Kg)		Spike Concentration (ng/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol NPMA	83333	NA	69111	NA	83	83	NA			
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_t	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1 , NDMA

Conc. = $\frac{(9044)(25)(1000)(\quad)(\quad)}{(209738)(1.176)(30)(28)(\quad)}$

=

34.7 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/16/11	3P20164.42R	ZBMultiR1	Aroclor-1016	21.0	SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD	Aroclor-1016 Aroclor-1221 Aroclor-1232	J (all detects) UJ (all non-detects)	A
6/16/11	3P20164.43R	ZBMultiR1	Aroclor-5460	24.2	SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD	Aroclor-5460	J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/16/11	3P20164.43R	ZBMultiR2	Aroclor-5460	30.2	SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 SL-076-SA8N-SB-4.0-5.0MS SL-076-SA8N-SB-4.0-5.0MSD	Aroclor-5460	J (all detects) UJ (all non-detects)	A
6/16/11	4P20164.08R	ZBMultiR1	Aroclor-5432	24.6	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 PBLK07162	Aroclor-5432	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 EB16-SA8N-SB-060811 was identified as an equipment 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
PBLK07162	Not specified	Decachlorobiphenyl	122 (45-120)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Affected Compound	Flag	A or P
LCS/D07162 (All soil samples in SDG DE176)	Aroclor-5442	144 (36-106)	120 (36-106)	-	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P
LCS/D15165 (All water samples in SDG DE176)	Aroclor-5442	86 (38-84)	88 (38-84)	-	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
SL-028-SA5DN-SB-11.5-12.5	Aroclor-1248 Aroclor-1254	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	P

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-028-SA5DN-SB-4.0-5.0	Aroclor-1254	149.25	J (all detects)	A
SL-076-SA8N-SB-4.0-5.0	Aroclor-1260	50.52	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Aroclor-1260	3.4	2.4	34 (≤50)	-	-

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-5460	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0	Aroclor-5432	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 EB16-SA8N-SB-060811	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE176	SL-028-SA5DN-SB-11.5-12.5	Aroclor-1248 Aroclor-1254	J (all detects) J (all detects)	P	Compound quantitation and RLs (exceeded range) (*XIII)
DE176	SL-028-SA5DN-SB-4.0-5.0	Aroclor-1254	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE176	SL-076-SA8N-SB-4.0-5.0	Aroclor-1260	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 EB16-SA8N-SB-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G3b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/12
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	%RSD ≤20
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	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	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 9 + 14
XVI.	Field blanks	ND	EB = 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL + Water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK071262	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	PBLK15165	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	EB16-SA8N-SB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MSD	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 262 7793b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓	✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
IX. Regional Quality Assurance and Quality Control			✓	
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26276936
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓	✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 26277G3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20..0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	6/16/11	3P20164.42R	ZB Multi R1	Y	21.0	( )	9-14, 16, 17	J/UJ/A (C)
						( )		qual V, W, X
						( )		
	6/16/11	3P20164.43R	ZB Multi R1	Aroclor 5460	24.2	( )	↓	J/UJ/A (C)
			↓ R2	↓	30.2	( )		↓
						( )		qual 5460 only
						( )		
						( )		
	6/16/11	4P20164.08R	ZB Multi R1	Aroclor 5432	24.6	( )	1PBLK07162, 1-8	J/UJ/A (C)
						( )		qual 5432 only
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 26277G3h

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: A

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y (N) N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	PBLK07162	NS	o	122 (45-120)	J/Pdet (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277G3b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS/D 07162	Aroclor 5442	144 (36-106)	120 (36-106)	( )	All soils	J/pdT (L)
			( )	( )	( )		qual 5442 ~~only~~ 5432 5460
			( )	( )	( )		
			( )	( )	( )		
	LCS/D 15165	↓	86 (38-84)	88 (38-84)	( )	all water	↓ (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )	

LDC #: 26277036
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: A

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Z, AA	x'ol cal Range	6	J/Pdet * XIII

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277G3b
SDG #: all covers

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: F7
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 cols Finding ≤ 40	Associated Samples	Qualifications
	AA	149.25	5	J/A det * XIII
	BB	50.52	9	J/A det * XIII

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26277G3h

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: ___ GC __ HPLC
Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/kg)		%RPD Limit ≤ 52	Qualification Parent only / All Samples
	9	14		
BB	3.4	2.4	34	

Compound	Concentration ( )		%RPD Limit _____	Qualification Parent only / All Samples

LDC #: 26277G3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (20 std)	Recalculated CF (20 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/13/11	1260 - 1 2Bmulti R1	37	37	37	37	2.9	2.9
			✓ 2Bmulti R2	206	206	204	204	8.5	8.5
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICIAL SB

LDC #: 26277G3b
SDG #: fw comm

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	3P20164.42R	6/16/11	Aroclor-1260 ZB5MultiR1	200.00	234.61	234.61	17.3	17.3
			↓ R2	200.00	217.30	217.30	8.7	8.7
2	3P20164.65R	6/16/11	↓	↓	247.11	247.11	23.6	23.6
					208.21	208.21	4.1	4.1
3	3P20164.77R	6/16/11	↓	200	228.49	228.49	14.2	14.2
			↓	↓	215.10	215.10	7.5	7.5
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
TCMX	ZB-2	1.036	0.991772	96	96	0
PCB	ZB-1	1.036	~~0.958297~~	97	97	0
			1.010229			

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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 2
Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 16 + 17

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
PCB-1260	16.56	16.56	3.05	20.01	21.85	102	102	113	113	9	9

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 #: 26277G3b
SDG #: µg cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: R
2nd Reviewer: C

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS07162

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
PCB 1260	16.67	NA	22.41	NA	134	134	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26776b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 5 Compound Name Aroclor 1254

Concentration = 0.49223 / 0.855

0.58 ug/kg

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	1254-1 = (6289.850586)(3) / (188)(60.4) = 1.10784			1254-1 = 1.10793	
				-2 = 0.15900	
				-3 = 0.21484	
				Av= 0.49223	

Comments: [illegible]

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 6, 2011

Matrix: Soil/Water

Parameters: Metals

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD
SL-076-SA8N-SB-4.0-5.0DUP

Introduction

This data review covers 17 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, 7470A, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Magnesium Mercury	19.500 ug/L 0.116 ug/L	All water samples in SDG DE176
ICB/CCB	Magnesium Titanium	41.2 ug/L 0.60 ug/L	All water samples in SDG DE176
PB (prep blank)	Calcium Iron Lead Magnesium Phosphorus Tin	4.395 mg/Kg 4.735 mg/Kg 0.015 mg/Kg 1.035 mg/Kg 1.618 mg/Kg 1.792 mg/Kg	All soil samples in SDG DE176
ICB/CCB	Titanium	0.39 ug/L	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-076-SA8N-SB-4.0-5.0

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Titanium	0.55 ug/L	SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811

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-023-SA5DN-SB-4.0-5.0	Tin	2.7 mg/Kg	2.7U mg/Kg
SL-023-SA5DN-SB-20.0-21.0	Tin	2.5 mg/Kg	2.5U mg/Kg
SL-025-SA5DN-SB-4.0-5.0	Tin	2.6 mg/Kg	2.6U mg/Kg
SL-025-SA5DN-SB-23.0-24.0	Tin	2.5 mg/Kg	2.5U mg/Kg
SL-028-SA5DN-SB-4.0-5.0	Tin	2.8 mg/Kg	2.8U mg/Kg
SL-028-SA5DN-SB-11.5-12.5	Tin	2.4 mg/Kg	2.4U mg/Kg
SL-051-SA5DN-SB-4.0-5.0	Tin	2.7 mg/Kg	2.7U mg/Kg
SL-051-SA5DN-SB-14.0-15.0	Tin	2.5 mg/Kg	2.5U mg/Kg
SL-076-SA8N-SB-4.0-5.0	Tin	2.8 mg/Kg	2.8U mg/Kg
SL-076-SA8N-SB-7.5-8.5	Tin	3.0 mg/Kg	3.0U mg/Kg
SL-106-SA8N-SB-2.5-3.5	Tin	3.2 mg/Kg	3.2U mg/Kg
SL-109-SA8N-SB-4.0-5.0	Tin	3.0 mg/Kg	3.0U mg/Kg
SL-109-SA8N-SB-9.0-10.0	Tin	2.8 mg/Kg	2.8U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
DUP10-SA8N-QC-060811	Tin	2.8 mg/Kg	2.8U mg/Kg
EB16-SA8N-SB-060811	Mercury	0.060 ug/L	0.060U ug/L

Sample EB16-SA8N-SB-060811 was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB16-SA8N-SB-060811	6/8/11	Lead Mercury	0.066 ug/L 0.060 ug/L	SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811

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-076-SA8N-SB-4.0-5.0	Mercury	0.024 mg/Kg	0.024U mg/Kg
DUP10-SA8N-QC-060811	Mercury	0.032 mg/Kg	0.032U 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-076-SA8N-SB-4.0-5.0MS/MSD (All soil samples in SDG DE176)	Antimony	64 (75-125)	62 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-076-SA8N-SB-4.0-5.0MS/MSD (All soil samples in SDG DE176)	Beryllium	126 (75-125)	144 (75-125)	-	J (all detects)	A
	Cadmium	151 (75-125)	141 (75-125)	-	J (all detects)	
	Chromium	160 (75-125)	145 (75-125)	-	J (all detects)	
	Cobalt	147 (75-125)	138 (75-125)	-	J (all detects)	
	Copper	160 (75-125)	153 (75-125)	-	J (all detects)	
	Lead	205 (75-125)	179 (75-125)	-	J (all detects)	
	Molybdenum	153 (75-125)	141 (75-125)	-	J (all detects)	
	Nickel	183 (75-125)	173 (75-125)	-	J (all detects)	
	Selenium	136 (75-125)	-	-	J (all detects)	
	Silver	150 (75-125)	137 (75-125)	-	J (all detects)	
	Thallium	162 (75-125)	155 (75-125)	-	J (all detects)	
	Vanadium	204 (75-125)	189 (75-125)	-	J (all detects)	

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0DUP (All soil samples in SDG DE176)	Arsenic	23 (≤20)	-	J (all detects) UJ (all non-detects)	A
	Lead	21 (≤20)	-		
	Manganese	92 (≤20)	-		

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-076-SA8N-SB-4.0-5.0	Chromium Copper Vanadium	15 (≤10) 13 (≤10) 15 (≤10)	All soil samples in SDG DE176	J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE176	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Aluminum	24500	24700	1 (≤50)	-	-
Antimony	0.27	0.20	30 (≤50)	-	-
Arsenic	9.5	11.5	19 (≤50)	-	-
Barium	119	165	32 (≤50)	-	-
Beryllium	0.87	1.1	23 (≤50)	-	-
Boron	4.5	4.5	0 (≤50)	-	-
Cadmium	0.078	0.11	34 (≤50)	-	-
Calcium	2430	2430	0 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Chromium	18.8	22.3	17 (≤50)	-	-
Cobalt	6.6	8.7	27 (≤50)	-	-
Copper	10.2	12.6	21 (≤50)	-	-
Iron	23200	23100	0 (≤50)	-	-
Lead	7.7	9.7	23 (≤50)	-	-
Lithium	31.3	31.4	0 (≤50)	-	-
Magnesium	4360	4370	0 (≤50)	-	-
Manganese	280	230	20 (≤50)	-	-
Mercury	0.024	0.032	29 (≤50)	-	-
Molybdenum	1.2	1.5	22 (≤50)	-	-
Nickel	16.0	20.0	22 (≤50)	-	-
Phosphorus	238	240	1 (≤50)	-	-
Potassium	2160	2150	0 (≤50)	-	-
Selenium	0.13	0.13	0 (≤50)	-	-
Silver	0.070	0.088	23 (≤50)	-	-
Sodium	122	134	9 (≤50)	-	-
Strontium	16.8	16.9	1 (≤50)	-	-
Thallium	0.33	0.41	22 (≤50)	-	-
Tin	2.8	2.8	0 (≤50)	-	-
Titanium	1210	1190	2 (≤50)	-	-
Vanadium	40.1	49.0	20 (≤50)	-	-
Zinc	62.6	85.1	30 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Zirconium	3.5	3.1	12 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE176

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE176	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Silver Thallium Vanadium	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE176	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Arsenic Lead Manganese	J (all detects) UJ (all non-detects)	A	Duplicate sample analysis (RPD) (E)
DE176	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	Chromium Copper Vanadium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
DE176	SL-152-SA5DN-SS-0.0-0.5 SL-153-SA5DN-SS-0.0-0.5 SL-154-SA5DN-SS-0.0-0.5 SL-155-SA5DN-SS-0.0-0.5 SL-156-SA5DN-SS-0.0-0.5 SL-157-SA5DN-SS-0.0-0.5 SL-158-SA5DN-SS-0.0-0.5 SL-159-SA5DN-SS-0.0-0.5 SL-160-SA5DN-SS-0.0-0.5 SL-162-SA5DN-SS-0.0-0.5 SL-166-SA5DN-SS-0.0-0.5 SL-207-SA5DN-SS-0.0-0.5 DUP-13-SA5DN-QC-060311 EB14-SA5DN-SB-060311 EB13-SA5DN-SS-060311 SL-019-SA5DN-SB-4.0-5.0 SL-019-SA5DN-SB-9.0-10.0 SL-027-SA5DN-SB-4.0-5.0 SL-027-SA5DN-SB-14.0-15.0 SL-052-SA5DN-SB-4.0-5.0 SL-052-SA5DN-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE176

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE176	SL-023-SA5DN-SB-4.0-5.0	Tin	2.7U mg/Kg	A	B
DE176	SL-023-SA5DN-SB-20.0-21.0	Tin	2.5U mg/Kg	A	B
DE176	SL-025-SA5DN-SB-4.0-5.0	Tin	2.6U mg/Kg	A	B
DE176	SL-025-SA5DN-SB-23.0-24.0	Tin	2.5U mg/Kg	A	B
DE176	SL-028-SA5DN-SB-4.0-5.0	Tin	2.8U mg/Kg	A	B
DE176	SL-028-SA5DN-SB-11.5-12.5	Tin	2.4U mg/Kg	A	B
DE176	SL-051-SA5DN-SB-4.0-5.0	Tin	2.7U mg/Kg	A	B
DE176	SL-051-SA5DN-SB-14.0-15.0	Tin	2.5U mg/Kg	A	B
DE176	SL-076-SA8N-SB-4.0-5.0	Tin	2.8U mg/Kg	A	B
DE176	SL-076-SA8N-SB-7.5-8.5	Tin	3.0U mg/Kg	A	B
DE176	SL-106-SA8N-SB-2.5-3.5	Tin	3.2U mg/Kg	A	B
DE176	SL-109-SA8N-SB-4.0-5.0	Tin	3.0U mg/Kg	A	B
DE176	SL-109-SA8N-SB-9.0-10.0	Tin	2.8U mg/Kg	A	B
DE176	DUP10-SA8N-QC-060811	Tin	2.8U mg/Kg	A	B
DE176	EB16-SA8N-SB-060811	Mercury	0.060U ug/L	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE176

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE176	SL-076-SA8N-SB-4.0-5.0	Mercury	0.024U mg/Kg	A	F
DE176	DUP10-SA8N-QC-060811	Mercury	0.032U mg/Kg	A	F

LDC #: 26277G4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-4-11

SDG #: DE176 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: CC

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020/~~7000~~ 7420A/7471A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	SW	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	DUP
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	Nonvolitized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(9, 14)
XV	Field Blanks	SW	EB=15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil/water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21		31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	EB16-SA8N-SB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0MSD	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18	SL-076-SA8N-SB-4.0-5.0DUP	28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes: _____

DC #: 262764

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?	✓			

DC #: 2627764

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

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 #: 26277b 4

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)
1-15		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
16-18		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

LDC #: 26277G4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: NA

Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water Reason: B

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	15									
Mg		19.500	41.2	206										
Hg		0.116		0.58	0.060									
Ti			0.60	3										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ca	4.395			21.98														
Fe	4.735			23.68														
Pb	0.015			0.08														
Mg	1.035			5.175														
P	1.618			8.09														
Sn	1.792			8.96	2.7	2.5	2.6	2.5	2.8	2.4	2.7	2.5	2.8	3.0	3.2	3.0	2.8	2.8

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1, 2, 9

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Ti			0.39	0.195										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 3-8, 10-14

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Ti			0.55	0.275										

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 #: 26277G4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CA
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6010B/7000)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target analytes detected in the field blanks? Reason: F

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/8/11 Soil factor applied 100x; Hg=167x

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: ~~All Soil~~ 9-14

Analyte	Blank ID	Sample Identification											
	15	Action Level	~~1~~	~~5~~	9	14							
Pb	0.066	0.033											
Hg	0.060	0.0501	~~0.019~~	~~0.0085~~	0.024	0.032							
			CA	CA									

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 #: 26776H

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were ICP interference check samples performed as required?
(Y) N N/A Were the AB solution percent recoveries (%R) within the control limits of 80-120% ?

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	ICS Identification	Analyte	Concentration (ug/L)	Limit (<MDL)	Associated Samples	Qualifications
	6/10/11	ICSA (12:29/1325	Mn	5	0.84	All Water	No Qual (<90% ICSA)
	6/18/11	ICSA (06:46/09:03)	Mn	4	0.78	All Soil	No Qual (<10x)

Comments:

LDC #: 26277G4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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 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
	16|17	S	Sb	64	62		All Soil	J|UJ|A (Q)
			Be	126	144			J det|A
			Cd	151	141			
			Cr	160	145			
			Co	147	138			
			Cu	160	153			
			Pb	205	179			
			Mo	153	141			
			Ni	183	173			
			Se	136				
			Ag	150	137			
			Tl	162	155			
			V	204	189			

Comments: _____

LDC #: 26764

VALIDATION FINDINGS WORKSHEET
Duplicate Analysis

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 Was a duplicate sample analyzed for each matrix in this SDG?

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤ 35% for soil samples? If no, see qualifications below. A control limit of ±R.L. (±2X R.L. for soil) was used for sample values that were <5X the R.L., including the case when only one of the duplicate sample values was <5X R.L.. If field blanks were used for laboratory duplicates, note in the Overall Assessment.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Duplicate ID	Matrix	Analyte	RPD (Limits)	Difference (Limits)	Associated Samples	Qualifications
		18	S	As	23 (≤20)		All Soil	J/UJ/A (E)
				Pb	21		↓	↓
				Mn	92 ↓			

Comments: _____

DUP.4SW

LDC #: 26077G4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

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 If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y (N) N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		9	S	Cr	15	All Soil	J (UJ/A (A)
				Cu	13	↓	↓
				V	15		

Comments: _____

SDILICPMS.wpd

LDC#: 26277G4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer:
2nd Reviewer:

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	9	14		
Aluminum	24500	24700	1	
Antimony	0.27	0.20	30	
Arsenic	9.5	11.5	19	
Barium	119	165	32	
Beryllium	0.87	1.1	23	
Boron	4.5	4.5	0	
Cadmium	0.078	0.11	34	
Calcium	2430	2430	0	
Chromium	18.8	22.3	17	
Cobalt	6.6	8.7	27	
Copper	10.2	12.6	21	
Iron	23200	23100	0	
Lead	7.7	9.7	23	
Lithium	31.3	31.4	0	
Magnesium	4360	4370	0	
Manganese	280	230	20	
Mercury	0.024	0.032	29	
Molybdenum	1.2	1.5	22	
Nickel	16.0	20.0	22	

LDC#: 26277G4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	9	14		
Phosphorus	238	240	1	
Potassium	2160	2150	0	
Selenium	0.13	0.13	0	
Silver	0.070	0.088	23	
Sodium	122	134	9	
Strontium	16.8	16.9	1	
Thallium	0.33	0.41	22	
Tin	2.8	2.8	0	
Titanium	1210	1190	2	
Vanadium	40.1	49.0	20	
Zinc	62.6	85.1	30	
Zirconium	3.5	3.1	12	

LDC #: 26277G4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CS
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 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)	Sn	581.72	600	97.0	97.0	Y
ICV	ICP/MS (Initial calibration)	Pb	50.31	50	100.6	100.6	
ICV	CVAA (Initial calibration)	Hg	2.41	2.5	96.4	96.4	
CCV	ICP (Continuing calibration)	Sr	505.05	500	101.0	101.0	
CCV	ICP/MS (Continuing calibration)	Tl	25.06	25	100.2	100.2	
CCV	CVAA (Continuing calibration)	Hg	0.93	1.0	93.0	93.0	
	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 #: 26277G4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	As	20.0	20.0	100.0	100.0	Y
LCS	Laboratory control sample	P	1065.3	1000	107	107	
16	Matrix spike	Cd	(SSR-SR) 1.6731	1.665	151	151	
18	Duplicate	K	257.502	251.3924	15	15	
9	ICP serial dilution	Mn	2532.27	2658.55	5	5	

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 #: 7627764

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: GR
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 Al were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(100mL)(260.8487\ mg/L)}{0.882(1.0g)} = 29574.7\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	29600	29600	Y
		Sb	0.36	0.36	
		As	9.0	9.0	
		Ba	168	168	
		Be	1.1	1.1	
		B	8.9	8.9	
		Cd	0.32	0.32	
		Ca	13900	13900	
		Cr	35.4	35.4	
		Co	12.6	12.6	
		Cu	20.5	20.5	
		Fe	33400	33400	
		Pb	12.6	12.6	
		Li	26.5	26.5	
		Mg	6920	6920	
		Mn	362	362	
		Hg	0.019	0.019	
		Mo	0.59	0.59	
		Ni	26.7	26.7	
		P	308	308	

Note: _____

LDC #: 26277C4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for [illegible] 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:

9: $\frac{100mL\ (21.92253\ mg/L)}{0.886\ (1.025)} = 2425.81\ mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	K	3550	3550	Y
		Se	0.12	0.12	
		Ag	0.055	0.055	
		Na	463	463	
		Sr	43.4	43.4	
		Tl	0.40	0.40	
		Sn	2.7	2.7	
		Ti	1050	1050	
		V	64.2	64.2	
		Zn	94.6	44.6	
		Zr	4.3	4.3	
	9	Al	24500	24500	
		Sb	0.27	0.27	
		As	9.5	9.5	
		Ba	119	119	
		Be	0.87	0.87	
		B	4.5	4.5	
		Cd	0.078	0.078	
		Ca	2430	2430	

Note: [illegible]

LDC #: 7627764

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: AR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation: see Previous Page

#	Sample ID	Analyte	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Acceptable (Y/N)
	9	Cr	18.8	18.8	Y
		Co	6.6	6.6	
		Cu	10.2	10.2	
		Fe	23200	23200	
		Pb	7.7	7.7	
		Li	31.3	31.3	
		Mg	4360	4360	
		Mn	280	280	
		Hg	0.024	0.024	
		Mo	1.2	1.2	
		Ni	16.0	16.0	
		P	238	238	
		K	2160	2160	
		Se	0.13	0.13	
		Ag	0.070	0.070	
		Na	122	122	
		Sr	16.8	16.8	
		Tl	0.33	0.33	
		Sn	2.8	2.8	
		Ti	1210	1210	
		V	40.1	40.1	
		Zn	62.6	62.6	
		Zr	3.5	3.5	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 20, 2011

Matrix: Soil/Water

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
EB16-SA8N-SB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0DUP
SL-106-SA8N-SB-2.5-3.5MS
SL-106-SA8N-SB-2.5-3.5DUP

Introduction

This data review covers 18 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 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
EB16-SA8N-SB-060811	Hexavalent chromium	24.5 hours	24 hours	J (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Sample EB16-SA8N-SB-060811 was identified as an equipment 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-076-SA8N-SB-4.0-5.0MS (SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5)	Fluoride	29 (80-120)	J (all detects) R (all non-detects)	A

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
SL-106-SA8N-SB-2.5-3.5MS (SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811)	Fluoride Nitrate as N	47 (80-120) 74 (80-120)	J (all detects) UJ (all non-detects) J (all detects) UJ (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 were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE176	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Fluoride	2.5	2.6	4 (≤50)	-	-
Nitrate	1.5	2.0	29 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Hexavalent chromium	0.51	0.48	6 (≤50)	-	-

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE176

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE176	EB16-SA8N-SB-060811	Hexavalent chromium	J (all detects) UJ (all non-detects)	P	Technical holding times (H)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5	Fluoride	J (all detects) R (all non-detects)	A	Matrix spike analysis (%R) (Q)
DE176	SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	Fluoride Nitrate as N	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike analysis (%R) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 EB16-SA8N-SB-060811	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 DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G6 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-4-11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: AC
2nd Reviewer: MC

METHOD: (Analyte) Cyanide (EPA SW846 Method 9012B), Nitrate, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 6/8/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	MS
V	Duplicates	A	Dup
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(9, 14)
X	Field blanks	ND	EB=15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil/water

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21		31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	EB16-SA8N-SB-060811 W	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17	SL-076-SA8N-SB-4.0-5.0DUP	27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18	#11 MS	28		38	
9	SL-076-SA8N-SB-4.0-5.0	19	#11 Dup	29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 627766

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: ✓

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 anayized 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 #: 26776

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [signature]

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.		✓		

DC #: 2627766

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-14		pH TDS Cl (F) (NO$_3$) NO$_2$ SO$_4$ PO$_4$ ALK (CN$^-$) NH$_3$ TKN TOC (Cr^{6+}) (ClO$_4$)
15		pH TDS Cl (F) NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC (Cr^{6+}) (ClO$_4$)
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
QC: 16,17		pH TDS Cl (F) (NO$_3$) NO$_2$ SO$_4$ PO$_4$ ALK (CN$^-$) NH$_3$ TKN TOC (Cr^{6+}) (ClO$_4$)
18,19		pH TDS Cl (F) (NO$_3$) NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$
		pH TDS Cl F NO$_3$ NO$_2$ SO$_4$ PO$_4$ ALK CN$^-$ NH$_3$ TKN TOC Cr^{6+} ClO$_4$

Comments:

LDC #: 26766

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: SR
2nd reviewer: W

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria?

Method:	7199					
Parameters:	Cr+6					
Technical holding time:	24hrs					

Sample ID	Sampling date	Analysis date	Analysis date	Analysis date	Analysis date	Analysis date	Qualifier
15	6/8/11 13:45	6/9/11 14:21	(24.5hrs)				J/UJ/R(H)

LDC #: 2627766

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Page: 1 of 1
Reviewer: OR
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 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~~ 80-120 (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
		16	S	F	29	~~All Soil~~ 1-10	J/R/A (Q)
		18	S	F	47	11-14	J/UJ/A (Q)
				NO_3	74	~~1-10~~	

Comments:

MS.6

LDC# 26277G6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: ___ of ___
Reviewer: ___
2nd Reviewer: ___

Inorganics, Method See Cover

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/L)		RPD (≤50)	
	9	14		
Fluoride	2.5	2.6	4	
Nitrate	1.5	2.0	29	
Hexavalent Chromium	0.51	0.48	6	

V:\FIELD DUPLICATES\FD_inorganic\26277G6.wpd

LDC #: 02145

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

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	1.6	1.5	107	-	Y
16	Matrix spike sample	CN	(SSR-SR) 4.6	4.78	96	97	/
17	Duplicate sample	NO_3	1.4	1.4	0	0	/

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 #: 26276G6

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 GGT / F reported with a positive detect were recalculated and verified using the following equation:

Concentration =

GGT = Area(85.39) + 0.4357

Recalculation: GGT = (0.1183(85.39) + 0.4357)(25.3) / 0.882 = 0.47 mg/L

F: y = 0.2018x - 0.0044

9: F = ((0.039 + 0.0044 / 0.2018) × 50mL) / 4.91g(0.886) = 2.5 mg/kg

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
0.882	1	F	7.1	7.1	Y
		NO3	1.6	1.6	
		GGT	0.48	0.47	
0.886	9	F	2.5	2.5	
		NO3	1.5	1.5	
		GGT	0.51	0.50	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
TB-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 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-060811 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811 TB-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G7 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/10/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: F
2nd Reviewer: A

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: 6/8/11
II	Initial calibration	A	% RSD ≤30
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 9 + 14
XIII.	Field blanks	ND	TB = 15

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-023-SA5DN-SB-4.0-5.0	11 1	SL-106-SA8N-SB-2.5-3.5	21 1	BLKH9	31	
2 1	SL-023-SA5DN-SB-20.0-21.0	12 1	SL-109-SA8N-SB-4.0-5.0	22 2	BLKHK	32	
3 1	SL-025-SA5DN-SB-4.0-5.0	13 2	SL-109-SA8N-SB-9.0-10.0	23 3	BLK13	33	
4 1	SL-025-SA5DN-SB-23.0-24.0	14 2	DUP10-SA8N-QC-060811	24		34	
5 1	SL-028-SA5DN-SB-4.0-5.0	15 3	TB-060811 W	25		35	
6 1	SL-028-SA5DN-SB-11.5-12.5	16 1	SL-076-SA8N-SB-4.0-5.0MS	26		36	
7 1	SL-051-SA5DN-SB-4.0-5.0	17 1	SL-076-SA8N-SB-4.0-5.0MSD	27		37	
8 1	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9 1	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10 1	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 2027697
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 2027197
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26277G7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (220 std)	Recalculated CF (220 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	LUFT 34333 ICAL	11/29/10	GRO	35488	35488	37329	37329	12.7	12.7
				(550)	(550)				
2	LUFT 20166	6/15/11	↓	7581	7581	7279	7279	5.8	5.8
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICI C 1SB

LDC #: 76277G7
SDG #: pw comm

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: F
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV	6/13/11	GRO	220.00	213.20	213.20	3.1	3.1
	11:00							
2	CCV	6/13/11	GRO	220.00	201.76	201.76	8.3	8.3
	20:39							
3	CCV	6/14/11	GRO	22000	194.07	194.07	11.8	11.8
	10:40							
4	CCV	6/16/11	GRO	550.00	568.92	568.92	3.4	3.4
	6:10							

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: /

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Trifluorotoluene	NS	636.3	509.1017	80	80	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [illegible]
Reviewer: EZ
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SA = Spike added SC = Sample concentration

RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 16 + 17

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)	9.26	9.26	ND	4.99	5.29	54	54	58	58	6	6
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

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 #: 26217G1
SDG #: All covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 111 64A34-A

Compound	Spike Added (mg/Kg)		Spiked Sample Concentration (mg/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	11	NA	8.37	NA	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 #: 26277G7
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Quallfications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 8, 2011
LDC Report Date:	October 7, 2011
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
PBLK11167	6/16/11	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	All samples in SDG DE176

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-023-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.3 mg/Kg	1.4U mg/Kg
SL-023-SA5DN-SB-20.0-21.0	Extractable fuel hydrocarbons (C8-C11)	1.2 mg/Kg	1.3U mg/Kg
SL-025-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-025-SA5DN-SB-23.0-24.0	Extractable fuel hydrocarbons (C8-C11)	1.4 mg/Kg	1.4U mg/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-028-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	0.99 mg/Kg	1.4U mg/Kg
SL-028-SA5DN-SB-11.5-12.5	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	1.3U mg/Kg
SL-051-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-051-SA5DN-SB-14.0-15.0	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-076-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-076-SA8N-SB-7.5-8.5	Extractable fuel hydrocarbons (C8-C11)	1.1 mg/Kg	1.4U mg/Kg
SL-106-SA8N-SB-2.5-3.5	Extractable fuel hydrocarbons (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-109-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.2 mg/Kg	1.4U mg/Kg
SL-109-SA8N-SB-9.0-10.0	Extractable fuel hydrocarbons (C8-C11)	0.95 mg/Kg	1.4U mg/Kg
DUP10-SA8N-QC-060811	Extractable fuel hydrocarbons (C8-C11)	0.99 mg/Kg	1.4U mg/Kg

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	Extractable fuel hydrocarbons (C15-C20)	125 (49-123)	150 (49-123)	-	J (all detects)	A
	Extractable fuel hydrocarbons (C21-C30)	-	158 (49-123)	-	J (all detects)	
	Extractable fuel hydrocarbons (C30-C40)	-	240 (49-123)	51 (≤20)	J (all detects)	

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-076-SA8N-SB-4.0-5.0	DUP10-SA8N-QC-060811			
Extractable fuel hydrocarbons (C21-C30)	2.1	2.5	17 (≤50)	-	-
Extractable fuel hydrocarbons (C30-C40)	4.8	5.4	12 (≤50)	-	-
Extractable fuel hydrocarbons (C8-C11)	1.2	0.99	19 (≤50)	-	-
Extractable fuel hydrocarbons (C15-C20)	1.4U	0.54	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-076-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C15-C20) Extractable fuel hydrocarbons (C21-C30)	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-076-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C30-C40)	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE176	SL-076-SA8N-SB-4.0-5.0 DUP10-SA8N-QC-060811	Extractable fuel hydrocarbons (C15-C20)	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DE176	SL-023-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-023-SA5DN-SB-20.0-21.0	Extractable fuel hydrocarbons (C8-C11)	1.3U mg/Kg	A	B
DE176	SL-025-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-025-SA5DN-SB-23.0-24.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-028-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-028-SA5DN-SB-11.5-12.5	Extractable fuel hydrocarbons (C8-C11)	1.3U mg/Kg	A	B
DE176	SL-051-SA5DN-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-051-SA5DN-SB-14.0-15.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DE176	SL-076-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-076-SA8N-SB-7.5-8.5	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-106-SA8N-SB-2.5-3.5	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-109-SA8N-SB-4.0-5.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	SL-109-SA8N-SB-9.0-10.0	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B
DE176	DUP10-SA8N-QC-060811	Extractable fuel hydrocarbons (C8-C11)	1.4U mg/Kg	A	B

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G8 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/7/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: [signature]

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: 6/8/11
II	Initial calibration	A	%D/RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	SW	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
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	SW	D = 9, 14
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK11167	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes: _____

DC #: 26277G8
DG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FI
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26277G8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?		✓		
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277G8

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: / GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a given method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction procedure was performed?
Y N N/A Was a method blank performed with each extraction batch?
Y N N/A Were any contaminants found in the method blanks? If yes, please see findings below.

Level IV/D Only

Y N N/A (Gasoline and aromatics only)Was a method blank analyzed with each 24 hour batch?
Y N N/A Was a method blank analyzed for each analytical / extraction batch of ≤20 samples?

(B)

Blank extraction date: ~~6/8/11~~ 6/16/11 **Blank analysis date:** 6/18/11 **Associated samples:** All

Conc. units: mg/kg

Compound	Blank ID	5X	Sample Identification					
	PBLK11167		1	2	3	4	5	6
EFH (C8-C11)	1.1	5.5	1.3/1.4U	1.2/1.3U	1.1/1.4U	1.4/U	0.99/1.4U	1.1/1.3U

Blank extraction date: 6/16/11 **Blank analysis date:** 6/18/11 **Associated samples:** All

Conc. units: mg/kg

Compound	Blank ID	Sample Identification						
	PBLK11167	7	8	9	10	11	12	13
EFH (C8-C11)	1.1	1.1/1.4U	1.1/1.4U	1.2/1.4U	~~1.8/U~~ 1.1/1.4U	1.2/1.4U	1.2/1.4U	0.95/1.4U
↓	↓	14						
↓		0.99/1.4U						

ALL 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 #: 26277GS

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15 + 16	EFH (C15-C20)	125 (49-123)	150 (49-123)	( )	9	J/A det (Q)
		EFH (C21-C30)	( )	158 (49-123)	( )	↓	↓
		EPH (C30-C46)	( )	240 (49-123)	51 (20)	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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LDC#: 26277G8

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: F
2nd Reviewer: A

METHOD: TPH Extractables (EPA Method 8015B)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(FD)

Compound	Concentration (mg/Kg)		≤ 50 RPD	
	9	14		
EFH (C21-C30)	2.1	2.5	17	
EFH (C30-C40)	4.8	5.4	12	
EFH (C8-C11)	1.2	0.99	19	
EFH (C15-C20)	1.4U	0.54	200	J/UJ/A

V:\FIELD DUPLICATES\templates\26277G8.wpd

LDC #: 26277G8
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (288 std)	Recalculated CF (288 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL 28-5	5/22/11	C8-C40	20047.44	20047.44	2067.85	2067.85	5.1	5.1
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G8
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	J168.37R	6/18/11	C8-C40	287.98	304.00	304.00	5.6	5.6
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
chlorobenzene	NS	1.0	0.635061	64	64	0
orthoterphenyl	↓	1.0	0.807792	81	81	↓

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 #:_____ VALIDATION FINDINGS WORKSHEET Page:___of___

SDG #: pw covers

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ

2nd Reviewer:

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (08-011)	0.84	0.84	1.04	1.58	1.73	64	64	83	83	9	9

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 #: 2627108
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 11167

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
EPH (C8-C11)	0.84	NA	0.69	NA	82	82	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 2627728
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ~~GC~~ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name C30 - C40

Concentration = 1712421 (1000) / 20671.85 (60) (0.882) (1000)

= 1.6 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 11, 2011

Matrix: Soil

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	1,3,5-Trinitrobenzene	-	76 (82-126)	-	J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LCS08164	PETN	123 (80-120)	All samples in SDG DE176	J (all detects)	P

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No explosives were detected in any of the samples.

Santa Susana Field Laboratory
Explosives - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-076-SA8N-SB-4.0-5.0	1,3,5-Trinitrobenzene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	PETN	J (all detects)	P	Laboratory control samples (%R) (L)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Explosives - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G40 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/10/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II	Initial calibration	A	%RSD ≤20, r²≥
III.	Calibration verification/ICV	A	%R ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
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	
XII.	Field duplicates	ND	D = 9, 14
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK 08/16	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 1027764D
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Method: NA GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26277G4U
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141(Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2.4.6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

LDC #: 26277G40

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: C

METHOD: __ GC ✓ HPLC (HAA)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15+16	C	( )	76 (82-126)	( )	9	J/UJ/A (Q)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277G40

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: __ GC / HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y/N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS08164	PETN	123 (80-120)	( )	( )	All	J/Pdet (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277G4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC [illegible] HPLC [illegible]

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (std)	Recalculated CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
				501.0/499.5					
1	chromp-ck ICAL	5/31/11	1,3,5 - TNB	1.97×10^2	1.97×10^2	2.00×10^2	2.0×10^2	0.8	0.8
			Nitrobenzene	1.98×10^2	1.98×10^2	2.00×10^2	2.0×10^2	1.8	1.8
2	CAPCELL	5/31/11	↓	3.31×10^2	3.31×10^2	3.32×10^2	3.32×10^2	7.0	7.0
				1.81×10^2	1.81×10^2	1.83×10^2	1.83×10^2	5.8	5.8
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G4(
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: FJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 19:07	6/16/11	1,3,5-TNB chrompack	500.50	503.48	503.48	0.6	0.6
			Nitrobenzene	499.50	508.04	508.04	1.7	1.7
	CCV 3:36	6/17/11	↓	1001.00	1013.72	1013.72	1.3	1.3
2			↓	999.00	1053.88	1053.88	5.5	5.5
3	CCV 19:07	6/16/11	↓ capcell	500.50	469.11	469.11	6.3	6.3
			↓	499.50	491.92	491.92	1.5	1.5
	CCV 3:36	6/17/11	↓	1001.00	990.10	990.10	1.1	1.1
4			↓	999.00	987.69	987.69	1.1	1.1

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1S

LDC #: [illegible]
SDG #: see cover

METHOD: ___ GC ✓ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2. nitro. m-xylene	CAPCELL	1922.68	2293.756	119	119	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)	1851.85	1851.85	ND	1535.48	1505.63	83	83	81	81	2	2
2,4,6-Trinitrotoluene (8330)	↓	↓	↓	1783.86	1788.3	96	96	97	97	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G4U
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 08164

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000	NA	2056.69	NA	103	103				
2,4,6-Trinitrotoluene (8330)	1999.2	↓	2408.01	↓	120	120	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26776H0
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 7, 2011

Matrix: Soil

Parameters: Terphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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 terphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-028-SA5DN-SB-4.0-5.0	n-Triacontane-d62	151 (50-150)	All TCL compounds	J (all detects)	P

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	m-Terphenyl	74 (75-125)	-	-	J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Terphenyls - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-028-SA5DN-SB-4.0-5.0	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S)
DE176	SL-076-SA8N-SB-4.0-5.0	m-Terphenyl	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G41 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/9/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Terphenyls (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	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	ND	D = 9 & 14
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
soil

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK05166	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 427464
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) < 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) < 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26277G4 1
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277G4/

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	5	NS	Z	151 (50-150)	J/Pdet (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	n-Triacontane-d62
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26277G4/

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** ___ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15 + 16	m-Terphenyl	74 (75-125)	( )	( )	9	J/UJ/A (a)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277G4/
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported 15-5W CF (std)	Recalculated 15-5W CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/24/11	m-terphenyl	2.51 X10^4	2.51 X10^4	2.48 X10^4	2.48 X10^4	1.8	1.8
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76277G4/
SDG #: pw Conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	R167.01R	6/16/11	m-Terphenyl	31.04	30.85	30.85	0.6	0.6
2	R167.12R	6/16/11	↓	↓	31.30	31.30	0.8	0.8
	R167.23R	6/17/11	↓	↓	31.17	31.17	0.4	0.4
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n-Triacontane-d62	SPB-5	0.33330	0.278307	83	83	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 #: [illegible]

SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: EZ

2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(((SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (mg/Kg)		Sample Conc. (mg/Kg)	Spike Sample Concentration (mg/Kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
m-Terphenyl	1.65	1.65	NO	1.22	1.35	74	74	82	82	10	10

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 #: 26277C4/
SDG #: all covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EO
2nd Reviewer:

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS05166

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
m-Terphenyl	1.65	1.6 NA	1.4	NA	85	85	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G4/
SDG #: pu seven

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: A

METHOD: / GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Quallfications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 7, 2011

Matrix: Soil

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No alcohols were detected in any of the samples.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G43 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: AL

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	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	ND	D = 9, 14
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK24160	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22	PBLK18161	32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 26277643
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples	✓			
Was an LCS analyzed for this SDG?				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26277G43
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277G43
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F7
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

3

#	Standard ID	Calibration Date	Compound	Reported CF (5000_{std})	Recalculated CF (5000_{std})	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/19/11	Methanol	2.82×10^{0}	2.82×10^{0}	2.95×10^{0}	2.95×10^{0}	12.3	10.3
2	ICAL	5/26/11	↓	9.04×10^{0}	9.04×10^{0}	8.95×10^{0}	8.95×10^{0}	2.0	2.0
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277943
SDG #: fw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 19:53	6/9/11	methanol	10000	8870.95	8870.95	11.3	11.3
	CCV 23:06	6/9/11	methanol	↓	9242.42	9242.42	7.6	7.6
2								
	CCV 19:14	6/10/11	methanol	↓	9409.92	9409.92	5.9	5.9
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Acetone	NS	2500	1882.7632	75	75	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [illegible] of [illegible]
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Methanol	2500	2500	no	1821.59	1851.85	73	73	74	74	2	2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G43
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS-24160

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Methanol	2500	NA	2187.09	NA	87	87	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Quallfications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 7, 2011

Matrix: Soil

Parameters: Glycols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-076-SA8N-SB-4.0-5.0MS/MSD (SL-076-SA8N-SB-4.0-5.0)	Ethylene glycol Propylene glycol Diethylene glycol	- - 54 (59-109)	56 (63-107) 59 (63-107) 44 (59-109)	22 (≤20) 23 (≤20) -	J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No glycols were detected in any of the samples.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-076-SA8N-SB-4.0-5.0	Ethylene glycol Propylene glycol	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE176	SL-076-SA8N-SB-4.0-5.0	Diethylene glycol	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G45 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11

SDG #: DE176 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Glycols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II	Initial calibration	A	%RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
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	D = 9, 14
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK25160	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes: _____

DC #: 26277G45
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Method: / GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) < 20%?	/			
Was a curve fit used for evaluation?		/		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			/	
Were the RT windows properly established?	/			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	/			
Were all percent differences (%D) < 20%.0 or percent recoveries 80-120%?	/			
Were all the retention times within the acceptance windows?	/			
V. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was a method blank analyzed for each matrix and concentration?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		/		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	/			
Was a MS/MSD analyzed every 20 samples of each matrix?	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		/		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			/	
Were the performance evaluation (PE) samples within the acceptance limits?			/	

LDC #: 26277G45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification.				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs.				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?		✓		
XII. System performance.				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data.				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates.				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks.				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277G45

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	15+16	Ethylene glycol	( )	56 (63-107)	22 (20)	9	J/UJ/A (Q)
		Propylene glycol	( )	59 (63-107)	23 (20)	↓	↓
		Diethylene glycol	54 (59-109)	44 (59-109)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26277945
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

4

#	Standard ID	Calibration Date	Compound	Reported CF (207.1872)	Recalculated CF (207.1872std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/11/11	ethylene glycol	3.44×10^2	3.44×10^2	3.30×10^2	3.30×10^2	10.6	10.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G45
SDG #: pw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 12:11	6/11/11	ethylene glycol	103.59	107.55	107.55	3.8	3.8
	CCV 15:23	6/11/11	↓	↓	109.00	109.00	5.2	5.2
2								
	CCV 18:23	6/11/11	↓	↓	106.67	106.67	3.0	3.0
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: _____

SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: ✓

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetramethylene glycol	NS	193	172.039948	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Ethylene Glycol	225.43	225.43	ND	157.11	125.99	70	70	56	56	22	22

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 #: 26277G45
SDG #: all covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 25160

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
ethylene glycol	225.43	NA	240.49	NA	107	107	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

KD

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 8, 2011

LDC Report Date: October 7, 2011

Matrix: Soil

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE176

Sample Identification

SL-023-SA5DN-SB-4.0-5.0
SL-023-SA5DN-SB-20.0-21.0
SL-025-SA5DN-SB-4.0-5.0
SL-025-SA5DN-SB-23.0-24.0
SL-028-SA5DN-SB-4.0-5.0
SL-028-SA5DN-SB-11.5-12.5
SL-051-SA5DN-SB-4.0-5.0
SL-051-SA5DN-SB-14.0-15.0
SL-076-SA8N-SB-4.0-5.0
SL-076-SA8N-SB-7.5-8.5
SL-106-SA8N-SB-2.5-3.5
SL-109-SA8N-SB-4.0-5.0
SL-109-SA8N-SB-9.0-10.0
DUP10-SA8N-QC-060811
SL-076-SA8N-SB-4.0-5.0MS
SL-076-SA8N-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples SL-076-SA8N-SB-4.0-5.0 and DUP10-SA8N-QC-060811 were identified as field duplicates. No formaldehyde was detected in any of the samples.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-4.0-5.0 SL-023-SA5DN-SB-20.0-21.0 SL-025-SA5DN-SB-4.0-5.0 SL-025-SA5DN-SB-23.0-24.0 SL-028-SA5DN-SB-4.0-5.0 SL-028-SA5DN-SB-11.5-12.5 SL-051-SA5DN-SB-4.0-5.0 SL-051-SA5DN-SB-14.0-15.0 SL-076-SA8N-SB-4.0-5.0 SL-076-SA8N-SB-7.5-8.5 SL-106-SA8N-SB-2.5-3.5 SL-109-SA8N-SB-4.0-5.0 SL-109-SA8N-SB-9.0-10.0 DUP10-SA8N-QC-060811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G71 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: ET
2nd Reviewer:

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/8/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D= 9,14
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
soil

1	SL-023-SA5DN-SB-4.0-5.0	11	SL-106-SA8N-SB-2.5-3.5	21	PBLK011166	31	
2	SL-023-SA5DN-SB-20.0-21.0	12	SL-109-SA8N-SB-4.0-5.0	22		32	
3	SL-025-SA5DN-SB-4.0-5.0	13	SL-109-SA8N-SB-9.0-10.0	23		33	
4	SL-025-SA5DN-SB-23.0-24.0	14	DUP10-SA8N-QC-060811 D	24		34	
5	SL-028-SA5DN-SB-4.0-5.0	15	SL-076-SA8N-SB-4.0-5.0MS	25		35	
6	SL-028-SA5DN-SB-11.5-12.5	16	SL-076-SA8N-SB-4.0-5.0MSD	26		36	
7	SL-051-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-051-SA5DN-SB-14.0-15.0	18		28		38	
9	SL-076-SA8N-SB-4.0-5.0 D	19		29		39	
10	SL-076-SA8N-SB-7.5-8.5	20		30		40	

Notes:

DC #: 26277G71
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FJ
2nd Reviewer: A

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

DC #: 76277G71
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26277G7 /
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC _____ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (W02 std)	Recalculated CF (W02 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/16/11	Formaldehyde	6.74X10'	6.74X10'	6.64 X10'	6.64X10'	8.8	8.8
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G71
SDG #: pw Cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: GC_____ HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV	6/16/11	Formaldehyde	2002.00	2024.74	2024.74	1.1	1.1
	23:03							
2	CCV	6/17/11	↓	↓	2024.19	2024.19	1.1	1.1
	0:48							
3	CCV	6/17/11	↓	↓	2020.32	2020.32	0.9	0.9
	2:33							
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 #: [illegible]

SDG #: see cover

METHOD: ___ GC ~~HPLC~~

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Butyraldehyde	NS	3967.5	4245.23	107	107	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 #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ
2nd Reviewer: A

METHOD: X GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(((SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Formaldehyde	5010	5010	ND	4565.18	4543.51	91	91	92	92	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G7/
SDG #: pc cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: ICS 011166

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
formaldehyde	5010	NA	4530.96	NA	90	90	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G1
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #12 Compound Name Formaldehyde

Concentration = $\frac{158123 \quad (200,000)\ (0.1)}{6.64 \times 10^7 \quad (20)\ (0.872)\ (1000)}$

= 2730.9 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	June 8, 2011
LDC Report Date:	October 7, 2011
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE176

Sample Identification

SL-023-SA5DN-SB-20.0-21.0
SL-028-SA5DN-SB-4.0-5.0

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the limit of detection verification (LODV) calibration standard were less than or equal to 50.0% for perchlorate.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE176	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 DE176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE176	SL-023-SA5DN-SB-20.0-21.0 SL-028-SA5DN-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG DE176

No Sample Data Qualified in this SDG

LDC #: 26277G87 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/6/11
SDG #: DE176 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: [illegible]

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: 6/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r^2 ~~ICV/CCV ≤ 15/50 LODY ≤ 50~~
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/50 LODY ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-023-SA5DN-SB-20.0-21.0	11	PBLK191166	21		31	
2	SL-028-SA5DN-SB-4.0-5.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26277487

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: [illegible]

LCMS Perchlorate (EPA Method 6850)

Method: ~~Semivolatiles (EPA SW-846 Method 8270C)~~

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 15/50 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
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 #: 26277G87

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC # 26277987
SDG# See cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: EZ
2nd Reviewer: A

METHOD: Method 6850

Parameter: perchlorate

Date	Column	Compound	y	x	
06/20/2011	LCMS	perchlorate	0.03	0.020	0.0004
			0.04	0.040	0.0016
			0.10	0.100	0.0100
			0.27	0.200	0.0400
			0.41	0.400	0.1600
			1.10	1.000	1.0000
			3.19	2.500	6.2500

Regression Output:		Regression Output:	Reported	
Constant		0.01870		1.8700E-002
Std Err of Y Est		0.03169		
R Squared		0.99949		0.99949
No. of Observations		7.00000		
Degrees of Freedom		4.00000		
X Coefficient(s)	9.669E-001	0.12	0.09670	1.20E-001
Std Err of Coef.	0.060943	0.02		

LDC #: 26277G87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270C)~~, Method 6850

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	MSSP/6811010	6/18/11	~~Phenol (1st internal standard)~~ Perchlorate	4	4.42	4.42	11	11
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 46277G8/

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ Method 8270

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS 19166

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	100	NA	104	NA	104	104	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26277G87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ 8270

Y N ~~N/A~~ Were all reported results recalculated and verified for all level IV samples?
Y N ~~N/A~~ Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____, _____:

Conc. = ( )( )( )( )( ) / ( )( )( )( )( )

= MD

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

SAMPLE DELIVERY GROUP

DE177

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	TB-060911	6312180	TB	5030B	8015M	III
09-Jun-2011	TB-060911	6312180	TB	5030B	8260B	III
09-Jun-2011	TB-060911	6312180	TB	5030B	8260B SIM	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3050B	6010B	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3050B	6020	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3060A	7199	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3550B	8082	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3550B	8270C	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	3550B	8270C SIM	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	5035	8260B	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	5035	8260B SIM	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	METHOD	300.0	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	METHOD	314.0	III
09-Jun-2011	SL-050-SA5DN-SB-4.0-5.0	6312177	N	METHOD	7471A	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3050B	6010B	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3050B	6020	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3060A	7199	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3550B	8082	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3550B	8270C	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	3550B	8270C SIM	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	METHOD	300.0	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	METHOD	314.0	III
09-Jun-2011	SL-050-SA5DN-SB-11.2-12.5	6312178	N	METHOD	7471A	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3050B	6010B	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3050B	6020	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3546	1625C	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3550B	8015B	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3550B	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3550B	8082	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3550B	8270C	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	3550B	8270C SIM	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	5035	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	5035	8260B	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	5035	8260B SIM	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	8330	8330A	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	300.0	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	314.0	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	7471A	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	8015B	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	8315A	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0	6312175	N	METHOD	9012B	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0DU	P312175D270338B	DUP	METHOD	300.0	III
09-Jun-2011	SL-040-SA5DN-SB-4.0-5.0MS	P312175R270353B	MS	METHOD	300.0	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3050B	6010B	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3050B	6020	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3060A	7199	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3546	1625C	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3550B	8015B	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3550B	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3550B	8270C	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	3550B	8270C SIM	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	5035	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	5035	8260B	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	5035	8260B SIM	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	8330	8330A	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	300.0	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	314.0	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	7471A	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	8015B	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	8015M	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	8315A	III
09-Jun-2011	SL-040-SA5DN-SB-10.5-11.5	6312176	N	METHOD	9012B	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3050B	6010B	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3050B	6020	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3060A	7199	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3546	1625C	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3550B	8015B	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3550B	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3550B	8082	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3550B	8270C	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	3550B	8270C SIM	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	5035	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	5035	8260B	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	5035	8260B SIM	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	8330	8330A	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-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	300.0	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	314.0	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	7471A	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	8015B	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	8315A	III
09-Jun-2011	SL-039-SA5DN-SB-4.0-5.0	6312173	N	METHOD	9012B	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3050B	6010B	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3050B	6020	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3060A	7199	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3546	1625C	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3550B	8015B	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3550B	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3550B	8082	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3550B	8270C	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	3550B	8270C SIM	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	5035	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	5035	8260B	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	5035	8260B SIM	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	8330	8330A	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	300.0	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	314.0	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	7471A	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	8015B	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	8015M	III
09-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	8315A	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-Jun-2011	SL-039-SA5DN-SB-11.5-12.5	6312174	N	METHOD	9012B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3050B	6010B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3050B	6020	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3060A	7199	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3546	1625C	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3550B	8015B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3550B	8015M	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3550B	8082	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3550B	8270C	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	3550B	8270C SIM	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	5035	8015M	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	5035	8260B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	5035	8260B SIM	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	8330	8330A	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	300.0	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	314.0	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	7471A	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	8015B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	8015M	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	8315A	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0	6312179	N	METHOD	9012B	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0DUP	P312179D271217B	DUP	METHOD	314.0	III
09-Jun-2011	SL-116-SA8N-SB-4.0-5.0MS	P312179R271241B	MS	METHOD	314.0	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	3510C	8015B	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	3510C	8015M	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	3520C	1625C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	5030B	8015M	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	8330	8330A	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	Gen Prep	300.0	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	Gen Prep	8015B	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	Gen Prep	8015M	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	METHOD	8315A	III
09-Jun-2011	EB17-SA8N-SB-060911	6312181	EB	METHOD	9012B	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	3510C	8015B	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	3510C	8015M	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	3520C	1625C	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	5030B	8015M	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	8330	8330A	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	Gen Prep	300.0	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	Gen Prep	8015B	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	Gen Prep	8015M	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	METHOD	8315A	III
09-Jun-2011	EB16-SA5DN-SB-060911	6312182	EB	METHOD	9012B	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3050B	6010B	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3050B	6020	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3060A	7199	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3546	1625C	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3550B	8015B	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3550B	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3550B	8082	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3550B	8270C	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	5035	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	5035	8260B	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	5035	8260B SIM	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	8330	8330A	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	300.0	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	314.0	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	7471A	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	8015B	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	8315A	III
09-Jun-2011	SL-038-SA5DN-SB-4.0-5.0	6312171	N	METHOD	9012B	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3050B	6010B	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3050B	6020	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3060A	7199	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3546	1625C	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3550B	8015B	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3550B	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3550B	8082	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3550B	8270C	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	3550B	8270C SIM	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	5035	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	5035	8260B	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	5035	8260B SIM	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	8330	8330A	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	300.0	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	6850	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	7471A	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	8015B	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	8015M	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	8315A	III
09-Jun-2011	SL-038-SA5DN-SB-10.5-11.5	6312172	N	METHOD	9012B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3050B	6010B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3050B	6020	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3060A	7199	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3546	1625C	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3550B	8015B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3550B	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3550B	8082	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3550B	8270C	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	3550B	8270C SIM	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	5035	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	5035	8260B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	5035	8260B SIM	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	8330	8330A	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	300.0	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	314.0	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	7471A	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	8015B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	8315A	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0	6312169	N	METHOD	9012B	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-Jun-2011	SL-037-SA5DN-SB-4.0-5.0DU	P312169D220259	DUP	3050B	6010B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0DU	P312169D220737A	DUP	3050B	6020	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0DU	P312169D270647A	DUP	METHOD	314.0	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R220302	MS	3050B	6010B	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R220739A	MS	3050B	6020	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R240320A	MS	METHOD	8315A	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R240921A	MS	3550B	8082	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R242159A	MS	8330	8330A	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R260715	MS	3550B	8270C	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R261146	MS	3550B	8270C SIM	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R261926	MS	3546	1625C	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R270711A	MS	METHOD	314.0	III
09-Jun-2011	SL-037-SA5DN-SB-4.0-5.0MS	P312169R320317A	MS	3550B	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3050B	6010B	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3050B	6020	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3060A	7199	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3546	1625C	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3550B	8015B	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3550B	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3550B	8082	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3550B	8270C	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	3550B	8270C SIM	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	5035	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	5035	8260B	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	5035	8260B SIM	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	8330	8330A	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-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	300.0	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	314.0	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	7471A	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	8015B	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	8015M	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	8315A	III
09-Jun-2011	SL-037-SA5DN-SB-11.5-12.5	6312170	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.3	J	0.89	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.5	J	0.97	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.6	J	0.88	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 10:39:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.2	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 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	9.2		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	23100		6.63	MDL	21.9	PQL	mg/Kg	J	E
BORON	2.56	J	0.394	MDL	5.48	PQL	mg/Kg	U	B
MANGANESE	237		0.0394	MDL	0.548	PQL	mg/Kg	J	E, E
PHOSPHORUS	424		0.383	MDL	11.0	PQL	mg/Kg	J	Q
POTASSIUM	2190		12.4	MDL	54.8	PQL	mg/Kg	J	Q
TIN	3.16	J	0.351	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.33	J	0.504	MDL	5.48	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 3:20:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	30800		7.02	MDL	23.2	PQL	mg/Kg	J	E
MANGANESE	452		0.0418	MDL	0.580	PQL	mg/Kg	J	E, E
PHOSPHORUS	286		0.406	MDL	11.6	PQL	mg/Kg	J	Q
POTASSIUM	4100		13.1	MDL	58.0	PQL	mg/Kg	J	Q
TIN	2.91	J	0.371	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.69	J	0.534	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-10.5-11.5 ***Collected:*** 6/9/2011 2:20:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	15100		6.44	MDL	21.3	PQL	mg/Kg	J	E
BORON	2.26	J	0.383	MDL	5.32	PQL	mg/Kg	U	B
MANGANESE	134		0.0383	MDL	0.532	PQL	mg/Kg	J	E, E
PHOSPHORUS	129		0.372	MDL	10.6	PQL	mg/Kg	J	Q
POTASSIUM	1820		12.0	MDL	53.2	PQL	mg/Kg	J	Q
TIN	2.55	J	0.340	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	2.33	J	0.489	MDL	5.32	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 2:10:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	30000		6.69	MDL	22.1	PQL	mg/Kg	J	E
MANGANESE	391		0.0398	MDL	0.553	PQL	mg/Kg	J	E, E
PHOSPHORUS	273		0.387	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	3890		12.5	MDL	55.3	PQL	mg/Kg	J	Q
TIN	2.43	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.29	J	0.509	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-11.5-12.5 ***Collected:*** 6/9/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	17100		6.87	MDL	22.7	PQL	mg/Kg	J	E
BORON	2.61	J	0.409	MDL	5.68	PQL	mg/Kg	U	B
MANGANESE	218		0.0409	MDL	0.568	PQL	mg/Kg	J	E, E
PHOSPHORUS	269		0.397	MDL	11.4	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-039-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	1950		12.8	MDL	56.8	PQL	mg/Kg	J	Q
TIN	2.56	J	0.363	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.98	J	0.522	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	31900		7.07	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	387		0.0421	MDL	0.584	PQL	mg/Kg	J	E, E
PHOSPHORUS	298		0.409	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	3920		13.2	MDL	58.4	PQL	mg/Kg	J	Q
TIN	3.03	J	0.374	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	4.91	J	0.537	MDL	5.84	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 10:39:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	2970		6.26	MDL	20.7	PQL	mg/Kg	J	E
BORON	1.93	J	0.373	MDL	5.18	PQL	mg/Kg	U	B
LITHIUM	1.3	J	0.64	MDL	2.1	PQL	mg/Kg	J	Z
MANGANESE	126		0.0373	MDL	0.518	PQL	mg/Kg	J	E, E
PHOSPHORUS	324		0.362	MDL	10.4	PQL	mg/Kg	J	Q
POTASSIUM	459		11.7	MDL	51.8	PQL	mg/Kg	J	Q
TIN	1.83	J	0.331	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	1.74	J	0.476	MDL	5.18	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 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
ALUMINUM	29900		6.71	MDL	22.2	PQL	mg/Kg	J	E
MANGANESE	372		0.0399	MDL	0.554	PQL	mg/Kg	J	E, E
PHOSPHORUS	259		0.388	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	3720		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	3.44	J	0.355	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.28	J	0.510	MDL	5.54	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-050-SA5DN-SB-11.2-12.5** ***Collected:*** **6/9/2011 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
ALUMINUM	20100		6.67	MDL	22.1	PQL	mg/Kg	J	E
BORON	4.30	J	0.397	MDL	5.51	PQL	mg/Kg	U	B
MANGANESE	271		0.0397	MDL	0.551	PQL	mg/Kg	J	E, E
PHOSPHORUS	251		0.386	MDL	11.0	PQL	mg/Kg	J	Q
POTASSIUM	2990		12.5	MDL	55.1	PQL	mg/Kg	J	Q
TIN	2.49	J	0.353	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.83	J	0.507	MDL	5.51	PQL	mg/Kg	J	Z

Sample ID: **SL-050-SA5DN-SB-4.0-5.0** ***Collected:*** **6/9/2011 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
ALUMINUM	32800		6.78	MDL	22.4	PQL	mg/Kg	J	E
MANGANESE	372		0.0403	MDL	0.560	PQL	mg/Kg	J	E, E
PHOSPHORUS	251		0.392	MDL	11.2	PQL	mg/Kg	J	Q
POTASSIUM	3610		12.7	MDL	56.0	PQL	mg/Kg	J	Q
TIN	2.73	J	0.359	MDL	11.2	PQL	mg/Kg	U	B

Sample ID: **SL-116-SA8N-SB-4.0-5.0** ***Collected:*** **6/9/2011 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	17400		6.84	MDL	22.6	PQL	mg/Kg	J	E
BORON	3.16	J	0.407	MDL	5.65	PQL	mg/Kg	U	B
MANGANESE	212		0.0407	MDL	0.565	PQL	mg/Kg	J	E, E
PHOSPHORUS	490		0.396	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3240		12.8	MDL	56.5	PQL	mg/Kg	J	Q
SODIUM	101	J	6.73	MDL	113	PQL	mg/Kg	J	Z
TIN	2.60	J	0.362	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.73	J	0.520	MDL	5.65	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.161	J	0.0635	MDL	0.438	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	13.3		0.0111	MDL	0.217	PQL	mg/Kg	J	Q, A

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.180	J	0.0811	MDL	0.219	PQL	mg/Kg	J	Z
ARSENIC	8.41		0.0876	MDL	0.438	PQL	mg/Kg	J	Q
BERYLLIUM	0.926		0.0175	MDL	0.110	PQL	mg/Kg	J	Q
CHROMIUM	29.2		0.131	MDL	0.438	PQL	mg/Kg	J	Q
COPPER	16.8		0.0876	MDL	0.438	PQL	mg/Kg	J	Q
NICKEL	18.1		0.110	MDL	0.438	PQL	mg/Kg	J	Q
SILVER	0.0679	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z
ZINC	68.9		0.613	MDL	3.29	PQL	mg/Kg	J	A, Q

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.230	J	0.0679	MDL	0.468	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	9.77		0.0123	MDL	0.241	PQL	mg/Kg	J	Q, A

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.17		0.0937	MDL	0.468	PQL	mg/Kg	J	Q
BERYLLIUM	0.848		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	36.2		0.141	MDL	0.468	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: PrepDE177_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	20.6		0.0937	MDL	0.468	PQL	mg/Kg	J	Q
NICKEL	23.9		0.117	MDL	0.468	PQL	mg/Kg	J	Q
SILVER	0.0533	J	0.0166	MDL	0.117	PQL	mg/Kg	J	Z
ZINC	77.3		0.656	MDL	3.51	PQL	mg/Kg	J	A, Q

Sample ID: SL-038-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 2:20:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	6.66		0.0108	MDL	0.213	PQL	mg/Kg	J	Q, A

Sample ID: SL-038-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.165	J	0.0810	MDL	0.219	PQL	mg/Kg	J	Z
ARSENIC	6.27		0.0876	MDL	0.438	PQL	mg/Kg	J	Q
BERYLLIUM	0.721		0.0175	MDL	0.110	PQL	mg/Kg	J	Q
CADMIUM	0.0777	J	0.0482	MDL	0.110	PQL	mg/Kg	J	Z
CHROMIUM	20.0		0.131	MDL	0.438	PQL	mg/Kg	J	Q
COPPER	9.57		0.0876	MDL	0.438	PQL	mg/Kg	J	Q
NICKEL	11.5		0.110	MDL	0.438	PQL	mg/Kg	J	Q
SILVER	0.0162	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z
ZINC	47.1		0.613	MDL	3.29	PQL	mg/Kg	J	A, Q

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.229	J	0.0674	MDL	0.465	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	18.3		0.0114	MDL	0.223	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-038-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 2:10:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.91		0.0929	MDL	0.465	PQL	mg/Kg	J	Q
BERYLLIUM	1.06		0.0186	MDL	0.116	PQL	mg/Kg	J	Q
CHROMIUM	36.4		0.139	MDL	0.465	PQL	mg/Kg	J	Q
COPPER	21.0		0.0929	MDL	0.465	PQL	mg/Kg	J	Q
NICKEL	27.3		0.116	MDL	0.465	PQL	mg/Kg	J	Q
SILVER	0.0623	J	0.0165	MDL	0.116	PQL	mg/Kg	J	Z
ZINC	105		0.650	MDL	3.48	PQL	mg/Kg	J	A, Q

Sample ID: SL-039-SA5DN-SB-11.5-12.5 ***Collected:*** 6/9/2011 11:45:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	6.16		0.0111	MDL	0.218	PQL	mg/Kg	J	Q, A

Sample ID: SL-039-SA5DN-SB-11.5-12.5 ***Collected:*** 6/9/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.133	J	0.0808	MDL	0.218	PQL	mg/Kg	J	Z
ARSENIC	5.50		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
BERYLLIUM	0.773		0.0175	MDL	0.109	PQL	mg/Kg	J	Q
CHROMIUM	30.0		0.131	MDL	0.437	PQL	mg/Kg	J	Q
COPPER	9.58		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
NICKEL	13.0		0.109	MDL	0.437	PQL	mg/Kg	J	Q
ZINC	48.7		0.611	MDL	3.27	PQL	mg/Kg	J	A, Q

Sample ID: SL-039-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 11:35:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.113	J	0.0658	MDL	0.454	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 11:35:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	13.1		0.0119	MDL	0.234	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: PrepDE177_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-039-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 11:35:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	8.80		0.0907	MDL	0.454	PQL	mg/Kg	J	Q
BERYLLIUM	1.16		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	44.2		0.136	MDL	0.454	PQL	mg/Kg	J	Q
COPPER	25.0		0.0907	MDL	0.454	PQL	mg/Kg	J	Q
NICKEL	32.3		0.113	MDL	0.454	PQL	mg/Kg	J	Q
SILVER	0.0890	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
ZINC	107		0.635	MDL	3.40	PQL	mg/Kg	J	A, Q

Sample ID: SL-040-SA5DN-SB-10.5-11.5 **Collected:** 6/9/2011 10:39:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	2.01		0.0106	MDL	0.207	PQL	mg/Kg	J	Q, A

Sample ID: SL-040-SA5DN-SB-10.5-11.5 **Collected:** 6/9/2011 10:39:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.114	J	0.0759	MDL	0.205	PQL	mg/Kg	J	Z
ARSENIC	2.50		0.0820	MDL	0.410	PQL	mg/Kg	J	Q
BERYLLIUM	0.143		0.0164	MDL	0.103	PQL	mg/Kg	J	Q
CADMIUM	0.0879	J	0.0451	MDL	0.103	PQL	mg/Kg	J	Z
CHROMIUM	12.4		0.123	MDL	0.410	PQL	mg/Kg	J	Q
COPPER	2.61		0.0820	MDL	0.410	PQL	mg/Kg	J	Q
NICKEL	6.64		0.103	MDL	0.410	PQL	mg/Kg	J	Q
ZINC	10.1		0.574	MDL	3.08	PQL	mg/Kg	J	A, Q

Sample ID: SL-040-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 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	0.163	J	0.0656	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 10:20:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	14.1		0.0118	MDL	0.231	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-040-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 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
ARSENIC	6.56		0.0904	MDL	0.452	PQL	mg/Kg	J	Q
BERYLLIUM	0.872		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	33.7		0.136	MDL	0.452	PQL	mg/Kg	J	Q
COPPER	18.8		0.0904	MDL	0.452	PQL	mg/Kg	J	Q
NICKEL	25.2		0.113	MDL	0.452	PQL	mg/Kg	J	Q
SILVER	0.0528	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z
ZINC	93.1		0.633	MDL	3.39	PQL	mg/Kg	J	A, Q

Sample ID: SL-050-SA5DN-SB-11.2-12.5 ***Collected:*** 6/9/2011 9:30:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	10.5		0.0110	MDL	0.216	PQL	mg/Kg	J	Q, A

Sample ID: SL-050-SA5DN-SB-11.2-12.5 ***Collected:*** 6/9/2011 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
ARSENIC	6.85		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
BERYLLIUM	0.799		0.0175	MDL	0.109	PQL	mg/Kg	J	Q
CHROMIUM	28.0		0.131	MDL	0.437	PQL	mg/Kg	J	Q
COPPER	14.8		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
NICKEL	22.4		0.109	MDL	0.437	PQL	mg/Kg	J	Q
SILVER	0.0408	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z
ZINC	63.1		0.611	MDL	3.28	PQL	mg/Kg	J	A, Q

Sample ID: SL-050-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 9:25:00 AM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0900	J	0.0656	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 9:25:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	13.7		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-050-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 9:25:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.198	J	0.0837	MDL	0.226	PQL	mg/Kg	J	Z
ARSENIC	5.57		0.0905	MDL	0.453	PQL	mg/Kg	J	Q
BERYLLIUM	0.892		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	33.3		0.136	MDL	0.453	PQL	mg/Kg	J	Q
COPPER	16.8		0.0905	MDL	0.453	PQL	mg/Kg	J	Q
NICKEL	22.7		0.113	MDL	0.453	PQL	mg/Kg	J	Q
SILVER	0.0407	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
ZINC	69.5		0.634	MDL	3.39	PQL	mg/Kg	J	A, Q

Sample ID: SL-116-SA8N-SB-4.0-5.0 ***Collected:*** 6/9/2011 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	0.144	J	0.0643	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: SL-116-SA8N-SB-4.0-5.0 ***Collected:*** 6/9/2011 12:25:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	12.5		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, A

Sample ID: SL-116-SA8N-SB-4.0-5.0 ***Collected:*** 6/9/2011 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
ANTIMONY	0.112	J	0.0821	MDL	0.222	PQL	mg/Kg	J	Z
ARSENIC	5.22		0.0887	MDL	0.444	PQL	mg/Kg	J	Q
BERYLLIUM	0.690		0.0177	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	25.4		0.133	MDL	0.444	PQL	mg/Kg	J	Q
COPPER	14.3		0.0887	MDL	0.444	PQL	mg/Kg	J	Q
NICKEL	16.8		0.111	MDL	0.444	PQL	mg/Kg	J	Q
SILVER	0.0783	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z
ZINC	78.5		0.621	MDL	3.33	PQL	mg/Kg	J	A, Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 3:20:00 PM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 2:10:00 PM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.62	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-11.5-12.5 **Collected:** 6/9/2011 11:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 11:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.63	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 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
HEXAVALENT CHROMIUM	0.73	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA5DN-SB-4.0-5.0 **Collected:** 6/9/2011 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
HEXAVALENT CHROMIUM	0.47	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-116-SA8N-SB-4.0-5.0 **Collected:** 6/9/2011 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
HEXAVALENT CHROMIUM	0.43	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0157	J	0.0073	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0084	J	0.0081	MDL	0.115	PQL	mg/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0332	J	0.0080	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0355	J	0.0078	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 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	0.0154	J	0.0078	MDL	0.110	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** AQ

Sample ID: EB16-SA5DN-SB-060911 *Collected:* 6/9/2011 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
N-NITROSODIMETHYLAMINE	7.95		0.498	MDL	0.995	PQL	ng/L	UJ	B, S

Sample ID: EB17-SA8N-SB-060911 *Collected:* 6/9/2011 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
N-NITROSODIMETHYLAMINE	7.17		0.506	MDL	1.01	PQL	ng/L	UJ	B, S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: PrepDE177_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 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
N-NITROSODIMETHYLAMINE	27.7	J	18.4	MDL	36.8	PQL	ng/Kg	UJ	S, F

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 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
N-NITROSODIMETHYLAMINE	42.7		20.3	MDL	40.6	PQL	ng/Kg	J	Q

Method Category: SVOA

Method: 8015M **Matrix:** AQ

Sample ID: EB16-SA5DN-SB-060911 *Collected:* 6/9/2011 1:00:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.13	J	0.10	MDL	0.60	PQL	mg/L	UJ	L, B

Sample ID: EB17-SA8N-SB-060911 *Collected:* 6/9/2011 12:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.14	J	0.10	MDL	0.60	PQL	mg/L	UJ	L, B

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.62	J	0.45	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	6.1	U	6.1	MDL	12	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-038-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 2:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.49	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z
EFH (C30-C40)	0.59	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	46		2.3	MDL	7.0	PQL	mg/Kg	U	B

Sample ID: SL-116-SA8N-SB-4.0-5.0 *Collected:* 6/9/2011 12:25:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.51	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.2	J	1.2	MDL	3.8	PQL	ug/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.4	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z
Aroclor 5460	2.3	J	1.2	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-116-SA8N-SB-4.0-5.0 *Collected:* 6/9/2011 12:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.1	J	0.45	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory:** LL

EDD Filename: PrepDE177_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 3:20:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	20	MDL	410	PQL	ug/Kg	U	B

Sample ID: SL-038-SA5DN-SB-10.5-11.5 ***Collected:*** 6/9/2011 2:20:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	18	MDL	370	PQL	ug/Kg	U	B

Sample ID: SL-038-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 2:10:00 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
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	19	MDL	390	PQL	ug/Kg	U	B

Sample ID: SL-039-SA5DN-SB-11.5-12.5 ***Collected:*** 6/9/2011 11:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	38	J	19	MDL	380	PQL	ug/Kg	U	B

Sample ID: SL-039-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 11:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	19	MDL	390	PQL	ug/Kg	U	B

Sample ID: SL-040-SA5DN-SB-10.5-11.5 ***Collected:*** 6/9/2011 10:39:00 ***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	180	J	18	MDL	360	PQL	ug/Kg	U	B

Sample ID: SL-040-SA5DN-SB-4.0-5.0 ***Collected:*** 6/9/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	27	J	19	MDL	390	PQL	ug/Kg	U	B

Sample ID: SL-050-SA5DN-SB-11.2-12.5 ***Collected:*** 6/9/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	19	MDL	370	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-116-SA8N-SB-4.0-5.0 *Collected:* 6/9/2011 12:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	26	J	19	MDL	380	PQL	ug/Kg	U	B

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 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
BENZO(A)ANTHRACENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.81	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.4	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.90	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
Butylbenzylphthalate	8.8	J	6.9	MDL	21	PQL	ug/Kg	J	Z
CHRYSENE	1.3	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	0.97	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	0.91	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 11:45:00 *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(A)PYRENE	1.7	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.90	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.81	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.7	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *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(G,H,I)PERYLENE	1.7	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.8	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	8.8	J	7.0	MDL	21	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.3	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.1	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: PrepDE177_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-040-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 10:39:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.4	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 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
BENZO(A)ANTHRACENE	1.4	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.8	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.0	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8330A **Matrix:** AQ

Sample ID: EB17-SA8N-SB-060911 *Collected:* 6/9/2011 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
RDX	0.43	J	0.20	MDL	0.60	PQL	ug/L	J	Z

Method Category: SVOA **Method:** 8330A **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 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
1,3,5-TRINITROBENZENE	48	U	48	MDL	140	PQL	ug/Kg	UJ	Q
RDX	60	U	60	MDL	140	PQL	ug/Kg	UJ	Q

Method Category: VOA **Method:** 8015B **Matrix:** AQ

Sample ID: EB16-SA5DN-SB-060911 *Collected:* 6/9/2011 1:00:00 PM *Analysis Type:* REA4 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	210	J	200	MDL	1000	PQL	ug/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: PrepDE177_v1 eQAPP Name: CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-037-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 3:30:00 PM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.0	J	0.23	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-037-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.5	J	0.25	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.9	J	0.23	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-038-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 2:10:00 PM *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.6	J	0.25	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.13	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-11.5-12.5 *Collected:* 6/9/2011 11:45:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.1	J	0.23	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-039-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 11:35:00 *Analysis Type:* RES *Dilution:* 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.8	J	0.25	MDL	4.2	PQL	ug/Kg	UJ	L, B
TOLUENE	0.13	J	0.09	MDL	4.2	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-040-SA5DN-SB-10.5-11.5 *Collected:* 6/9/2011 10:39:00 *Analysis Type:* RES *Dilution:* 0.99

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	11		7.0	MDL	8.4	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	3.4	J	0.25	MDL	4.2	PQL	ug/Kg	UJ	L, B
TOLUENE	0.22	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-040-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 10:20:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.2	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	L, B
TOLUENE	0.17	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-050-SA5DN-SB-4.0-5.0 *Collected:* 6/9/2011 9:25:00 AM *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.7	J	0.25	MDL	4.2	PQL	ug/Kg	UJ	L, B
TOLUENE	0.17	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-116-SA8N-SB-4.0-5.0 *Collected:* 6/9/2011 12:25:00 *Analysis Type:* RES *Dilution:* 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.8	J	0.22	MDL	3.7	PQL	ug/Kg	UJ	L, B
TOLUENE	0.17	J	0.07	MDL	3.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: PrepDE177_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE177

Method Blank Outlier Report

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWA16B260857	6/30/2011 8:57:00 AM	N-NITROSODIMETHYLAMINE	6.03 ng/L	EB16-SA5DN-SB-060911 EB17-SA8N-SB-060911

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
EB16-SA5DN-SB-060911(RES)	N-NITROSODIMETHYLAMINE	7.95 ng/L	7.95U ng/L
EB17-SA8N-SB-060911(RES)	N-NITROSODIMETHYLAMINE	7.17 ng/L	7.17U ng/L

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16808BB220244	6/21/2011 2:44:00 AM	ALUMINUM	5.85 mg/Kg	SL-037-SA5DN-SB-11.5-12.5
		BORON	0.868 mg/Kg	SL-037-SA5DN-SB-4.0-5.0
		CALCIUM	14.7 mg/Kg	SL-038-SA5DN-SB-10.5-11.5
		IRON	3.86 mg/Kg	SL-038-SA5DN-SB-4.0-5.0
		MAGNESIUM	0.630 mg/Kg	SL-039-SA5DN-SB-11.5-12.5
		PHOSPHORUS	1.54 mg/Kg	SL-039-SA5DN-SB-4.0-5.0
		STRONTIUM	0.0819 mg/Kg	SL-040-SA5DN-SB-10.5-11.5
		TIN	1.52 mg/Kg	SL-040-SA5DN-SB-4.0-5.0
				SL-050-SA5DN-SB-11.2-12.5
				SL-050-SA5DN-SB-4.0-5.0
				SL-116-SA8N-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-037-SA5DN-SB-11.5-12.5(RES)	BORON	2.56 mg/Kg	2.56U mg/Kg
SL-037-SA5DN-SB-11.5-12.5(RES)	TIN	3.16 mg/Kg	3.16U mg/Kg
SL-037-SA5DN-SB-4.0-5.0(RES)	TIN	2.91 mg/Kg	2.91U mg/Kg
SL-038-SA5DN-SB-10.5-11.5(RES)	BORON	2.26 mg/Kg	2.26U mg/Kg
SL-038-SA5DN-SB-10.5-11.5(RES)	TIN	2.55 mg/Kg	2.55U mg/Kg
SL-038-SA5DN-SB-4.0-5.0(RES)	TIN	2.43 mg/Kg	2.43U mg/Kg
SL-039-SA5DN-SB-11.5-12.5(RES)	BORON	2.61 mg/Kg	2.61U mg/Kg
SL-039-SA5DN-SB-11.5-12.5(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-039-SA5DN-SB-4.0-5.0(RES)	TIN	3.03 mg/Kg	3.03U mg/Kg
SL-040-SA5DN-SB-10.5-11.5(RES)	BORON	1.93 mg/Kg	1.93U mg/Kg
SL-040-SA5DN-SB-10.5-11.5(RES)	TIN	1.83 mg/Kg	1.83U mg/Kg
SL-040-SA5DN-SB-4.0-5.0(RES)	TIN	3.44 mg/Kg	3.44U mg/Kg
SL-050-SA5DN-SB-11.2-12.5(RES)	BORON	4.30 mg/Kg	4.30U mg/Kg
SL-050-SA5DN-SB-11.2-12.5(RES)	TIN	2.49 mg/Kg	2.49U mg/Kg
SL-050-SA5DN-SB-4.0-5.0(RES)	TIN	2.73 mg/Kg	2.73U mg/Kg
SL-116-SA8N-SB-4.0-5.0(RES)	BORON	3.16 mg/Kg	3.16U mg/Kg
SL-116-SA8N-SB-4.0-5.0(RES)	TIN	2.60 mg/Kg	2.60U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P65651AB320311A	6/18/2011 3:11:00 AM	EFH (C8-C11)	0.11 mg/L	EB16-SA5DN-SB-060911 EB17-SA8N-SB-060911

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
EB16-SA5DN-SB-060911(REA2)	EFH (C8-C11)	0.13 mg/L	0.60U mg/L
EB17-SA8N-SB-060911(REA2)	EFH (C8-C11)	0.14 mg/L	0.60U mg/L

Method: 8015M
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P71719AB322215A	6/20/2011 10:15:00 PM	EFH (C30-C40)	2.2 mg/Kg	SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-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-039-SA5DN-SB-4.0-5.0(REA2)	EFH (C30-C40)	46 mg/Kg	46U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB84B210341A	6/15/2011 3:41:00 AM	ACETONE METHYLENE CHLORIDE	9.0 ug/Kg 1.4 ug/Kg	SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-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-037-SA5DN-SB-11.5-12.5(RES)	METHYLENE CHLORIDE	2.0 ug/Kg	3.9U ug/Kg
SL-037-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.1U ug/Kg
SL-038-SA5DN-SB-10.5-11.5(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	3.9U ug/Kg
SL-038-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.1U ug/Kg
SL-039-SA5DN-SB-11.5-12.5(RES)	METHYLENE CHLORIDE	2.1 ug/Kg	3.9U ug/Kg
SL-039-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.2U ug/Kg
SL-040-SA5DN-SB-10.5-11.5(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-040-SA5DN-SB-10.5-11.5(RES)	METHYLENE CHLORIDE	3.4 ug/Kg	4.2U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: DE177_v1 eQAPP Name: CDM_SSFL_110509

Method: 8260B
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-040-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.2 ug/Kg	4.0U ug/Kg
SL-050-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.2U ug/Kg
SL-116-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	3.7U ug/Kg

Method: 8270C
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLA16B260223	6/23/2011 2:23:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE	21 ug/Kg	SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-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-037-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	24 ug/Kg	410U ug/Kg
SL-038-SA5DN-SB-10.5-11.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	22 ug/Kg	370U ug/Kg
SL-038-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	34 ug/Kg	390U ug/Kg
SL-039-SA5DN-SB-11.5-12.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	38 ug/Kg	380U ug/Kg
SL-039-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	34 ug/Kg	390U ug/Kg
SL-040-SA5DN-SB-10.5-11.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	180 ug/Kg	360U ug/Kg
SL-040-SA5DN-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	27 ug/Kg	390U ug/Kg
SL-050-SA5DN-SB-11.2-12.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	19 ug/Kg	370U ug/Kg
SL-116-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	26 ug/Kg	380U ug/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB16-SA5DN-SB-060911 (RES)	6/9/2011 1:00:00 PM	N-NITROSODIMETHYLAMINE	7.95 ng/L	SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-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-037-SA5DN-SB-11.5-12.5(RES)	N-NITROSODIMETHYLAMINE	27.7 ng/Kg	36.8U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: DE177_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA5DN-SB-4.0-5.0MS SL-037-SA5DN-SB-4.0-5.0MSD (SL-037-SA5DN-SB-4.0-5.0)	DIETHYLENE GLYCOL	50	56	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA5DN-SB-4.0-5.0MSD (SL-037-SA5DN-SB-4.0-5.0)	PETN	-	123	80.00-121.00	-	PETN	J(all detects)
SL-037-SA5DN-SB-4.0-5.0MS (SL-037-SA5DN-SB-4.0-5.0)	1,3,5-TRINITROBENZENE RDX	79 74	- -	82.00-126.00 75.00-129.00	- -	1,3,5-TRINITROBENZENE RDX	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-037-SA5DN-SB-4.0-5.0MS SL-037-SA5DN-SB-4.0-5.0MSD (SL-037-SA5DN-SB-4.0-5.0)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	128 201 337	- 131 231	49.00-123.00 49.00-123.00 49.00-123.00	- 23 (20.00) -	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	J(all detects)

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA5DN-SB-4.0-5.0MS (SL-037-SA5DN-SB-4.0-5.0)	N-NITROSODIMETHYLAMINE	66	-	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE177 | Laboratory: LL

EDD Filename: DE177_v1 | eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA5DN-SB-4.0-5.0MS SL-037-SA5DN-SB-4.0-5.0MSD (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	ALUMINUM IRON MAGNESIUM PHOSPHORUS POTASSIUM	2397 12445 297 - 146	1692 13631 386 161 129	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM IRON MAGNESIUM PHOSPHORUS POTASSIUM	J(all detects) Al, Fe, Mg, No Qual, >4x
SL-037-SA5DN-SB-4.0-5.0MS SL-037-SA5DN-SB-4.0-5.0MSD (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	CALCIUM MANGANESE	62 453	288 175	75.00-125.00 75.00-125.00	- 26 (20.00)	CALCIUM MANGANESE	J(all detects) UJ(all non-detects) Ca, Mn, No Qual %R, >4x

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-040-SA5DN-SB-4.0-5.0MS (SL-040-SA5DN-SB-4.0-5.0)	FLUORIDE	35	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-037-SA5DN-SB-11.5-12.5MS SL-037-SA5DN-SB-11.5-12.5MSD (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	TITANIUM	206	284	75.00-125.00	-	TITANIUM	No Qual, >4x

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-037-SA5DN-SB-4.0-5.0MS **SL-037-SA5DN-SB-4.0-5.0MSD** (SL-037-SA5DN-SB-11.5-12.5 SL -037-SA5DN-SB-4.0-5.0 SL -038-SA5DN-SB-10.5-11.5 SL -038-SA5DN-SB-4.0-5.0 SL -039-SA5DN-SB-11.5-12.5 SL -039-SA5DN-SB-4.0-5.0 SL -040-SA5DN-SB-10.5-11.5 SL -040-SA5DN-SB-4.0-5.0 SL -050-SA5DN-SB-11.2-12.5 SL -050-SA5DN-SB-4.0-5.0 SL -116-SA8N-SB-4.0-5.0)	LEAD	235	235	75.00-125.00	-	LEAD	J(all detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: DE177_v1 eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-037-SA5DN-SB-4.0-5.0DUP	ALUMINUM	22	20.00	
(SL-037-SA5DN-SB-11.5-12.5	BORON	25	20.00	
SL-037-SA5DN-SB-4.0-5.0	MANGANESE	31	20.00	J (all detects) UJ (all non-detects)
SL-038-SA5DN-SB-10.5-11.5				
SL-038-SA5DN-SB-4.0-5.0				
SL-039-SA5DN-SB-11.5-12.5				
SL-039-SA5DN-SB-4.0-5.0				
SL-040-SA5DN-SB-10.5-11.5				B, No Qual, OK by Difference
SL-040-SA5DN-SB-4.0-5.0				
SL-050-SA5DN-SB-11.2-12.5				
SL-050-SA5DN-SB-4.0-5.0				
SL-116-SA8N-SB-4.0-5.0)				

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: DE177_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11651AY320401A (EB16-SA5DN-SB-060911 EB17-SA8N-SB-060911)	EFH (C8-C11)	-	104	46.00-103.00	-	EFH (C8-C11)	J(all detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11649AQ241745A (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	2,4,6-TRINITROTOLUENE PETN	121 121	- -	80.00-120.00 80.00-120.00	- -	2,4,6-TRINITROTOLUENE PETN	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16826AQ220936A (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	ANTIMONY	137	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits
P16826AQ220936C (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-11.2-12.5 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	MOLYBDENUM	121	-	80.00-120.00	-	MOLYBDENUM	No Qual, SRM within QC Limits

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE177 Laboratory: LL

EDD Filename: DE177_v1 eQAPP Name: CDM_SSFL_110509

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB84Q210207A LCSB84Y210231A (SL-037-SA5DN-SB-11.5-12.5 SL-037-SA5DN-SB-4.0-5.0 SL-038-SA5DN-SB-10.5-11.5 SL-038-SA5DN-SB-4.0-5.0 SL-039-SA5DN-SB-11.5-12.5 SL-039-SA5DN-SB-4.0-5.0 SL-040-SA5DN-SB-10.5-11.5 SL-040-SA5DN-SB-4.0-5.0 SL-050-SA5DN-SB-4.0-5.0 SL-116-SA8N-SB-4.0-5.0)	METHYLENE CHLORIDE	128	125	76.00-124.00	-	METHYLENE CHLORIDE	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB16-SA5DN-SB-060911	N-Nitrosodimethylamine-d6	154	50.00-150.00	All Target Analytes	J (all detects)
EB17-SA8N-SB-060911	N-Nitrosodimethylamine-d6	151	50.00-150.00	All Target Analytes	J(all detects)

Method: **1625C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-037-SA5DN-SB-11.5-12.5	N-Nitrosodimethylamine-d6	203	50.00-150.00	All Target Analytes	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB16-SA5DN-SB-060911	METHANOL	J	210	1000	PQL	ug/L	J (all detects)

Method: 8015M

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB16-SA5DN-SB-060911	EFH (C8-C11)	J	0.13	0.60	PQL	mg/L	J (all detects)
EB17-SA8N-SB-060911	EFH (C8-C11)	J	0.14	0.60	PQL	mg/L	J (all detects)

Method: 8330A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB17-SA8N-SB-060911	RDX	J	0.43	0.60	PQL	ug/L	J (all detects)

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	N-NITROSODIMETHYLAMINE	J	27.7	36.8	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)
SL-037-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)
SL-038-SA5DN-SB-10.5-11.5	Nitrate-NO3	J	1.6	1.7	PQL	mg/Kg	J (all detects)
SL-040-SA5DN-SB-10.5-11.5	Nitrate-NO3	J	1.2	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	BORON	J	2.56	5.48	PQL	mg/Kg	J (all detects)
	TIN	J	3.16	11.0	PQL	mg/Kg	
	Zirconium	J	3.33	5.48	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-4.0-5.0	TIN	J	2.91	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.69	5.80	PQL	mg/Kg	
SL-038-SA5DN-SB-10.5-11.5	BORON	J	2.26	5.32	PQL	mg/Kg	J (all detects)
	TIN	J	2.55	10.6	PQL	mg/Kg	
	Zirconium	J	2.33	5.32	PQL	mg/Kg	
SL-038-SA5DN-SB-4.0-5.0	TIN	J	2.43	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.29	5.53	PQL	mg/Kg	
SL-039-SA5DN-SB-11.5-12.5	BORON	J	2.61	5.68	PQL	mg/Kg	J (all detects)
	TIN	J	2.56	11.4	PQL	mg/Kg	
	Zirconium	J	2.98	5.68	PQL	mg/Kg	
SL-039-SA5DN-SB-4.0-5.0	TIN	J	3.03	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.91	5.84	PQL	mg/Kg	
SL-040-SA5DN-SB-10.5-11.5	BORON	J	1.93	5.18	PQL	mg/Kg	J (all detects)
	LITHIUM	J	1.3	2.1	PQL	mg/Kg	
	TIN	J	1.83	10.4	PQL	mg/Kg	
	Zirconium	J	1.74	5.18	PQL	mg/Kg	
SL-040-SA5DN-SB-4.0-5.0	TIN	J	3.44	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.28	5.54	PQL	mg/Kg	
SL-050-SA5DN-SB-11.2-12.5	BORON	J	4.30	5.51	PQL	mg/Kg	J (all detects)
	TIN	J	2.49	11.0	PQL	mg/Kg	
	Zirconium	J	3.83	5.51	PQL	mg/Kg	
SL-050-SA5DN-SB-4.0-5.0	TIN	J	2.73	11.2	PQL	mg/Kg	J (all detects)
SL-116-SA8N-SB-4.0-5.0	BORON	J	3.16	5.65	PQL	mg/Kg	J (all detects)
	SODIUM	J	101	113	PQL	mg/Kg	
	TIN	J	2.60	11.3	PQL	mg/Kg	
	Zirconium	J	2.73	5.65	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	ANTIMONY	J	0.180	0.219	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.161	0.438	PQL	mg/Kg	
	SILVER	J	0.0679	0.110	PQL	mg/Kg	
SL-037-SA5DN-SB-4.0-5.0	SELENIUM	J	0.230	0.468	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0533	0.117	PQL	mg/Kg	
SL-038-SA5DN-SB-10.5-11.5	ANTIMONY	J	0.165	0.219	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0777	0.110	PQL	mg/Kg	
	SILVER	J	0.0162	0.110	PQL	mg/Kg	
SL-038-SA5DN-SB-4.0-5.0	SELENIUM	J	0.229	0.465	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0623	0.116	PQL	mg/Kg	
SL-039-SA5DN-SB-11.5-12.5	ANTIMONY	J	0.133	0.218	PQL	mg/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	SELENIUM	J	0.113	0.454	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0890	0.113	PQL	mg/Kg	
SL-040-SA5DN-SB-10.5-11.5	ANTIMONY	J	0.114	0.205	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0879	0.103	PQL	mg/Kg	
SL-040-SA5DN-SB-4.0-5.0	SELENIUM	J	0.163	0.452	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0528	0.113	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-050-SA5DN-SB-11.2-12.5	SILVER	J	0.0408	0.109	PQL	mg/Kg	J (all detects)
SL-050-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.198	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0900	0.453	PQL	mg/Kg	
	SILVER	J	0.0407	0.113	PQL	mg/Kg	
SL-116-SA8N-SB-4.0-5.0	ANTIMONY	J	0.112	0.222	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.144	0.444	PQL	mg/Kg	
	SILVER	J	0.0783	0.111	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.54	1.2	PQL	mg/Kg	J (all detects)
SL-038-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.62	1.2	PQL	mg/Kg	J (all detects)
SL-039-SA5DN-SB-11.5-12.5	HEXAVALENT CHROMIUM	J	0.38	1.1	PQL	mg/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.63	1.2	PQL	mg/Kg	J (all detects)
SL-040-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.73	1.2	PQL	mg/Kg	J (all detects)
SL-050-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.1	PQL	mg/Kg	J (all detects)
SL-116-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	MERCURY	J	0.0157	0.104	PQL	mg/Kg	J (all detects)
SL-037-SA5DN-SB-4.0-5.0	MERCURY	J	0.0084	0.115	PQL	mg/Kg	J (all detects)
SL-038-SA5DN-SB-4.0-5.0	MERCURY	J	0.0332	0.114	PQL	mg/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	MERCURY	J	0.0355	0.110	PQL	mg/Kg	J (all detects)
SL-040-SA5DN-SB-4.0-5.0	MERCURY	J	0.0154	0.110	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	EFH (C21-C30)	J	0.62	1.3	PQL	mg/Kg	J (all detects)
SL-038-SA5DN-SB-10.5-11.5	EFH (C21-C30)	J	0.49	1.3	PQL	mg/Kg	J (all detects)
	EFH (C30-C40)	J	0.59	1.3	PQL	mg/Kg	
SL-116-SA8N-SB-4.0-5.0	EFH (C15-C20)	J	0.51	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-038-SA5DN-SB-4.0-5.0	Aroclor 5460	J	3.2	3.8	PQL	ug/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	AROCLOR 1260 Aroclor 5460	J J	1.4 2.3	2.0 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-116-SA8N-SB-4.0-5.0	AROCLOR 1260	J	1.1	2.0	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-11.5-12.5	METHYLENE CHLORIDE TOLUENE	J J	2.0 0.15	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-037-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.5 0.15	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-038-SA5DN-SB-10.5-11.5	METHYLENE CHLORIDE TOLUENE	J J	1.9 0.15	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-038-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.6 0.13	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-039-SA5DN-SB-11.5-12.5	METHYLENE CHLORIDE TOLUENE	J J	2.1 0.15	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.8 0.13	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-040-SA5DN-SB-10.5-11.5	METHYLENE CHLORIDE TOLUENE	J J	3.4 0.22	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-040-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.2 0.17	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-050-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.7 0.17	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-116-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.8 0.17	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	410	PQL	ug/Kg	J (all detects)
SL-038-SA5DN-SB-10.5-11.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	370	PQL	ug/Kg	J (all detects)
SL-038-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	390	PQL	ug/Kg	J (all detects)
SL-039-SA5DN-SB-11.5-12.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	38	380	PQL	ug/Kg	J (all detects)
SL-039-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	390	PQL	ug/Kg	J (all detects)
SL-040-SA5DN-SB-10.5-11.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	180	360	PQL	ug/Kg	J (all detects)
SL-040-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	390	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE177 **Laboratory: LL**

EDD Filename: DE177_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-050-SA5DN-SB-11.2-12.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	370	PQL	ug/Kg	J (all detects)
SL-116-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	26	380	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-038-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.81	1.9	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.4	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.90	1.9	PQL	ug/Kg	
	Butylbenzylphthalate	J	8.8	21	PQL	ug/Kg	
	CHRYSENE	J	1.3	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	0.97	1.9	PQL	ug/Kg	
	PYRENE	J	0.91	1.9	PQL	ug/Kg	
SL-039-SA5DN-SB-11.5-12.5	BENZO(A)PYRENE	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.90	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.81	1.9	PQL	ug/Kg	
	PYRENE	J	1.7	1.9	PQL	ug/Kg	
SL-039-SA5DN-SB-4.0-5.0	BENZO(G,H,I)PERYLENE	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	1.8	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	8.8	21	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.3	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.1	1.9	PQL	ug/Kg	
SL-040-SA5DN-SB-10.5-11.5	ANTHRACENE	J	1.4	1.8	PQL	ug/Kg	J (all detects)
SL-040-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	1.4	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.8	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.0	1.9	PQL	ug/Kg	

\DC #: 26277H4

SDG #: DE177

Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 9/30/11

Page: 1 of 1

Reviewer: MY

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	N, qual
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, Ca, Fe, Mg, Mn, Ti > 4X, No fmt for ZR, ICP/MS, ~~Fe~~ Pb DE178 (RPD out)
VII.	Duplicate Sample Analysis	SW	B < 5X
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Pb, Zn
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-037-SA5DN-SB-4.0-5.0	11	SL-116-SA8N-SB-4.0-5.0	21		31	
2	SL-037-SA5DN-SB-11.5-12.5	12	#1 MS (ICP, Pb)	22		32	
3	SL-038-SA5DN-SB-4.0-5.0	13	MSD	23		33	
4	SL-038-SA5DN-SB-10.5-11.5	14	Dup	24		34	
5	SL-039-SA5DN-SB-4.0-5.0	15	#2 MS (Ti)	25		35	
6	SL-039-SA5DN-SB-11.5-12.5	16	MSD	26		36	
7	SL-040-SA5DN-SB-4.0-5.0	17	Dup	27		37	
8	SL-040-SA5DN-SB-10.5-11.5	18		28		38	
9	SL-050-SA5DN-SB-4.0-5.0	19		29		39	
10	SL-050-SA5DN-SB-11.2-12.5	20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE177
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6312169BKG Matrix Spike Lab Sample ID: 6312169MS Matrix Spike Duplicate Lab Sample ID: 6312169MSD
% Solids for Sample: 82.1
Batch Id(s): P16808B, P17326A

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		30765.8802		36490.2116		34729.6367		238.8288	234.2359	MG/KG	2397		1692		5			20	P
Boron		8.1399		225.9953		224.8056		238.8288	234.2359	MG/KG	91		92		1		84 - 115	20	P
Calcium		7114.8274		7412.8048		8465.2406		477.6576	468.4718	MG/KG	62		288		13			20	P
Iron		35285.3848		50147.0684		51249.8032		119.4144	117.1180	MG/KG	12445		13631		2			20	P
[redacted]	208	9.7732		18.1167		18.1773		3.5477	3.5824	MG/KG	[redacted]		[redacted]		0		75 - 125	20	MS
Lithium		24.7584		142.4709		141.4949		119.4144	117.1180	MG/KG	99		100		1		82 - 114	20	P
Magnesium		6792.0271		7501.3768		7696.7875		238.8288	234.2359	MG/KG	297		386		3			20	P
Mangane[redacted]		451.7847		722.1621		554.5383		59.7072	58.5590	MG/KG	453		175		[redacted]			20	P
[redacted]		286.0704		414.5889		474.9543		119.4144	117.1180	MG/KG	108		[redacted]	N	14		75 - 125	20	P
[redacted]		4104.1216		5849.6573		5613.7871		1194.1439	1171.1796	MG/KG	[redacted]		[redacted]	N	4		75 - 125	20	P
Sodium		327.3511		1433.8683		1433.6890		1194.1439	1171.1796	MG/KG	93		94		0		75 - 125	20	P
Strontium		36.4863		148.0667		146.4092		119.4144	117.1180	MG/KG	93		94		1		75 - 115	20	P
Tin		2.9070	B	402.4719		403.5815		477.6576	468.4718	MG/KG	84		86		0		80 - 110	20	P
Zirconium		3.6866	B	114.2342		112.7003		119.4144	117.1180	MG/KG	93		93		1		75 - 125	20	P

[redacted] quality like data.

[redacted] + As, Be, Cu, Ni J tot (Q)
+ Cr J/UJ

from SDG DE178

DE177 2246

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

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE177
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6312170BKG Matrix Spike Lab Sample ID: 6312170MS Matrix Spike Duplicate Lab Sample ID: 6312170MSD
% Solids for Sample: 89.5
Batch Id(s): P17208E

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
Titanium		1100.2278		1323.8922		1414.9510		108.4775	110.6256	MG/KG	206		284		7		.	20	P

DE177 4247

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

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE177
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6312169BKG
% Solids for Duplicate: 82.1
Batch ID(s): P16808B, P17326A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6312169DUP
% Solids for Sample: 82.1

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
[redacted]			30765.8802		24700.0470		22	*	P
Boron		5.8	8.1399		6.3530		25		P
Calcium			7114.8274		6972.4678		2		P
Iron			35285.3848		38323.2571		8		P
Lead	208		9.7732		10.1001		3		MS
Lithium			24.7584		21.3408		15		P
Magnesium			6792.0271		6155.7410		10		P
[redacted]			451.7847		330.5725		31	*	P
Phosphorus			286.0704		264.2226		8		P
Potassium			4104.1216		3528.4259		15		P
Sodium		116.0	327.3511		291.7415		12		P
Strontium			36.4863		32.1897		13		P
Tin			2.9070	B	2.7460	B	6		P
Zirconium			3.6866	B	3.0776	B	18		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.

<5X

(No fact for ICP/MS from SDG DE 178)

DE177 4249

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

SAMPLE DELIVERY GROUP

DE178

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jun-2011	TB-061011	6313376	TB	5030B	8015M	III
10-Jun-2011	TB-061011	6313376	TB	5030B	8260B	III
10-Jun-2011	TB-061011	6313376	TB	5030B	8260B SIM	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3050B	6010B	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3060A	7199	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3546	1625C	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3550B	8015B	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3550B	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3550B	8082	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3550B	8270C	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	3550B	8270C SIM	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	5035	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	5035	8260B	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	5035	8260B SIM	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	8330	8330A	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	300.0	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	314.0	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	6850	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	7471A	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	8015B	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	8315A	III
10-Jun-2011	SL-041-SA5DN-SB-9.0-10.0	6313368	N	METHOD	9012B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3050B	6010B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3050B	6020	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-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3060A	7199	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3546	1625C	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3550B	8015B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3550B	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3550B	8082	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3550B	8270C	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	3550B	8270C SIM	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	5035	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	5035	8260B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	5035	8260B SIM	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	8330	8330A	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	300.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	314.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	7471A	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	8015B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	8015M	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	8315A	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0	6313367	N	METHOD	9012B	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D220935	DUP	METHOD	7471A	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D220942A	DUP	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D220942B	DUP	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D220942C	DUP	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D220942D	DUP	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D270452A	DUP	METHOD	300.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0DU	P313367D271457A	DUP	METHOD	314.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R220936	MS	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R220945A	MS	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R220945B	MS	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R220945C	MS	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R220945D	MS	3050B	6020	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R261133	MS	3550B	8270C	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R262359	MS	3546	1625C	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R270507A	MS	METHOD	300.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R271520A	MS	METHOD	314.0	III
10-Jun-2011	SL-041-SA5DN-SB-4.0-5.0MS	P313367R321723A	MS	METHOD	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3050B	6010B	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3050B	6020	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3060A	7199	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3546	1625C	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3550B	8015B	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3550B	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3550B	8082	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3550B	8270C	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	3550B	8270C SIM	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	5035	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	5035	8260B	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	5035	8260B SIM	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	8330	8330A	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	300.0	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	314.0	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	7471A	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	8015B	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-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	8315A	III
10-Jun-2011	SL-045-SA5DN-SB-9.0-10.0	6313370	N	METHOD	9012B	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3050B	6010B	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3050B	6020	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3060A	7199	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3546	1625C	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3550B	8015B	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3550B	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3550B	8082	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3550B	8270C	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	3550B	8270C SIM	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	5035	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	5035	8260B	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	5035	8260B SIM	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	8330	8330A	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	300.0	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	314.0	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	7471A	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	8015B	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	8015M	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	8315A	III
10-Jun-2011	SL-045-SA5DN-SB-4.0-5.0	6313369	N	METHOD	9012B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3050B	6010B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3050B	6020	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3546	1625C	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3550B	8015B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3550B	8015M	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3550B	8082	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3550B	8270C	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	3550B	8270C SIM	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	5035	8015M	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	5035	8260B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	5035	8260B SIM	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	8330	8330A	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	300.0	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	314.0	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	7471A	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	8015B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	8015M	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	8315A	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0	6313375	N	METHOD	9012B	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0DUP	P313375D272103A	DUP	3060A	7199	III
10-Jun-2011	SL-111-SA8N-SB-3.0-4.0MS	P313375R272029A	MS	3060A	7199	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3050B	6010B	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3050B	6020	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3060A	7199	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3550B	8082	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3550B	8270C	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	3550B	8270C SIM	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	5035	8260B	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-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	5035	8260B SIM	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	METHOD	300.0	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	METHOD	314.0	III
10-Jun-2011	SL-049-SA5DN-SB-4.0-5.0	6313373	N	METHOD	7471A	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3050B	6010B	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3050B	6020	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3060A	7199	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3550B	8082	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3550B	8270C	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	3550B	8270C SIM	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	METHOD	300.0	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	METHOD	314.0	III
10-Jun-2011	SL-049-SA5DN-SB-15.5-16.5	6313374	N	METHOD	7471A	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3050B	6010B	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3050B	6020	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3060A	7199	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3550B	8082	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3550B	8270C	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	3550B	8270C SIM	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	5035	8260B	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	5035	8260B SIM	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	METHOD	300.0	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	METHOD	314.0	III
10-Jun-2011	SL-048-SA5DN-SB-4.0-5.0	6313371	N	METHOD	7471A	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3050B	6010B	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3050B	6020	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-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3060A	7199	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3550B	8082	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3550B	8270C	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	3550B	8270C SIM	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	METHOD	300.0	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	METHOD	314.0	III
10-Jun-2011	SL-048-SA5DN-SB-11.5-12.5	6313372	N	METHOD	7471A	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE178 Laboratory: LL

EDD Filename: DE178_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.6		0.95	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.95	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.9		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	13.6		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-045-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	12.4		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-048-SA5DN-SB-11.5-12.5 *Collected:* 6/10/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-048-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	24.2		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-049-SA5DN-SB-15.5-16.5 *Collected:* 6/10/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.6		0.91	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
FLUORIDE	22.9		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 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	1.7		0.88	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.88	MDL	1.6	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	29300		7.07	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	589		0.0421	MDL	0.584	PQL	mg/Kg	J	E, E
PHOSPHORUS	262		0.409	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	3730		13.2	MDL	58.4	PQL	mg/Kg	J	Q
TIN	2.83	J	0.374	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	3.31	J	0.538	MDL	5.84	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	26900		6.55	MDL	21.7	PQL	mg/Kg	J	E
MANGANESE	237		0.0390	MDL	0.541	PQL	mg/Kg	J	E, E
PHOSPHORUS	215		0.379	MDL	10.8	PQL	mg/Kg	J	Q
POTASSIUM	2920		12.2	MDL	54.1	PQL	mg/Kg	J	Q
TIN	2.54	J	0.347	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.96	J	0.498	MDL	5.41	PQL	mg/Kg	J	Z

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	34000		7.14	MDL	23.6	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	230		0.0425	MDL	0.590	PQL	mg/Kg	J	E, E
PHOSPHORUS	221		0.413	MDL	11.8	PQL	mg/Kg	J	Q
POTASSIUM	3510		13.3	MDL	59.0	PQL	mg/Kg	J	Q
TIN	2.77	J	0.378	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	4.47	J	0.543	MDL	5.90	PQL	mg/Kg	J	Z

Sample ID: SL-045-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	26100		6.69	MDL	22.1	PQL	mg/Kg	J	E
BORON	4.71	J	0.398	MDL	5.53	PQL	mg/Kg	J	Z
MANGANESE	212		0.0398	MDL	0.553	PQL	mg/Kg	J	E, E
PHOSPHORUS	269		0.387	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	3060		12.5	MDL	55.3	PQL	mg/Kg	J	Q
TIN	2.51	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.74	J	0.509	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-048-SA5DN-SB-11.5-12.5 *Collected:* 6/10/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	18800		6.47	MDL	21.4	PQL	mg/Kg	J	E
BORON	2.21	J	0.385	MDL	5.34	PQL	mg/Kg	U	B
MANGANESE	357		0.0385	MDL	0.534	PQL	mg/Kg	J	E, E
PHOSPHORUS	166		0.374	MDL	10.7	PQL	mg/Kg	J	Q
POTASSIUM	1680		12.1	MDL	53.4	PQL	mg/Kg	J	Q
TIN	2.57	J	0.342	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	3.44	J	0.492	MDL	5.34	PQL	mg/Kg	J	Z

Sample ID: SL-048-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	32200		6.98	MDL	23.1	PQL	mg/Kg	J	E
MANGANESE	392		0.0415	MDL	0.577	PQL	mg/Kg	J	E, E
PHOSPHORUS	430		0.404	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	3590		13.0	MDL	57.7	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-048-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.75	J	0.369	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-049-SA5DN-SB-15.5-16.5 ***Collected:*** 6/10/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	20100		6.57	MDL	21.7	PQL	mg/Kg	J	E
BORON	3.19	J	0.391	MDL	5.43	PQL	mg/Kg	U	B
MANGANESE	169		0.0391	MDL	0.543	PQL	mg/Kg	J	E, E
PHOSPHORUS	272		0.380	MDL	10.9	PQL	mg/Kg	J	Q
POTASSIUM	2890		12.3	MDL	54.3	PQL	mg/Kg	J	Q
TIN	2.47	J	0.348	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.85	J	0.500	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 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
ALUMINUM	29800		6.96	MDL	23.0	PQL	mg/Kg	J	E
MANGANESE	493		0.0414	MDL	0.575	PQL	mg/Kg	J	E, E
PHOSPHORUS	275		0.403	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	3730		13.0	MDL	57.5	PQL	mg/Kg	J	Q
TIN	2.56	J	0.368	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	3.91	J	0.529	MDL	5.75	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SB-3.0-4.0 ***Collected:*** 6/10/2011 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
ALUMINUM	14800		6.50	MDL	21.5	PQL	mg/Kg	J	E
BORON	1.94	J	0.387	MDL	5.37	PQL	mg/Kg	U	B
MANGANESE	115		0.0387	MDL	0.537	PQL	mg/Kg	J	E, E
PHOSPHORUS	250		0.376	MDL	10.7	PQL	mg/Kg	J	Q
POTASSIUM	1960		12.1	MDL	53.7	PQL	mg/Kg	J	Q
SODIUM	81.9	J	6.39	MDL	107	PQL	mg/Kg	J	Z
TIN	2.50	J	0.344	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	1.55	J	0.494	MDL	5.37	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
SELENIUM	0.216	J	0.0665	MDL	0.458	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:00:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	18.1		0.0119	MDL	0.234	PQL	mg/Kg	J	Q, A

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
ARSENIC	5.70		0.0917	MDL	0.458	PQL	mg/Kg	J	Q
BERYLLIUM	0.861		0.0183	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	40.3		0.138	MDL	0.458	PQL	mg/Kg	J	Q
COPPER	18.4		0.0917	MDL	0.458	PQL	mg/Kg	J	Q
NICKEL	23.9		0.115	MDL	0.458	PQL	mg/Kg	J	Q
SILVER	0.0648	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z
ZINC	74.1		0.642	MDL	3.44	PQL	mg/Kg	J	Q, A

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3.15		0.0113	MDL	0.221	PQL	mg/Kg	J	Q, A

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.174	J	0.0809	MDL	0.219	PQL	mg/Kg	J	Z
ARSENIC	2.91		0.0875	MDL	0.437	PQL	mg/Kg	J	Q
BERYLLIUM	0.228		0.0175	MDL	0.109	PQL	mg/Kg	J	Q
CADMIUM	0.0853	J	0.0481	MDL	0.109	PQL	mg/Kg	J	Z
CHROMIUM	15.2		0.131	MDL	0.437	PQL	mg/Kg	J	Q
COPPER	4.66		0.0875	MDL	0.437	PQL	mg/Kg	J	Q
NICKEL	7.91		0.109	MDL	0.437	PQL	mg/Kg	J	Q
THALLIUM	0.0669	J	0.0328	MDL	0.109	PQL	mg/Kg	J	Z
ZINC	18.6		0.612	MDL	3.28	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0776	J	0.0678	MDL	0.468	PQL	mg/Kg	J	Z

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	13.0		0.0117	MDL	0.229	PQL	mg/Kg	J	Q, A

Sample ID: SL-045-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 11:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.53		0.0935	MDL	0.468	PQL	mg/Kg	J	Q
BERYLLIUM	1.06		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	39.7		0.140	MDL	0.468	PQL	mg/Kg	J	Q
COPPER	20.2		0.0935	MDL	0.468	PQL	mg/Kg	J	Q
NICKEL	23.7		0.117	MDL	0.468	PQL	mg/Kg	J	Q
SILVER	0.0746	J	0.0166	MDL	0.117	PQL	mg/Kg	J	Z
ZINC	75.6		0.655	MDL	3.51	PQL	mg/Kg	J	Q, A

Sample ID: SL-045-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 11:40:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	11.7		0.0113	MDL	0.221	PQL	mg/Kg	J	Q, A

Sample ID: SL-045-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 11:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.61		0.0911	MDL	0.456	PQL	mg/Kg	J	Q
BERYLLIUM	1.31		0.0182	MDL	0.114	PQL	mg/Kg	J	Q
CHROMIUM	45.7		0.137	MDL	0.456	PQL	mg/Kg	J	Q
COPPER	21.2		0.0911	MDL	0.456	PQL	mg/Kg	J	Q
NICKEL	33.6		0.114	MDL	0.456	PQL	mg/Kg	J	Q
SILVER	0.0411	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z
ZINC	86.7		0.638	MDL	3.42	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-048-SA5DN-SB-11.5-12.5 ***Collected:*** 6/10/2011 3:20:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0659	J	0.0632	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: SL-048-SA5DN-SB-11.5-12.5 ***Collected:*** 6/10/2011 3:20:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	4.98		0.0110	MDL	0.216	PQL	mg/Kg	J	Q, A

Sample ID: SL-048-SA5DN-SB-11.5-12.5 ***Collected:*** 6/10/2011 3:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.11		0.0872	MDL	0.436	PQL	mg/Kg	J	Q
BERYLLIUM	0.897		0.0174	MDL	0.109	PQL	mg/Kg	J	Q
CADMIUM	0.0972	J	0.0479	MDL	0.109	PQL	mg/Kg	J	Z
CHROMIUM	27.4		0.131	MDL	0.436	PQL	mg/Kg	J	Q
COPPER	12.4		0.0872	MDL	0.436	PQL	mg/Kg	J	Q
NICKEL	18.3		0.109	MDL	0.436	PQL	mg/Kg	J	Q
SILVER	0.0469	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z
ZINC	51.7		0.610	MDL	3.27	PQL	mg/Kg	J	Q, A

Sample ID: SL-048-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 3:10:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0688	J	0.0663	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: SL-048-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 3:10:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	13.2		0.0118	MDL	0.231	PQL	mg/Kg	J	Q, A

Sample ID: SL-048-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.92		0.0914	MDL	0.457	PQL	mg/Kg	J	Q
BERYLLIUM	1.11		0.0183	MDL	0.114	PQL	mg/Kg	J	Q
CHROMIUM	40.7		0.137	MDL	0.457	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-048-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 3:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	22.6		0.0914	MDL	0.457	PQL	mg/Kg	J	Q
NICKEL	28.8		0.114	MDL	0.457	PQL	mg/Kg	J	Q
SILVER	0.0609	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z
ZINC	93.6		0.640	MDL	3.43	PQL	mg/Kg	J	Q, A

Sample ID: SL-049-SA5DN-SB-15.5-16.5 *Collected:* 6/10/2011 2:20:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	9.00		0.0113	MDL	0.221	PQL	mg/Kg	J	Q, A

Sample ID: SL-049-SA5DN-SB-15.5-16.5 *Collected:* 6/10/2011 2:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.82		0.0903	MDL	0.452	PQL	mg/Kg	J	Q
BERYLLIUM	0.793		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	27.6		0.135	MDL	0.452	PQL	mg/Kg	J	Q
COPPER	15.5		0.0903	MDL	0.452	PQL	mg/Kg	J	Q
NICKEL	23.9		0.113	MDL	0.452	PQL	mg/Kg	J	Q
SILVER	0.0361	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z
ZINC	62.9		0.632	MDL	3.39	PQL	mg/Kg	J	Q, A

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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	0.174	J	0.0667	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 2:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	15.7		0.0117	MDL	0.230	PQL	mg/Kg	J	Q, A

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
ARSENIC	8.43		0.0920	MDL	0.460	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
BERYLLIUM	1.18		0.0184	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	44.9		0.138	MDL	0.460	PQL	mg/Kg	J	Q
COPPER	23.4		0.0920	MDL	0.460	PQL	mg/Kg	J	Q
NICKEL	31.3		0.115	MDL	0.460	PQL	mg/Kg	J	Q
SILVER	0.0715	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z
ZINC	99.3		0.644	MDL	3.45	PQL	mg/Kg	J	Q, A

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 12:40:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.175	J	0.0617	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 12:40:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	5.90		0.0110	MDL	0.215	PQL	mg/Kg	J	Q, A

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 12:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.141	J	0.0787	MDL	0.213	PQL	mg/Kg	J	Z
ARSENIC	3.69		0.0851	MDL	0.425	PQL	mg/Kg	J	Q
BERYLLIUM	0.522		0.0170	MDL	0.106	PQL	mg/Kg	J	Q
CADMIUM	0.0584	J	0.0468	MDL	0.106	PQL	mg/Kg	J	Z
CHROMIUM	16.9		0.128	MDL	0.425	PQL	mg/Kg	J	Q
COPPER	6.05		0.0851	MDL	0.425	PQL	mg/Kg	J	Q
NICKEL	8.58		0.106	MDL	0.425	PQL	mg/Kg	J	Q
SILVER	0.0400	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z
ZINC	41.4		0.595	MDL	3.19	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-048-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
HEXAVALENT CHROMIUM	0.48	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 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	0.62	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-049-SA5DN-SB-15.5-16.5 *Collected:* 6/10/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0422	J	0.0076	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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	0.0151	J	0.0077	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 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
MERCURY	0.0125	J	0.0074	MDL	0.105	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
DIETHYLENE GLYCOL	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q
Propylene glycol	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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
EFH (C15-C20)	1.2	J	0.95	MDL	2.9	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	7.3		0.45	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-045-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 11:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	5.2		0.46	MDL	1.4	PQL	mg/Kg	U	B

Sample ID: SL-111-SA8N-SB-3.0-4.0 *Collected:* 6/10/2011 12:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	4.1		0.44	MDL	1.3	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.7	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	2.6	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-049-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 2:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.7	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z
Aroclor 5460	1.6	J	1.2	MDL	3.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 *Collected:* 6/10/2011 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	38	J	20	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
1,3-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
1,4-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2,4,5-TRICHLOROPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
2,4,6-TRICHLOROPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
2,4-DICHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2,4-DIMETHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	S
2,4-DINITROTOLUENE	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
2,6-DINITROTOLUENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2-CHLORONAPHTHALENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2-CHLOROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
2-NITROANILINE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
2-NITROPHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
3,3'-DICHLOROBENZIDINE	110	U	110	MDL	380	PQL	ug/Kg	UJ	S
3-NITROANILINE	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-9.0-10.0 *Collected:* 6/10/2011 10:50:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-CHLORO-3-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
4-CHLOROANILINE	75	U	75	MDL	190	PQL	ug/Kg	UJ	S
4-CHLOROPHENYL-PHENYLETHER	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
4-METHYLPHENOL	38	U	38	MDL	190	PQL	ug/Kg	UJ	S
4-NITROANILINE	75	U	75	MDL	190	PQL	ug/Kg	UJ	S
4-NITROPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
ANILINE	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
BENZIDINE	1300	U	1300	MDL	3800	PQL	ug/Kg	UJ	S
BENZOIC ACID	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
BENZYL ALCOHOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
BIS(2-CHLOROETHOXY)METHANE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
BIS(2-CHLOROETHYL) ETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
BIS(2-CHLOROISOPROPYL) ETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	19	MDL	380	PQL	ug/Kg	J	Z, S
CARBAZOLE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
DIBENZOFURAN	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
HEXACHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
HEXACHLOROBUTADIENE	75	U	75	MDL	190	PQL	ug/Kg	UJ	S
HEXACHLOROCYCLOPENTADIENE	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
HEXACHLOROETHANE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
ISOPHORONE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
NITROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
N-NITROSO-DI-N-PROPYLAMINE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
N-NITROSODIPHENYLAMINE	19	U	19	MDL	190	PQL	ug/Kg	UJ	S
PENTACHLOROPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	S
PHENOL	19	U	19	MDL	190	PQL	ug/Kg	UJ	S

Sample ID: SL-049-SA5DN-SB-15.5-16.5 *Collected:* 6/10/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	35	J	19	MDL	380	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 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
ANTHRACENE	0.51	J	0.39	MDL	2.0	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	0.91	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.7	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 ***Collected:*** 6/10/2011 10:50:00 ***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(A)ANTHRACENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.4	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.3	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.95	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.8	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.6	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.83	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	0.89	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.7	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-15.5-16.5 ***Collected:*** 6/10/2011 2:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.7	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.6	J	6.8	MDL	21	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 ***Collected:*** 6/10/2011 2:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.0	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.3	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
CHRYSENE	1.8	J	0.39	MDL	2.0	PQL	ug/Kg	J	Z
Di-n-butylphthalate	12	J	7.1	MDL	21	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.83	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
NAPHTHALENE	0.80	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory:** LL

EDD Filename: DE178_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-041-SA5DN-SB-4.0-5.0 **Collected:** 6/10/2011 11:00:00 **Analysis Type:** RES **Dilution:** 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.7	J	0.27	MDL	4.5	PQL	ug/Kg	UJ	L, B
TOLUENE	0.11	J	0.09	MDL	4.5	PQL	ug/Kg	J	Z

Sample ID: SL-041-SA5DN-SB-9.0-10.0 **Collected:** 6/10/2011 10:50:00 **Analysis Type:** RES **Dilution:** 0.97

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.4	J	0.26	MDL	4.4	PQL	ug/Kg	UJ	L, B
TOLUENE	0.11	J	0.09	MDL	4.4	PQL	ug/Kg	J	Z

Sample ID: SL-045-SA5DN-SB-4.0-5.0 **Collected:** 6/10/2011 11:50:00 **Analysis Type:** RES **Dilution:** 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.3	J	0.24	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.09	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-045-SA5DN-SB-9.0-10.0 **Collected:** 6/10/2011 11:40:00 **Analysis Type:** RES **Dilution:** 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.9		6.9	MDL	8.3	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.2	J	0.25	MDL	4.2	PQL	ug/Kg	UJ	L, B

Sample ID: SL-048-SA5DN-SB-4.0-5.0 **Collected:** 6/10/2011 3:10:00 **Analysis Type:** RES **Dilution:** 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.7	J	0.26	MDL	4.2	PQL	ug/Kg	UJ	L, B
TOLUENE	0.10	J	0.09	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-049-SA5DN-SB-4.0-5.0 **Collected:** 6/10/2011 2:10:00 **Analysis Type:** RES **Dilution:** 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.5	J	0.25	MDL	4.1	PQL	ug/Kg	UJ	L, B
TOLUENE	0.15	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-111-SA8N-SB-3.0-4.0** ***Collected:*** **6/10/2011 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.89**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
METHYLENE CHLORIDE	1.5	J	0.23	MDL	3.9	PQL	ug/Kg	UJ	L, B
TOLUENE	0.09	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE178

Method Blank Outlier Report

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16808BB220244	6/21/2011 2:44:00 AM	ALUMINUM	5.85 mg/Kg	SL-041-SA5DN-SB-4.0-5.0
		BORON	0.868 mg/Kg	SL-041-SA5DN-SB-9.0-10.0
		CALCIUM	14.7 mg/Kg	SL-045-SA5DN-SB-4.0-5.0
		IRON	3.86 mg/Kg	SL-045-SA5DN-SB-9.0-10.0
		MAGNESIUM	0.630 mg/Kg	SL-048-SA5DN-SB-11.5-12.5
		PHOSPHORUS	1.54 mg/Kg	SL-048-SA5DN-SB-4.0-5.0
		STRONTIUM	0.0819 mg/Kg	SL-049-SA5DN-SB-15.5-16.5
		TIN	1.52 mg/Kg	SL-049-SA5DN-SB-4.0-5.0
				SL-111-SA8N-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-041-SA5DN-SB-4.0-5.0(RES)	TIN	2.83 mg/Kg	2.83U mg/Kg
SL-041-SA5DN-SB-9.0-10.0(RES)	TIN	2.54 mg/Kg	2.54U mg/Kg
SL-045-SA5DN-SB-4.0-5.0(RES)	TIN	2.77 mg/Kg	2.77U mg/Kg
SL-045-SA5DN-SB-9.0-10.0(RES)	TIN	2.51 mg/Kg	2.51U mg/Kg
SL-048-SA5DN-SB-11.5-12.5(RES)	BORON	2.21 mg/Kg	2.21U mg/Kg
SL-048-SA5DN-SB-11.5-12.5(RES)	TIN	2.57 mg/Kg	2.57U mg/Kg
SL-048-SA5DN-SB-4.0-5.0(RES)	TIN	2.75 mg/Kg	2.75U mg/Kg
SL-049-SA5DN-SB-15.5-16.5(RES)	BORON	3.19 mg/Kg	3.19U mg/Kg
SL-049-SA5DN-SB-15.5-16.5(RES)	TIN	2.47 mg/Kg	2.47U mg/Kg
SL-049-SA5DN-SB-4.0-5.0(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-111-SA8N-SB-3.0-4.0(RES)	BORON	1.94 mg/Kg	1.94U mg/Kg
SL-111-SA8N-SB-3.0-4.0(RES)	TIN	2.50 mg/Kg	2.50U mg/Kg

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P71719AB322215A	6/20/2011 10:15:00 PM	EFH (C30-C40)	2.2 mg/Kg	SL-041-SA5DN-SB-4.0-5.0
				SL-041-SA5DN-SB-9.0-10.0
				SL-045-SA5DN-SB-4.0-5.0
				SL-045-SA5DN-SB-9.0-10.0
				SL-111-SA8N-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-041-SA5DN-SB-9.0-10.0(REA2)	EFH (C30-C40)	7.3 mg/Kg	7.3U mg/Kg
SL-045-SA5DN-SB-9.0-10.0(REA2)	EFH (C30-C40)	5.2 mg/Kg	5.2U mg/Kg
SL-111-SA8N-SB-3.0-4.0(REA2)	EFH (C30-C40)	4.1 mg/Kg	4.1U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB84B210341A	6/15/2011 3:41:00 AM	ACETONE METHYLENE CHLORIDE	9.0 ug/Kg 1.4 ug/Kg	SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-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-041-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.5U ug/Kg
SL-041-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	2.4 ug/Kg	4.4U ug/Kg
SL-045-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.1U ug/Kg
SL-045-SA5DN-SB-9.0-10.0(RES)	ACETONE	8.9 ug/Kg	8.9U ug/Kg
SL-045-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	2.2 ug/Kg	4.2U ug/Kg
SL-048-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.2U ug/Kg
SL-049-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.1U ug/Kg
SL-111-SA8N-SB-3.0-4.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	3.9U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE178 Laboratory: LL

EDD Filename: DE178_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-041-SA5DN-SB-4.0-5.0MS SL-041-SA5DN-SB-4.0-5.0MSD (SL-041-SA5DN-SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	44 - -	4 6 6	59.00-109.00 63.00-107.00 63.00-107.00	- - -	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-041-SA5DN-SB-4.0-5.0MSD (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	ARSENIC BERYLLIUM COPPER NICKEL ZINC	- - - - -	153 133 143 153 200	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ARSENIC BERYLLIUM COPPER NICKEL ZINC	J(all detects)
SL-041-SA5DN-SB-4.0-5.0MS (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	VANADIUM	29	-	75.00-125.00	-	VANADIUM	No Qual, >4x
SL-041-SA5DN-SB-4.0-5.0MS (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	CHROMIUM	35	-	75.00-125.00	-	CHROMIUM	J(all detects) UJ(all non-detects)
SL-041-SA5DN-SB-4.0-5.0MS SL-041-SA5DN-SB-4.0-5.0MSD (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	BARIUM	177	397	75.00-125.00	-	BARIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-041-SA5DN-SB-4.0-5.0MSD (SL-041-SA5DN-SB-4.0-5.0)	4-CHLOROANILINE	-	-	23.00-95.00	54 (30.00)	4-CHLOROANILINE	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-041-SA5DN-SB-4.0-5.0MS (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	FLUORIDE	75	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-041-SA5DN-SB-4.0-5.0DUP (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	Nitrate-NO3	29	20.00	No Qual OK by Difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-041-SA5DN-SB-4.0-5.0DUP (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	ANTIMONY SELENIUM	24 22	20.00 20.00	No Qual OK by Difference

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-111-SA8N-SB-3.0-4.0DUP (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	HEXAVALENT CHROMIUM	38	20.00	No Qual OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE178 Laboratory: LL

EDD Filename: DE178_v1 eQAPP Name: CDM_SSFL_110509

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11648AQ242114A (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-111-SA8N-SB-3.0-4.0)	PETN	123	-	80.00-120.00	-	PETN	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16826AQ220936A (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	ANTIMONY	137	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits
P16826AQ220936C (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-11.5-12.5 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-15.5-16.5 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	MOLYBDENUM	121	-	80.00-120.00	-	MOLYBDENUM	No Qual, SRM within QC Limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB84Q210207A LCSB84Y210231A (SL-041-SA5DN-SB-4.0-5.0 SL-041-SA5DN-SB-9.0-10.0 SL-045-SA5DN-SB-4.0-5.0 SL-045-SA5DN-SB-9.0-10.0 SL-048-SA5DN-SB-4.0-5.0 SL-049-SA5DN-SB-4.0-5.0 SL-111-SA8N-SB-3.0-4.0)	METHYLENE CHLORIDE	128	125	76.00-124.00	-	METHYLENE CHLORIDE	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-041-SA5DN-SB -9.0-10.0	2,4,6-TRIBROMOPHENOL	21	35.00-130.00	All Target Analytes	
	2-FLUOROBIPHENYL	22	45.00-130.00		
	2-FLUOROPHENOL	22	25.00-130.00		J (all detects)
	Nitrobenzene-d5	22	40.00-130.00		UJ (all non-detects)
	PHENOL-D6	22	25.00-120.00		
	Terphenyl-d14	20	45.00-135.00		

Reporting Limit Outliers

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.8	PQL	mg/Kg	J (all detects)
SL-111-SA8N-SB-3.0-4.0	Nitrate-NO3	J	1.5	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	TIN	J	2.83	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.31	5.84	PQL	mg/Kg	
SL-041-SA5DN-SB-9.0-10.0	TIN	J	2.54	10.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.96	5.41	PQL	mg/Kg	
SL-045-SA5DN-SB-4.0-5.0	TIN	J	2.77	11.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.47	5.90	PQL	mg/Kg	
SL-045-SA5DN-SB-9.0-10.0	BORON	J	4.71	5.53	PQL	mg/Kg	J (all detects)
	TIN	J	2.51	11.1	PQL	mg/Kg	
	Zirconium	J	4.74	5.53	PQL	mg/Kg	
SL-048-SA5DN-SB-11.5-12.5	BORON	J	2.21	5.34	PQL	mg/Kg	J (all detects)
	TIN	J	2.57	10.7	PQL	mg/Kg	
	Zirconium	J	3.44	5.34	PQL	mg/Kg	
SL-048-SA5DN-SB-4.0-5.0	TIN	J	2.75	11.5	PQL	mg/Kg	J (all detects)
SL-049-SA5DN-SB-15.5-16.5	BORON	J	3.19	5.43	PQL	mg/Kg	J (all detects)
	TIN	J	2.47	10.9	PQL	mg/Kg	
	Zirconium	J	3.85	5.43	PQL	mg/Kg	
SL-049-SA5DN-SB-4.0-5.0	TIN	J	2.56	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.91	5.75	PQL	mg/Kg	
SL-111-SA8N-SB-3.0-4.0	BORON	J	1.94	5.37	PQL	mg/Kg	J (all detects)
	SODIUM	J	81.9	107	PQL	mg/Kg	
	TIN	J	2.50	10.7	PQL	mg/Kg	
	Zirconium	J	1.55	5.37	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	SELENIUM	J	0.216	0.458	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0648	0.115	PQL	mg/Kg	
SL-041-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.174	0.219	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0853	0.109	PQL	mg/Kg	
	THALLIUM	J	0.0669	0.109	PQL	mg/Kg	
SL-045-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0776	0.468	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0746	0.117	PQL	mg/Kg	
SL-045-SA5DN-SB-9.0-10.0	SILVER	J	0.0411	0.114	PQL	mg/Kg	J (all detects)
SL-048-SA5DN-SB-11.5-12.5	CADMIUM	J	0.0972	0.109	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0659	0.436	PQL	mg/Kg	
	SILVER	J	0.0469	0.109	PQL	mg/Kg	
SL-048-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0688	0.457	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0609	0.114	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-049-SA5DN-SB-15.5-16.5	SILVER	J	0.0361	0.113	PQL	mg/Kg	J (all detects)
SL-049-SA5DN-SB-4.0-5.0	SELENIUM	J	0.174	0.460	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0715	0.115	PQL	mg/Kg	
SL-111-SA8N-SB-3.0-4.0	ANTIMONY	J	0.141	0.213	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0584	0.106	PQL	mg/Kg	
	SELENIUM	J	0.175	0.425	PQL	mg/Kg	
	SILVER	J	0.0400	0.106	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-048-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.2	PQL	mg/Kg	J (all detects)
SL-049-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.48	1.2	PQL	mg/Kg	J (all detects)
SL-111-SA8N-SB-3.0-4.0	HEXAVALENT CHROMIUM	J	0.62	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-049-SA5DN-SB-15.5-16.5	MERCURY	J	0.0422	0.108	PQL	mg/Kg	J (all detects)
SL-049-SA5DN-SB-4.0-5.0	MERCURY	J	0.0151	0.109	PQL	mg/Kg	J (all detects)
SL-111-SA8N-SB-3.0-4.0	MERCURY	J	0.0125	0.105	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	EFH (C15-C20)	J	1.2	2.9	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-9.0-10.0	AROCLOR 1260	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	2.6	3.7	PQL	ug/Kg	
SL-049-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	1.7	2.0	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	1.6	3.9	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.7	4.5	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.11	4.5	PQL	ug/Kg	
SL-041-SA5DN-SB-9.0-10.0	METHYLENE CHLORIDE	J	2.4	4.4	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.11	4.4	PQL	ug/Kg	
SL-045-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.3	4.1	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.09	4.1	PQL	ug/Kg	
SL-045-SA5DN-SB-9.0-10.0	METHYLENE CHLORIDE	J	2.2	4.2	PQL	ug/Kg	J (all detects)
SL-048-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.7	4.2	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.10	4.2	PQL	ug/Kg	
SL-049-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.5	4.1	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.15	4.1	PQL	ug/Kg	
SL-111-SA8N-SB-3.0-4.0	METHYLENE CHLORIDE	J	1.5	3.9	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.09	3.9	PQL	ug/Kg	

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	38	390	PQL	ug/Kg	J (all detects)
SL-041-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	380	PQL	ug/Kg	J (all detects)
SL-049-SA5DN-SB-15.5-16.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	35	380	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA5DN-SB-4.0-5.0	ANTHRACENE	J	0.51	2.0	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	0.91	2.0	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.7	2.0	PQL	ug/Kg	
SL-041-SA5DN-SB-9.0-10.0	BENZO(A)ANTHRACENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.4	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.3	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.95	1.9	PQL	ug/Kg	
	CHRYSENE	J	1.8	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	1.6	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.83	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	0.89	1.9	PQL	ug/Kg	
	PYRENE	J	1.7	1.9	PQL	ug/Kg	
SL-049-SA5DN-SB-15.5-16.5	BENZO(A)ANTHRACENE	J	1.7	1.9	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.6	21	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.9	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE178 **Laboratory: LL**

EDD Filename: DE178_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-049-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	1.0	2.0	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.3	2.0	PQL	ug/Kg	
	CHRYSENE	J	1.8	2.0	PQL	ug/Kg	
	Di-n-butylphthalate	J	12	21	PQL	ug/Kg	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	0.83	2.0	PQL	ug/Kg	
	NAPHTHALENE	J	0.80	2.0	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	2.0	PQL	ug/Kg	

LDC #: 26277I4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/20/11
SDG #: DE178 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No final
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	Ba, V, Zn >5X
VII.	Duplicate Sample Analysis	N	Sb, Se, <5X (final Al, Mn, Fe, Mg DB/22)
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Pb, Zn
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-041-SA5DN-SB-4.0-5.0	11	#1 MS (ICP/MS-Pb, Zn)	21		31	
2	SL-041-SA5DN-SB-9.0-10.0	12	MSD	22		32	
3	SL-045-SA5DN-SB-4.0-5.0	13	Dup	23		33	
4	SL-045-SA5DN-SB-9.0-10.0	14		24		34	
5	SL-048-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-048-SA5DN-SB-11.5-12.5	16		26		36	
7	SL-049-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-049-SA5DN-SB-15.5-16.5	18		28		38	
9	SL-111-SA8N-SB-3.0-4.0	19		29		39	
10		20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE178
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6313367BKG Matrix Spike Lab Sample ID: 6313367MS Matrix Spike Duplicate Lab Sample ID: 6313367MSD
% Solids for Sample: 83.9
Batch Id(s): P16826A, P16811C

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
Antimony	121	0.2583		1.3964		1.4266		1.3753	1.3753	MG/KG	83		85		2		75 - 125	20	MS
Arsenic	75	5.7028		8.0888		9.2120		2.2921	2.2921	MG/KG	104		153	N	13		75 - 125	20	MS
[redacted]	137	158.7971		179.0364		204.2954		11.4605	11.4605	MG/KG	177		397		13			20	MS
Beryllium	9	0.8607		1.7541		2.0831		0.9168	0.9168	MG/KG	97		133	N	17		75 - 125	20	MS
Cadmium	111	0.4687		1.5630		1.7585		1.1461	1.1461	MG/KG	95		113		12		75 - 125	20	MS
Chromium	52	40.2723		44.2606		49.8991		11.4605	11.4605	MG/KG	35	N	84		12		75 - 125	20	MS
Cobalt	59	11.4743		73.3703		82.4929		57.3026	57.3026	MG/KG	108		124		12		75 - 125	20	MS
Copper	63	18.3987		30.4850		34.7712		11.4605	11.4605	MG/KG	105		143	N	13		75 - 125	20	MS
Mercury		0.0082	U	0.1668		0.1621		0.1983	0.1891	MG/KG	84		86		3		65 - 135	20	CV
Molybdenum	98	0.4389		12.5951		14.3165		11.4605	11.4605	MG/KG	106		121		13		75 - 125	20	MS
Nickel	60	23.8608		36.6966		41.3496		11.4605	11.4605	MG/KG	112		153	N	12		75 - 125	20	MS
Selenium	78	0.2160	B	2.4548		2.7780		2.2921	2.2921	MG/KG	98		112		12		75 - 125	20	MS
Silver	107	0.0648	B	12.2192		13.4065		11.4605	11.4605	MG/KG	106		116		9		75 - 125	20	MS
Thallium	203	0.5102		0.9217		1.0138		0.4584	0.4584	MG/KG	90		110		10		75 - 125	20	MS
Vanadium	51	68.1443		71.4679		81.7365		11.4605	11.4605	MG/KG	29		119		13			20	MS
Zinc	66	74.1267		87.0083		97.0019		11.4605	11.4605	MG/KG	112		200		11			20	MS

+ Pb, P, K J Lt (Q) > 5 hg DZ 1/7
Mn J hu J (RPD, Z)
fully Lt

DE178

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:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE178
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6313367BKG
% Solids for Duplicate: 83.9
Batch ID(s): P16826A, P16811C
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6313367DUP
% Solids for Sample: 83.9

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121	0.2	0.2583		0.3300		24		MS
Arsenic	75		5.7028		6.5590		14		MS
Barium	137		158.7971		177.4390		11		MS
Beryllium	9		0.8607		1.0043		15		MS
Cadmium	111	0.1	0.4687		0.4003		16		MS
Chromium	52		40.2723		37.4326		7		MS
Cobalt	59		11.4743		13.4271		16		MS
Copper	63		18.3987		20.0687		9		MS
Mercury			0.0082	U	0.0079	U			CV
Molybdenum	98	0.1	0.4389		0.5034		14		MS
Nickel	60		23.8608		27.0714		13		MS
Selenium	78		0.2160	B	0.1727	B	22		MS
Silver	107		0.0648	B	0.0713	B	10		MS
Thallium	203	0.1	0.5102		0.4668		9		MS
Vanadium	51		68.1443		65.6604		4		MS
Zinc	66		74.1267		80.7420		9		MS

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.

Mo. fuel

Sb, Se <5X

Ave
(Al, Mn for SMG DE177)

DE178 3483

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

SAMPLE DELIVERY GROUP

DE179

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2011	TB-061311	6314474	TB	5030B	8015M	III
13-Jun-2011	TB-061311	6314474	TB	5030B	8260B	III
13-Jun-2011	TB-061311	6314474	TB	5030B	8260B SIM	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3050B	6010B	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3050B	6020	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3060A	7199	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3546	1625C	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3550B	8015B	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3550B	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3550B	8082	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3550B	8270C	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	3550B	8270C SIM	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	5035	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	5035	8260B	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	5035	8260B SIM	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	8330	8330A	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	300.0	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	314.0	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	7471A	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	8015B	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	8315A	III
13-Jun-2011	SL-047-SA5DN-SB-4.0-5.0	6314468	N	METHOD	9012B	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3050B	6010B	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3050B	6020	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3546	1625C	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3550B	8015B	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3550B	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3550B	8082	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3550B	8270C	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	3550B	8270C SIM	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	5035	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	5035	8260B	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	5035	8260B SIM	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	8330	8330A	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	300.0	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	314.0	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	7471A	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	8015B	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	8015M	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	8315A	III
13-Jun-2011	SL-047-SA5DN-SB-10.0-11.0	6314469	N	METHOD	9012B	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3050B	6010B	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3050B	6020	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3060A	7199	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3546	1625C	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3550B	8015B	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3550B	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3550B	8082	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3550B	8270C	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	5035	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	5035	8260B	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	5035	8260B SIM	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	8330	8330A	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	300.0	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	314.0	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	7471A	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	8015B	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	8315A	III
13-Jun-2011	SL-046-SA5DN-SB-4.0-5.0	6314466	N	METHOD	9012B	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3050B	6010B	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3050B	6020	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3060A	7199	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3546	1625C	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3550B	8015B	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3550B	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3550B	8082	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3550B	8270C	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	3550B	8270C SIM	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	5035	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	5035	8260B	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	5035	8260B SIM	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	8330	8330A	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	300.0	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	6850	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	7471A	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	8015B	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	8015M	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	8315A	III
13-Jun-2011	SL-046-SA5DN-SB-9.0-10.0	6314467	N	METHOD	9012B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3050B	6010B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3060A	7199	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3546	1625C	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3550B	8015B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3550B	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3550B	8082	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3550B	8270C	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	3550B	8270C SIM	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	5035	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	5035	8260B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	5035	8260B SIM	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	8330	8330A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	300.0	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	314.0	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	7471A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	8015B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	8315A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0	6314462	N	METHOD	9012B	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
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D220554	DUP	METHOD	7471A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D220820A	DUP	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D220820B	DUP	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D220820C	DUP	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D220820D	DUP	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D221030	DUP	3050B	6010B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D271439A	DUP	METHOD	300.0	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D271626A	DUP	METHOD	9012B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0DU	P314462D272224A	DUP	METHOD	314.0	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R220555	MS	METHOD	7471A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R220823A	MS	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R220823B	MS	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R220823C	MS	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R220823D	MS	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R221034	MS	3050B	6010B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R242102A	MS	METHOD	8315A	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R260157	MS	3550B	8270C SIM	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R261745	MS	3550B	8270C	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R271453A	MS	METHOD	300.0	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R271627A	MS	METHOD	9012B	III
13-Jun-2011	SL-042-SA5DN-SB-4.0-5.0MS	P314462R272248A	MS	METHOD	314.0	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3050B	6010B	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3050B	6020	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3060A	7199	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3546	1625C	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3550B	8015B	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
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3550B	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3550B	8082	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3550B	8270C	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	3550B	8270C SIM	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	5035	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	5035	8260B	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	5035	8260B SIM	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	8330	8330A	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	300.0	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	314.0	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	6850	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	7471A	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	8015B	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	8015M	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	8315A	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0	6314463	N	METHOD	9012B	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0D	P314463D271312A	DUP	3060A	7199	III
13-Jun-2011	SL-042-SA5DN-SB-9.0-10.0M	P314463R271238A	MS	3060A	7199	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3050B	6010B	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3050B	6020	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3060A	7199	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3546	1625C	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3550B	8015B	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3550B	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3550B	8082	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3550B	8270C	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
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	3550B	8270C SIM	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	5035	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	5035	8260B	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	5035	8260B SIM	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	8330	8330A	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	300.0	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	314.0	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	7471A	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	8015B	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	8315A	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0	6314464	N	METHOD	9012B	III
13-Jun-2011	SL-043-SA5DN-SB-4.0-5.0MS	P314464R322126A	MS	METHOD	8015B	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3050B	6010B	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3050B	6020	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3060A	7199	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3546	1625C	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3550B	8015B	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3550B	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3550B	8082	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3550B	8270C	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	3550B	8270C SIM	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	5035	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	5035	8260B	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	5035	8260B SIM	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	8330	8330A	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
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	300.0	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	314.0	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	7471A	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	8015B	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	8015M	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	8315A	III
13-Jun-2011	SL-043-SA5DN-SB-9.0-10.0	6314465	N	METHOD	9012B	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3050B	6010B	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3050B	6020	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3060A	7199	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3550B	8082	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3550B	8270C	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	3550B	8270C SIM	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	5035	8260B	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	5035	8260B SIM	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	METHOD	300.0	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	METHOD	314.0	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0	6314472	N	METHOD	7471A	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0DU	P314472D270354B	DUP	METHOD	314.0	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0DU	P314472D271757B	DUP	METHOD	300.0	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0MS	P314472R270417B	MS	METHOD	314.0	III
13-Jun-2011	SL-202-SA5DN-SB-4.0-5.0MS	P314472R271812B	MS	METHOD	300.0	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3050B	6010B	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3050B	6020	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3060A	7199	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3550B	8270C	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	3550B	8270C SIM	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	METHOD	300.0	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	METHOD	314.0	III
13-Jun-2011	SL-202-SA5DN-SB-9.0-10.0	6314473	N	METHOD	7471A	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3050B	6010B	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3050B	6020	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3060A	7199	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3550B	8082	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3550B	8270C	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	3550B	8270C SIM	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	5035	8260B	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	5035	8260B SIM	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	METHOD	300.0	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	METHOD	314.0	III
13-Jun-2011	SL-054-SA5DN-SB-4.0-5.0	6314470	N	METHOD	7471A	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3050B	6010B	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3050B	6020	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3060A	7199	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3550B	8082	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3550B	8270C	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	3550B	8270C SIM	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	METHOD	300.0	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	METHOD	314.0	III
13-Jun-2011	SL-054-SA5DN-SB-9.0-10.0	6314471	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 11:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	7.1		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.6	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 11:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.3		0.88	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.88	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 11:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.4		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-043-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 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	7.9		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-046-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 9:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	14.7		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-046-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 10:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	7.4		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-047-SA5DN-SB-10.0-11.0 **Collected:** 6/13/2011 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
FLUORIDE	3.4		0.86	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-047-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 9:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	14.4		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-054-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 3:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.3		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-054-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 3:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.7		0.96	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-202-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 2:20:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.6		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-202-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.9		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 11:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.49	J	0.420	MDL	5.84	PQL	mg/Kg	J	Z
CALCIUM	14700		2.92	MDL	23.4	PQL	mg/Kg	J	E
PHOSPHORUS	239		0.409	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	3430		13.2	MDL	58.4	PQL	mg/Kg	J	Q
TIN	3.76	J	0.374	MDL	11.7	PQL	mg/Kg	U	B
TITANIUM	1490		0.0829	MDL	1.17	PQL	mg/Kg	J	L
Zirconium	5.81	J	0.537	MDL	5.84	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 Laboratory: LL

EDD Filename: DE179_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 11:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.44	J	0.382	MDL	5.31	PQL	mg/Kg	J	Z
CALCIUM	5450		2.66	MDL	21.2	PQL	mg/Kg	J	E
PHOSPHORUS	345		0.372	MDL	10.6	PQL	mg/Kg	J	Q
POTASSIUM	1380		12.0	MDL	53.1	PQL	mg/Kg	J	Q
TIN	2.11	J	0.340	MDL	10.6	PQL	mg/Kg	U	B
TITANIUM	670		0.0754	MDL	1.06	PQL	mg/Kg	J	L
Zirconium	3.75	J	0.489	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 11:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.75	J	0.408	MDL	5.67	PQL	mg/Kg	J	Z
CALCIUM	14500		2.84	MDL	22.7	PQL	mg/Kg	J	E
PHOSPHORUS	254		0.397	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3410		12.8	MDL	56.7	PQL	mg/Kg	J	Q
TIN	2.77	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
TITANIUM	1400		0.0805	MDL	1.13	PQL	mg/Kg	J	L
Zirconium	5.23	J	0.522	MDL	5.67	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 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
BORON	3.55	J	0.409	MDL	5.68	PQL	mg/Kg	J	Z
CALCIUM	5530		2.84	MDL	22.7	PQL	mg/Kg	J	E
PHOSPHORUS	274		0.398	MDL	11.4	PQL	mg/Kg	J	Q
POTASSIUM	3490		12.8	MDL	56.8	PQL	mg/Kg	J	Q
TIN	3.09	J	0.364	MDL	11.4	PQL	mg/Kg	U	B
TITANIUM	1480		0.0807	MDL	1.14	PQL	mg/Kg	J	L
Zirconium	5.15	J	0.523	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 9:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.60	J	0.408	MDL	5.67	PQL	mg/Kg	J	Z
CALCIUM	6340		2.83	MDL	22.7	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	313		0.397	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3880		12.8	MDL	56.7	PQL	mg/Kg	J	Q
TIN	3.11	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
TITANIUM	1700		0.0805	MDL	1.13	PQL	mg/Kg	J	L

Sample ID: SL-046-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.95	J	0.405	MDL	5.63	PQL	mg/Kg	J	Z
CALCIUM	6680		2.82	MDL	22.5	PQL	mg/Kg	J	E
PHOSPHORUS	198		0.394	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3100		12.7	MDL	56.3	PQL	mg/Kg	J	Q
TIN	2.90	J	0.360	MDL	11.3	PQL	mg/Kg	U	B
TITANIUM	1320		0.0800	MDL	1.13	PQL	mg/Kg	J	L
Zirconium	5.01	J	0.518	MDL	5.63	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-10.0-11.0 *Collected:* 6/13/2011 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
CALCIUM	9420		2.60	MDL	20.8	PQL	mg/Kg	J	E
PHOSPHORUS	294		0.364	MDL	10.4	PQL	mg/Kg	J	Q
POTASSIUM	2270		11.8	MDL	52.0	PQL	mg/Kg	J	Q
TIN	2.85	J	0.333	MDL	10.4	PQL	mg/Kg	U	B
TITANIUM	1360		0.0739	MDL	1.04	PQL	mg/Kg	J	L
Zirconium	3.25	J	0.479	MDL	5.20	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	6560		2.77	MDL	22.2	PQL	mg/Kg	J	E
PHOSPHORUS	397		0.388	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	3660		12.5	MDL	55.5	PQL	mg/Kg	J	Q
TIN	3.01	J	0.355	MDL	11.1	PQL	mg/Kg	U	B
TITANIUM	1620		0.0788	MDL	1.11	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-054-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.57	J	0.432	MDL	6.00	PQL	mg/Kg	J	Z
CALCIUM	5390		3.00	MDL	24.0	PQL	mg/Kg	J	E
PHOSPHORUS	391		0.420	MDL	12.0	PQL	mg/Kg	J	Q
POTASSIUM	3540		13.6	MDL	60.0	PQL	mg/Kg	J	Q
TIN	3.09	J	0.384	MDL	12.0	PQL	mg/Kg	U	B
TITANIUM	1680		0.0852	MDL	1.20	PQL	mg/Kg	J	L
Zirconium	5.49	J	0.552	MDL	6.00	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 3:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	7860		2.90	MDL	23.2	PQL	mg/Kg	J	E
PHOSPHORUS	460		0.406	MDL	11.6	PQL	mg/Kg	J	Q
POTASSIUM	3330		13.1	MDL	58.0	PQL	mg/Kg	J	Q
TIN	3.33	J	0.371	MDL	11.6	PQL	mg/Kg	U	B
TITANIUM	1590		0.0824	MDL	1.16	PQL	mg/Kg	J	L

Sample ID: SL-202-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	10600		3.02	MDL	24.1	PQL	mg/Kg	J	E
PHOSPHORUS	549		0.422	MDL	12.1	PQL	mg/Kg	J	Q
POTASSIUM	4230		13.6	MDL	60.3	PQL	mg/Kg	J	Q
TIN	3.15	J	0.386	MDL	12.1	PQL	mg/Kg	U	B
TITANIUM	1680		0.0856	MDL	1.21	PQL	mg/Kg	J	L

Sample ID: SL-202-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.94	J	0.407	MDL	5.65	PQL	mg/Kg	J	Z
CALCIUM	11400		2.82	MDL	22.6	PQL	mg/Kg	J	E
PHOSPHORUS	372		0.395	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3480		12.8	MDL	56.5	PQL	mg/Kg	J	Q
TIN	3.08	J	0.362	MDL	11.3	PQL	mg/Kg	U	B
TITANIUM	1490		0.0802	MDL	1.13	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS
Method: 6010B **Matrix:** SO

Method Category: METALS
Method: 6020 **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 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
SELENIUM	0.113	J	0.0664	MDL	0.458	PQL	mg/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 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
ANTIMONY	0.408		0.0847	MDL	0.229	PQL	mg/Kg	UJ	Q, B
COPPER	17.7		0.0916	MDL	0.458	PQL	mg/Kg	J	E
LEAD	10.5		0.0117	MDL	0.229	PQL	mg/Kg	J	Q, E, E
SILVER	0.0530	J	0.0163	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0667	J	0.0616	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.168	J	0.0786	MDL	0.212	PQL	mg/Kg	UJ	Q, B
COPPER	9.40		0.0850	MDL	0.425	PQL	mg/Kg	J	E
LEAD	5.73		0.0108	MDL	0.212	PQL	mg/Kg	J	Q, E, E
SILVER	0.0246	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0667	J	0.0664	MDL	0.458	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.261		0.0848	MDL	0.229	PQL	mg/Kg	UJ	Q, B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-043-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 11:55:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	16.4		0.0916	MDL	0.458	PQL	mg/Kg	J	E
LEAD	10.2		0.0117	MDL	0.229	PQL	mg/Kg	J	Q, E, E
SILVER	0.0480	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 12:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.251		0.0850	MDL	0.230	PQL	mg/Kg	UJ	Q, B
COPPER	19.7		0.0918	MDL	0.459	PQL	mg/Kg	J	E
LEAD	10.8		0.0117	MDL	0.230	PQL	mg/Kg	J	Q, E, E
SILVER	0.0538	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 9:50:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0665	J	0.0645	MDL	0.445	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 9:50:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.421		0.0823	MDL	0.222	PQL	mg/Kg	UJ	Q, B
COPPER	22.1		0.0889	MDL	0.445	PQL	mg/Kg	J	E
LEAD	13.7		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, E, E
SILVER	0.0992	J	0.0158	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 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	0.0667	J	0.0647	MDL	0.446	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 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
ANTIMONY	0.469		0.0825	MDL	0.223	PQL	mg/Kg	UJ	Q, B
COPPER	25.9		0.0892	MDL	0.446	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 Laboratory: LL

EDD Filename: DE179_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-046-SA5DN-SB-9.0-10.0 **Collected:** 6/13/2011 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
LEAD	13.9		0.0114	MDL	0.223	PQL	mg/Kg	J	Q, E, E
SILVER	0.0747	J	0.0158	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-10.0-11.0 **Collected:** 6/13/2011 9:10:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0619	J	0.0609	MDL	0.420	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-10.0-11.0 **Collected:** 6/13/2011 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
ANTIMONY	0.158	J	0.0778	MDL	0.210	PQL	mg/Kg	UJ	Q, B
COPPER	13.7		0.0841	MDL	0.420	PQL	mg/Kg	J	E
LEAD	7.02		0.0107	MDL	0.210	PQL	mg/Kg	J	Q, E, E
SILVER	0.0260	J	0.0149	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 9:00:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.496		0.0813	MDL	0.220	PQL	mg/Kg	UJ	Q, B
COPPER	21.4		0.0879	MDL	0.440	PQL	mg/Kg	J	E
LEAD	14.6		0.0112	MDL	0.220	PQL	mg/Kg	J	Q, E, E
SILVER	0.0646	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 3:10:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0775	J	0.0683	MDL	0.471	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-4.0-5.0 **Collected:** 6/13/2011 3:10:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.307		0.0871	MDL	0.235	PQL	mg/Kg	UJ	Q, B
COPPER	17.5		0.0941	MDL	0.471	PQL	mg/Kg	J	E
LEAD	11.7		0.0120	MDL	0.235	PQL	mg/Kg	J	Q, E, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-054-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0594	J	0.0167	MDL	0.118	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 3:15:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.130	J	0.0673	MDL	0.464	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 3:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.309		0.0858	MDL	0.232	PQL	mg/Kg	UJ	Q, B
COPPER	24.4		0.0928	MDL	0.464	PQL	mg/Kg	J	E
LEAD	12.3		0.0118	MDL	0.232	PQL	mg/Kg	J	Q, E, E
SILVER	0.0609	J	0.0165	MDL	0.116	PQL	mg/Kg	J	Z

Sample ID: SL-202-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 2:20:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.104	J	0.0700	MDL	0.483	PQL	mg/Kg	J	Z

Sample ID: SL-202-SA5DN-SB-4.0-5.0 ***Collected:*** 6/13/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.395		0.0893	MDL	0.241	PQL	mg/Kg	UJ	Q, B
COPPER	25.0		0.0965	MDL	0.483	PQL	mg/Kg	J	E
LEAD	16.1		0.0123	MDL	0.241	PQL	mg/Kg	J	Q, E, E
SILVER	0.0636	J	0.0171	MDL	0.121	PQL	mg/Kg	J	Z

Sample ID: SL-202-SA5DN-SB-9.0-10.0 ***Collected:*** 6/13/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.338		0.0836	MDL	0.226	PQL	mg/Kg	UJ	Q, B
COPPER	17.4		0.0904	MDL	0.452	PQL	mg/Kg	J	E
LEAD	10.6		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, E, E
SILVER	0.0593	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.49	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.88	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.41	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-10.0-11.0 *Collected:* 6/13/2011 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
HEXAVALENT CHROMIUM	0.32	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.41	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.55	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS
Method: 7199 **Matrix:** SO

Sample ID: SL-202-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-202-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS
Method: 7471A **Matrix:** SO

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0398	J	0.0079	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0124	J	0.0076	MDL	0.107	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 1625C **Matrix:** SO

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	187	U	187	MDL	374	PQL	ng/Kg	UJ	H

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.60	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 Laboratory: LL

EDD Filename: DE179_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.84	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.6	J	0.91	MDL	2.7	PQL	mg/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 12:05:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.3	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C30-C40)	0.52	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES *Dilution:* 20.76

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	PQL	mg/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 21.33

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	0.3	J	0.2	MDL	1	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 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
AROCLOR 1260	0.87	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.59	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.74	J	0.45	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 3:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.85	J	0.47	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	Q, L
BENZO(A)ANTHRACENE	29	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	22	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	26	J	20	MDL	200	PQL	ug/Kg	J	Z
CHRYSENE	34	J	20	MDL	200	PQL	ug/Kg	J	Z
FLUORANTHENE	27	J	20	MDL	200	PQL	ug/Kg	J	Z
PYRENE	30	J	20	MDL	200	PQL	ug/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	19	MDL	380	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 Laboratory: LL

EDD Filename: DE179_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-043-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 12:05:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	L

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1200	PQL	ug/Kg	UJ	L

Sample ID: SL-046-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 10:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	L

Sample ID: SL-047-SA5DN-SB-10.0-11.0 *Collected:* 6/13/2011 9:10:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	350	U	350	MDL	1100	PQL	ug/Kg	UJ	L

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L

Sample ID: SL-054-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 3:10:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L

Sample ID: SL-054-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 3:15:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L

Sample ID: SL-202-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 2:20:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 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
BENZO(G,H,I)PERYLENE	1.8	J	0.78	MDL	2.0	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.4	J	0.78	MDL	2.0	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.78	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.7	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.7	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.92	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.7	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.3	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.93	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	0.79	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	0.89	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 12:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	8.7	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	8.2	J	6.9	MDL	21	PQL	ug/Kg	J	Z
Di-n-octylphthalate	14	J	6.9	MDL	21	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-202-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.90	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
CHRYSENE	0.67	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-042-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:00:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.23	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-042-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 11:10:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	7.4		0.23	MDL	3.8	PQL	ug/Kg	U	B
TOLUENE	0.17	J	0.08	MDL	3.8	PQL	ug/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 11:55:00 *Analysis Type:* RES *Dilution:* 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	8.7		0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.23	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-043-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 12:05:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	5.6		0.24	MDL	3.9	PQL	ug/Kg	U	B
TOLUENE	0.19	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-046-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:50:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	5.7		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.20	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory:** LL

EDD Filename: DE179_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-046-SA5DN-SB-9.0-10.0 *Collected:* 6/13/2011 10:00:00 *Analysis Type:* RES *Dilution:* 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	3.6	J	0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.18	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-10.0-11.0 *Collected:* 6/13/2011 9:10:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	5.2		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.21	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-047-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 9:00:00 *Analysis Type:* RES *Dilution:* 0.95

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	4.2	J	0.26	MDL	4.3	PQL	ug/Kg	U	B
TOLUENE	0.21	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z

Sample ID: SL-054-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 3:10:00 *Analysis Type:* RES *Dilution:* 0.82

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	4.1		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.23	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-202-SA5DN-SB-4.0-5.0 *Collected:* 6/13/2011 2:20:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	3.5	J	0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.17	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE179

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE179
EDD Filename: DE179_v1

Laboratory: LL
eQAPP Name: CDM_SSFL_110509

Method: 1625C **Preparation Method: 3546**
Matrix: SO

Sample ID	*Type*	*Actual*	*Criteria*	*Units*	*Flag*
SL-047-SA5DN-SB-4.0-5.0 (RES)	Sampling To Extraction	17.00	14.00	DAYS	J (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17208BB221009	6/24/2011 10:09:00 AM	IRON	4.19 mg/Kg	SL-042-SA5DN-SB-4.0-5.0
		MAGNESIUM	0.703 mg/Kg	SL-042-SA5DN-SB-9.0-10.0
		MANGANESE	0.0380 mg/Kg	SL-043-SA5DN-SB-4.0-5.0
		PHOSPHORUS	1.71 mg/Kg	SL-043-SA5DN-SB-9.0-10.0
		TIN	1.71 mg/Kg	SL-046-SA5DN-SB-4.0-5.0
				SL-046-SA5DN-SB-9.0-10.0
				SL-047-SA5DN-SB-10.0-11.0
				SL-047-SA5DN-SB-4.0-5.0
				SL-054-SA5DN-SB-4.0-5.0
				SL-054-SA5DN-SB-9.0-10.0
				SL-202-SA5DN-SB-4.0-5.0
				SL-202-SA5DN-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-042-SA5DN-SB-4.0-5.0(RES)	TIN	3.76 mg/Kg	3.76U mg/Kg
SL-042-SA5DN-SB-9.0-10.0(RES)	TIN	2.11 mg/Kg	2.11U mg/Kg
SL-043-SA5DN-SB-4.0-5.0(RES)	TIN	2.77 mg/Kg	2.77U mg/Kg
SL-043-SA5DN-SB-9.0-10.0(RES)	TIN	3.09 mg/Kg	3.09U mg/Kg
SL-046-SA5DN-SB-4.0-5.0(RES)	TIN	3.11 mg/Kg	3.11U mg/Kg
SL-046-SA5DN-SB-9.0-10.0(RES)	TIN	2.90 mg/Kg	2.90U mg/Kg
SL-047-SA5DN-SB-10.0-11.0(RES)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-047-SA5DN-SB-4.0-5.0(RES)	TIN	3.01 mg/Kg	3.01U mg/Kg
SL-054-SA5DN-SB-4.0-5.0(RES)	TIN	3.09 mg/Kg	3.09U mg/Kg
SL-054-SA5DN-SB-9.0-10.0(RES)	TIN	3.33 mg/Kg	3.33U mg/Kg
SL-202-SA5DN-SB-4.0-5.0(RES)	TIN	3.15 mg/Kg	3.15U mg/Kg
SL-202-SA5DN-SB-9.0-10.0(RES)	TIN	3.08 mg/Kg	3.08U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17226AB220808A	6/22/2011 8:08:00 AM	ANTIMONY	0.101 mg/Kg	SL-042-SA5DN-SB-4.0-5.0
				SL-042-SA5DN-SB-9.0-10.0
				SL-043-SA5DN-SB-4.0-5.0
				SL-043-SA5DN-SB-9.0-10.0
				SL-046-SA5DN-SB-4.0-5.0
				SL-046-SA5DN-SB-9.0-10.0
				SL-047-SA5DN-SB-10.0-11.0
				SL-047-SA5DN-SB-4.0-5.0
				SL-054-SA5DN-SB-4.0-5.0
				SL-054-SA5DN-SB-9.0-10.0
				SL-202-SA5DN-SB-4.0-5.0
				SL-202-SA5DN-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-042-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.408 mg/Kg	0.408U mg/Kg
SL-042-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.168 mg/Kg	0.168U mg/Kg
SL-043-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.261 mg/Kg	0.261U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
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-043-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.251 mg/Kg	0.251U mg/Kg
SL-046-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.421 mg/Kg	0.421U mg/Kg
SL-046-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.469 mg/Kg	0.469U mg/Kg
SL-047-SA5DN-SB-10.0-11.0(RES)	ANTIMONY	0.158 mg/Kg	0.158U mg/Kg
SL-047-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.496 mg/Kg	0.496U mg/Kg
SL-054-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.307 mg/Kg	0.307U mg/Kg
SL-054-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.309 mg/Kg	0.309U mg/Kg
SL-202-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.395 mg/Kg	0.395U mg/Kg
SL-202-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.338 mg/Kg	0.338U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB88B210142A	6/18/2011 1:42:00 AM	METHYLENE CHLORIDE	0.98 ug/Kg	SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-202-SA5DN-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-042-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	7.4 ug/Kg	7.4U ug/Kg
SL-043-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	8.7 ug/Kg	8.7U ug/Kg
SL-043-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	5.6 ug/Kg	5.6U ug/Kg
SL-046-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	5.7 ug/Kg	5.7U ug/Kg
SL-046-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	3.6 ug/Kg	4.2U ug/Kg
SL-047-SA5DN-SB-10.0-11.0(RES)	METHYLENE CHLORIDE	5.2 ug/Kg	5.2U ug/Kg
SL-047-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	4.2 ug/Kg	4.3U ug/Kg
SL-054-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	4.1 ug/Kg	4.1U ug/Kg
SL-202-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	3.5 ug/Kg	4.2U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0)	BENZOIC ACID	-	-	10.00-173.00	46 (30.00)	BENZOIC ACID	J (all detects)
SL-042-SA5DN-SB-4.0-5.0MS SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0)	2,4-DINITROPHENOL	14	15	20.00-143.00	-	2,4-DINITROPHENOL	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-042-SA5DN-SB-4.0-5.0MS SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	ANTIMONY	64	53	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)
	LEAD	-	284	75.00-125.00	34 (20.00)	LEAD	Zn, No Qual, >4x
	ZINC	64	126	75.00-125.00	-	ZINC	
SL-042-SA5DN-SB-4.0-5.0MS SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	BARIUM	144	148	75.00-125.00	-	BARIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-042-SA5DN-SB-4.0-5.0MS SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	ALUMINUM IRON MAGNESIUM PHOSPHORUS POTASSIUM TITANIUM	1239 1046 242 154 156 187	2136 2072 272 145 166 224	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 IRON MAGNESIUM PHOSPHORUS POTASSIUM TITANIUM	J(all detects) Al, Fe, Mg, Ti, No Qual, >4x
SL-042-SA5DN-SB-4.0-5.0MS SL-042-SA5DN-SB-4.0-5.0MSD (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	CALCIUM MANGANESE	713 -2	-38 -	75.00-125.00 75.00-125.00	22 (20.00) -	CALCIUM MANGANESE	J(all detects) UJ(all non-detects) Ca, Mn, No Qual %R, >4x

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-042-SA5DN-SB-4.0-5.0MS (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0)	FLUORIDE	69	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-202-SA5DN-SB-4.0-5.0MS (SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	FLUORIDE	74	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-042-SA5DN-SB-4.0-5.0DUP (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0)	Nitrate-NO3	27	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-042-SA5DN-SB-4.0-5.0DUP (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	BORON	39	20.00	No Qual OK by Difference
	TIN	38	20.00	

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-042-SA5DN-SB-4.0-5.0DUP (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	ANTIMONY	53	20.00	J(all detects) UJ(all non-detects) Sb, Cd, Se, No Qual, OK by Difference
	CADMIUM	65	20.00	
	COPPER	60	20.00	
	LEAD	38	20.00	
	SELENIUM	48	20.00	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-202-SA5DN-SB-4.0-5.0DUP (SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	FLUORIDE	36	20.00	No Qual OK by Difference

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-042-SA5DN-SB-9.0-10.0DUP (SL-042-SA5DN-SB-4.0-5.0 SL-042-SA5DN-SB-9.0-10.0 SL-043-SA5DN-SB-4.0-5.0 SL-043-SA5DN-SB-9.0-10.0 SL-046-SA5DN-SB-4.0-5.0 SL-046-SA5DN-SB-9.0-10.0 SL-047-SA5DN-SB-10.0-11.0 SL-047-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-4.0-5.0 SL-054-SA5DN-SB-9.0-10.0 SL-202-SA5DN-SB-4.0-5.0 SL-202-SA5DN-SB-9.0-10.0)	HEXAVALENT CHROMIUM	58	20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P1LGLCSQ261652 (SL-042-SA5DN -SB-4.0-5.0 SL -042-SA5DN -SB-9.0-10.0 SL -043-SA5DN -SB-4.0-5.0 SL -043-SA5DN -SB-9.0-10.0 SL -046-SA5DN -SB-4.0-5.0 SL -046-SA5DN -SB-9.0-10.0 SL -047-SA5DN -SB-10.0-11.0 SL -047-SA5DN -SB-4.0-5.0 SL -054-SA5DN -SB-4.0-5.0 SL -054-SA5DN -SB-9.0-10.0 SL -202-SA5DN -SB-4.0-5.0)	2,4-DINITROPHENOL	32	-	37.00-120.00	-	2,4-DINITROPHENOL	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P17226AQ220811A (SL-042-SA5DN -SB-4.0-5.0 SL -042-SA5DN -SB-9.0-10.0 SL -043-SA5DN -SB-4.0-5.0 SL -043-SA5DN -SB-9.0-10.0 SL -046-SA5DN -SB-4.0-5.0 SL -046-SA5DN -SB-9.0-10.0 SL -047-SA5DN -SB-10.0-11.0 SL -047-SA5DN -SB-4.0-5.0 SL -054-SA5DN -SB-4.0-5.0 SL -054-SA5DN -SB-9.0-10.0 SL -202-SA5DN -SB-4.0-5.0 SL -202-SA5DN -SB-9.0-10.0)	ANTIMONY	142	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB88Q210352A (SL-042-SA5DN -SB-4.0-5.0 SL -042-SA5DN -SB-9.0-10.0 SL -043-SA5DN -SB-4.0-5.0 SL -043-SA5DN -SB-9.0-10.0 SL -046-SA5DN -SB-4.0-5.0 SL -046-SA5DN -SB-9.0-10.0 SL -047-SA5DN -SB-10.0-11.0 SL -047-SA5DN -SB-4.0-5.0 SL -054-SA5DN -SB-4.0-5.0 SL -202-SA5DN -SB-4.0-5.0)	1,1-DICHLOROETHENE	124	-	73.00-123.00	-	1,1-DICHLOROETHENE	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.6	1.8	PQL	mg/Kg	J (all detects)
SL-042-SA5DN-SB-9.0-10.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	BORON	J	5.49	5.84	PQL	mg/Kg	J (all detects)
	TIN	J	3.76	11.7	PQL	mg/Kg	
	Zirconium	J	5.81	5.84	PQL	mg/Kg	
SL-042-SA5DN-SB-9.0-10.0	BORON	J	2.44	5.31	PQL	mg/Kg	J (all detects)
	TIN	J	2.11	10.6	PQL	mg/Kg	
	Zirconium	J	3.75	5.31	PQL	mg/Kg	
SL-043-SA5DN-SB-4.0-5.0	BORON	J	4.75	5.67	PQL	mg/Kg	J (all detects)
	TIN	J	2.77	11.3	PQL	mg/Kg	
	Zirconium	J	5.23	5.67	PQL	mg/Kg	
SL-043-SA5DN-SB-9.0-10.0	BORON	J	3.55	5.68	PQL	mg/Kg	J (all detects)
	TIN	J	3.09	11.4	PQL	mg/Kg	
	Zirconium	J	5.15	5.68	PQL	mg/Kg	
SL-046-SA5DN-SB-4.0-5.0	BORON	J	5.60	5.67	PQL	mg/Kg	J (all detects)
	TIN	J	3.11	11.3	PQL	mg/Kg	
SL-046-SA5DN-SB-9.0-10.0	BORON	J	2.95	5.63	PQL	mg/Kg	J (all detects)
	TIN	J	2.90	11.3	PQL	mg/Kg	
	Zirconium	J	5.01	5.63	PQL	mg/Kg	
SL-047-SA5DN-SB-10.0-11.0	TIN	J	2.85	10.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.25	5.20	PQL	mg/Kg	
SL-047-SA5DN-SB-4.0-5.0	TIN	J	3.01	11.1	PQL	mg/Kg	J (all detects)
SL-054-SA5DN-SB-4.0-5.0	BORON	J	4.57	6.00	PQL	mg/Kg	J (all detects)
	TIN	J	3.09	12.0	PQL	mg/Kg	
	Zirconium	J	5.49	6.00	PQL	mg/Kg	
SL-054-SA5DN-SB-9.0-10.0	TIN	J	3.33	11.6	PQL	mg/Kg	J (all detects)
SL-202-SA5DN-SB-4.0-5.0	TIN	J	3.15	12.1	PQL	mg/Kg	J (all detects)
SL-202-SA5DN-SB-9.0-10.0	BORON	J	4.94	5.65	PQL	mg/Kg	J (all detects)
	TIN	J	3.08	11.3	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	SELENIUM	J	0.113	0.458	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0530	0.114	PQL	mg/Kg	
SL-042-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.168	0.212	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0667	0.425	PQL	mg/Kg	
	SILVER	J	0.0246	0.106	PQL	mg/Kg	
SL-043-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0667	0.458	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0480	0.115	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-043-SA5DN-SB-9.0-10.0	SILVER	J	0.0538	0.115	PQL	mg/Kg	J (all detects)
SL-046-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.0665 0.0992	0.445 0.111	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-046-SA5DN-SB-9.0-10.0	SELENIUM SILVER	J J	0.0667 0.0747	0.446 0.112	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-047-SA5DN-SB-10.0-11.0	ANTIMONY SELENIUM SILVER	J J J	0.158 0.0619 0.0260	0.210 0.420 0.105	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-047-SA5DN-SB-4.0-5.0	SILVER	J	0.0646	0.110	PQL	mg/Kg	J (all detects)
SL-054-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.0775 0.0594	0.471 0.118	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-054-SA5DN-SB-9.0-10.0	SELENIUM SILVER	J J	0.130 0.0609	0.464 0.116	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-202-SA5DN-SB-4.0-5.0	SELENIUM SILVER	J J	0.104 0.0636	0.483 0.121	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-202-SA5DN-SB-9.0-10.0	SILVER	J	0.0593	0.113	PQL	mg/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.37	1.2	PQL	mg/Kg	J (all detects)
SL-042-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.49	1.1	PQL	mg/Kg	J (all detects)
SL-043-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.1	PQL	mg/Kg	J (all detects)
SL-046-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.88	1.2	PQL	mg/Kg	J (all detects)
SL-046-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.41	1.2	PQL	mg/Kg	J (all detects)
SL-047-SA5DN-SB-10.0-11.0	HEXAVALENT CHROMIUM	J	0.32	1.1	PQL	mg/Kg	J (all detects)
SL-047-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.41	1.1	PQL	mg/Kg	J (all detects)
SL-054-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.55	1.2	PQL	mg/Kg	J (all detects)
SL-202-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.2	PQL	mg/Kg	J (all detects)
SL-202-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.54	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-046-SA5DN-SB-4.0-5.0	MERCURY	J	0.0398	0.112	PQL	mg/Kg	J (all detects)
SL-047-SA5DN-SB-4.0-5.0	MERCURY	J	0.0124	0.107	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	EFH (C15-C20)	J	0.60	1.4	PQL	mg/Kg	J (all detects)
SL-042-SA5DN-SB-9.0-10.0	EFH (C30-C40)	J	0.84	1.3	PQL	mg/Kg	J (all detects)
SL-043-SA5DN-SB-4.0-5.0	EFH (C15-C20)	J	1.6	2.7	PQL	mg/Kg	J (all detects)
SL-043-SA5DN-SB-9.0-10.0	EFH (C21-C30) EFH (C30-C40)	J J	1.3 0.52	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-046-SA5DN-SB-4.0-5.0	GASOLINE RANGE ORGANICS (C5-C12)	J	0.2	1	PQL	mg/Kg	J (all detects)
SL-047-SA5DN-SB-4.0-5.0	GASOLINE RANGE ORGANICS (C5-C12)	J	0.3	1	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.87	2.0	PQL	ug/Kg	J (all detects)
SL-042-SA5DN-SB-9.0-10.0	AROCLOR 1260	J	0.59	1.9	PQL	ug/Kg	J (all detects)
SL-043-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.74	1.9	PQL	ug/Kg	J (all detects)
SL-054-SA5DN-SB-9.0-10.0	AROCLOR 1260	J	0.85	2.0	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	TOLUENE	J	0.23	4.0	PQL	ug/Kg	J (all detects)
SL-042-SA5DN-SB-9.0-10.0	TOLUENE	J	0.17	3.8	PQL	ug/Kg	J (all detects)
SL-043-SA5DN-SB-4.0-5.0	TOLUENE	J	0.23	4.1	PQL	ug/Kg	J (all detects)
SL-043-SA5DN-SB-9.0-10.0	TOLUENE	J	0.19	3.9	PQL	ug/Kg	J (all detects)
SL-046-SA5DN-SB-4.0-5.0	TOLUENE	J	0.20	4.0	PQL	ug/Kg	J (all detects)
SL-046-SA5DN-SB-9.0-10.0	METHYLENE CHLORIDE TOLUENE	J J	3.6 0.18	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-047-SA5DN-SB-10.0-11.0	TOLUENE	J	0.21	4.0	PQL	ug/Kg	J (all detects)
SL-047-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	4.2 0.21	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-054-SA5DN-SB-4.0-5.0	TOLUENE	J	0.23	4.0	PQL	ug/Kg	J (all detects)
SL-202-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	3.5 0.17	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE179 **Laboratory: LL**

EDD Filename: DE179_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	29	200	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	22	200	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	26	200	PQL	ug/Kg	
	CHRYSENE	J	34	200	PQL	ug/Kg	
	FLUORANTHENE	J	27	200	PQL	ug/Kg	
	PYRENE	J	30	200	PQL	ug/Kg	
SL-042-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	370	PQL	ug/Kg	J (all detects)
SL-043-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	380	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-042-SA5DN-SB-4.0-5.0	BENZO(G,H,I)PERYLENE	J	1.8	2.0	PQL	ug/Kg	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	1.4	2.0	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	2.0	PQL	ug/Kg	
SL-042-SA5DN-SB-9.0-10.0	BENZO(A)ANTHRACENE	J	1.7	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.7	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.92	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.7	1.8	PQL	ug/Kg	
	PYRENE	J	1.3	1.8	PQL	ug/Kg	
SL-043-SA5DN-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.93	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.79	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	0.89	1.9	PQL	ug/Kg	
SL-043-SA5DN-SB-9.0-10.0	Di-n-octylphthalate	J	8.7	21	PQL	ug/Kg	J (all detects)
SL-046-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.2	21	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	14	21	PQL	ug/Kg	
SL-202-SA5DN-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.90	2.0	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.67	2.0	PQL	ug/Kg	

LDC #: 26277J4

SDG #: DE179

Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 9/30/11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No [illegible]
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	Al, Ba, Ca, Fe, Mg, Mn, Ti, Zn 74X, No [illegible] %R
VII.	Duplicate Sample Analysis	SW	Sb, B, Cd, Se, SN <5X
VIII.	Laboratory Control Samples (LCS)	SW	SRM
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	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-042-SA5DN-SB-4.0-5.0	11	SL-202-SA5DN-SB-4.0-5.0	21		31	
2	SL-042-SA5DN-SB-9.0-10.0	12	SL-202-SA5DN-SB-9.0-10.0	22		32	
3	SL-043-SA5DN-SB-4.0-5.0	13	#1 MS	23		33	
4	SL-043-SA5DN-SB-9.0-10.0	14	MSD	24		34	
5	SL-046-SA5DN-SB-4.0-5.0	15	Dup	25		35	
6	SL-046-SA5DN-SB-9.0-10.0	16		26		36	
7	SL-047-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-047-SA5DN-SB-10.0-11.0	18		28		38	
9	SL-054-SA5DN-SB-4.0-5.0	19		29		39	
10	SL-054-SA5DN-SB-9.0-10.0	20		30		40	

Notes:

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE179
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6314462BKG Matrix Spike Lab Sample ID: 6314462MS Matrix Spike Duplicate Lab Sample ID: 6314462MSD
% Solids for Sample: 84.8
Batch Id(s): P17208B, P17226A, P17211D

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		34979.1098		37901.9116		39870.8681		235.8491	228.9797	MG/KG	1239		2136		5			20	P'
Antimony	121	0.4076		1.2944		1.1362		1.3873	1.3739	MG/KG	64	N	53	N	13		75 - 125	20	MS
Arsenic	75	7.2106		9.4987		9.4454		2.3122	2.2898	MG/KG	99		98		1		75 - 125	20	MS
Barium	137	135.7391		152.3770		152.7294		11.5612	11.4490	MG/KG	144		148		0			20	MS
Beryllium	9	1.0563		2.0089		1.8772		0.9249	0.9159	MG/KG	103		90		7		75 - 125	20	MS
Boron		5.4876	B	238.6887		233.1505		235.8491	228.9797	MG/KG	99		99		2		84 - 115	20	P
Cadmium	111	0.1948		1.5774		1.4316		1.1561	1.1449	MG/KG	120		108		10		75 - 125	20	MS
Calcium		14693.4453		18057.6981		14517.5192		471.6981	457.9593	MG/KG	713		-38		22	*		20	P
Chromium	52	42.4528		54.7771		55.8710		11.5612	11.4490	MG/KG	107		117		2		75 - 125	20	MS
Cobalt	59	11.1422		74.8936		71.6477		57.8061	57.2449	MG/KG	110		106		4		75 - 125	20	MS
Copper	63	17.6910		29.1112		31.5763		11.5612	11.4490	MG/KG	99		121		8		75 - 125	20	MS
Iron		35405.9114		36639.9764		37777.5806		117.9245	114.4898	MG/KG	1046		2072		3			20	P
Lead	208	10.4758		14.3036		20.2372		3.4684	3.4347	MG/KG	110		284	N	34	*	75 - 125	20	MS
Lithium		28.5844		149.3149		145.2292		117.9245	114.4898	MG/KG	102		102		3		82 - 114	20	P
Magnesium		7160.1987		7730.5590		7782.9593		235.8491	228.9797	MG/KG	242		272		1			20	P
Manganese		414.5666		413.4080		469.7701		58.9623	57.2449	MG/KG	-2		96		13			20	P
Mercury		0.0082	U	0.1895		0.1772		0.1929	0.1939	MG/KG	98		91		7		65 - 135	20	CV
Molybdenum	98	0.4660		13.8249		12.8480		11.5612	11.4490	MG/KG	116		108		7		75 - 125	20	MS
Nickel	60	22.6942		34.2675		36.1330		11.5612	11.4490	MG/KG	100		117		5		75 - 125	20	MS
Phosphorus		239.3389		420.5059		404.8200		117.9245	114.4898	MG/KG	154	N	145	N	4		75 - 125	20	P
Potassium		3433.5641		5271.5542		5338.0083		1179.2453	1144.8983	MG/KG	156	N	166	N	1		75 - 125	20	P
Selenium	78	0.1130	B	2.4186		2.3928		2.3122	2.2898	MG/KG	100		100		1		75 - 125	20	MS
Silver	107	0.0530	B	13.5844		12.2825		11.5612	11.4490	MG/KG	117		107		10		75 - 125	20	MS
Sodium		513.6851		1650.0660		1636.0128		1179.2453	1144.8983	MG/KG	96		98		1		75 - 125	20	P
Strontium		46.1657		160.1450		159.1867		117.9245	114.4898	MG/KG	97		99		1		75 - 115	20	P
Thallium	203	0.3959		0.8930		0.8768		0.4624	0.4580	MG/KG	108		105		2		75 - 125	20	MS
Tin		3.7607	B	424.7370		407.2644		471.6981	457.9593	MG/KG	89		88		4		80 - 110	20	P
Titanium		1489.5467		1710.5200		1746.3226		117.9245	114.4898	MG/KG	187		224		2			20	P
Vanadium	51	77.9218		91.1025		91.4774		11.5612	11.4490	MG/KG	114		118		0			20	MS
Zinc	66	68.3275		75.7029		82.7761		11.5612	11.4490	MG/KG	64		126		9			20	MS
Zirconium		5.8075	B	121.7429		115.4710		117.9245	114.4898	MG/KG	98		96		5		75 - 125	20	P

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:
N = Matrix Spike OOS, * = Duplicate OOS

for Sb JMJ (Q)
Ca JMJ (Z)
Mg JMJ (Z Q)

P, K, JMJ (Q)

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE179
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6314462BKG
% Solids for Duplicate: 84.8
Batch ID(s): P17208B, P17226A, P17211D
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6314462DUP
% Solids for Sample: 84.8

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			34979.1098		30879.9031		12		P
Antimony	121	0.2	0.4076		0.7030		53	*	MS
Arsenic	75		7.2106		6.7444		7		MS
Barium	137		135.7391		132.0755		3		MS
Beryllium	9		1.0563		0.9819		7		MS
Boron			5.4876	B	3.7158	B	39		P
Cadmium	111	0.1	0.1948		0.3810		65	*	MS
Calcium			14693.4453		15017.9835		2		P
Chromium	52		42.4528		40.4572		5		MS
Cobalt	59		11.1422		11.8197		6		MS
Copper	63		17.6910		32.7014		60	*	MS
Iron			35405.9114		33561.6618		5		P
Lead	208		10.4758		15.3642		38	*	MS
Lithium			28.5844		26.5527		7		P
Magnesium			7160.1987		6824.1618		5		P
Manganese			414.5666		354.4210		16		P
Mercury			0.0082	U	0.0080	U			CV
Molybdenum	98	0.1	0.4660		0.4989		7		MS
Nickel	60		22.6942		22.2446		2		MS
Phosphorus			239.3389		249.6740		4		P
Potassium			3433.5641		3311.1092		4		P
Selenium	78		0.1130	B	0.0693	B	48		MS
Silver	107		0.0530	B	0.0488	B	8		MS
Sodium		116.8	513.6851		482.2073		6		P
Strontium			46.1657		44.1304		5		P
Thallium	203	0.1	0.3959		0.3379		16		MS
Tin			3.7607	B	2.5469	B	38		P
Titanium			1489.5467		1246.6022		18		P
Vanadium	51		77.9218		70.5733		10		MS
Zinc	66		68.3275		76.1747		11		MS
Zirconium			5.8075	B	5.4661	B	6		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.

for Cu, Pb. (Z)

DE179 3732

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

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: DE179
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Limit		%R	M	In Spec
Aluminum		P17208BQ	MG/KG	14146.0	14759.8		8676.7	15560.3	104	P	Yes
Antimony	121	P17226AQ	MG/KG	99.2	141.2		26.3	179.7	142	MS	Yes
Arsenic	75	P17226AQ	MG/KG	109.0	110.8		90.5	123.5	102	MS	Yes
Barium	137	P17226AQ	MG/KG	345.0	365.2		280.4	381.6	106	MS	Yes
Beryllium	9	P17226AQ	MG/KG	75.2	75.1		64.4	83.8	100	MS	Yes
Boron		P17208BQ	MG/KG	167.0	163.2		130.6	183.9	98	P	Yes
Cadmium	111	P17226AQ	MG/KG	244.0	256.4		200.0	288.0	105	MS	Yes
Calcium		P17208BQ	MG/KG	9858.0	9950.8		8634.5	10843.6	101	P	Yes
Chromium	52	P17226AQ	MG/KG	80.6	91.3		64.1	97.0	113	MS	Yes
Cobalt	59	P17226AQ	MG/KG	85.8	91.4		70.3	101.0	107	MS	Yes
Copper	63	P17226AQ	MG/KG	67.4	68.4		56.2	74.4	101	MS	Yes
Iron		P17208BQ	MG/KG	23615.0	23763.1		14448.8	25976.6	101	P	Yes
Lead	208	P17226AQ	MG/KG	111.0	109.8		91.9	122.1	99	MS	Yes
Lithium		P17208BQ	UG/L	1000.0	1002.5		800.0	1200.0	100	P	Yes
Magnesium		P17208BQ	MG/KG	4434.0	4519.7		3649.7	4877.1	102	P	Yes
Manganese		P17208BQ	MG/KG	450.0	470.0		400.6	503.4	104	P	Yes
Mercury		P17211DQ	MG/KG	2.8	2.5		2.5	3.5	89	CV	Yes
Molybdenum	98	P17226AQ	MG/KG	47.2	53.0		36.8	57.5	112	MS	Yes
Nickel	60	P17226AQ	MG/KG	103.5	101.7		83.5	113.9	98	MS	Yes
Phosphorus		P17208BQ	UG/L	1000.0	1061.5		800.0	1200.0	106	P	Yes
Potassium		P17208BQ	MG/KG	5021.0	5128.9		3926.8	5523.2	102	P	Yes
Selenium	78	P17226AQ	MG/KG	183.0	189.0		151.6	202.4	103	MS	Yes
Silver	107	P17226AQ	MG/KG	48.0	49.2		39.0	53.4	103	MS	Yes
Sodium		P17208BQ	MG/KG	1099.0	1071.1		957.0	1209.1	97	P	Yes
Strontium		P17208BQ	MG/KG	105.6	109.0		90.4	116.2	103	P	Yes
Thallium	203	P17226AQ	MG/KG	286.0	283.8		237.4	314.6	99	MS	Yes
Tin		P17208BQ	MG/KG	180.0	185.7		161.3	204.7	103	P	Yes
Titanium		P17208BQ	MG/KG	579.0	725.2		463.2	694.8	125	P	No
Vanadium	51	P17226AQ	MG/KG	130.0	134.4		108.8	151.2	103	MS	Yes
Zinc	66	P17226AQ	MG/KG	390.0	400.7		317.4	438.6	103	MS	Yes
Zirconium		P17208BQ	UG/L	1000.0	1011.9		800.0	1200.0	101	P	Yes

JJH/P. (L)

DE179 3713

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

SAMPLE DELIVERY GROUP

DE180

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	TB-061411	6315643	TB	5030B	8015M	III
14-Jun-2011	TB-061411	6315643	TB	5030B	8260B	III
14-Jun-2011	TB-061411	6315643	TB	5030B	8260B SIM	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3050B	6010B	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3050B	6020	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3060A	7199	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3546	1625C	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3550B	8015B	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3550B	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3550B	8082	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3550B	8270C	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	3550B	8270C SIM	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	5035	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	5035	8260B	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	5035	8260B SIM	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	8330	8330A	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	300.0	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	314.0	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	7471A	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	8015B	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	8315A	III
14-Jun-2011	SL-035-SA5DN-SB-4.0-5.0	6315638	N	METHOD	9012B	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3050B	6010B	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3050B	6020	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3546	1625C	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3550B	8015B	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3550B	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3550B	8082	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3550B	8270C	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	3550B	8270C SIM	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	5035	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	5035	8260B	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	5035	8260B SIM	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	8330	8330A	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	300.0	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	314.0	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	7471A	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	8015B	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	8015M	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	8315A	III
14-Jun-2011	SL-035-SA5DN-SB-9.5-10.5	6315639	N	METHOD	9012B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3050B	6010B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3050B	6020	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3060A	7199	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3546	1625C	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3550B	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3550B	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3550B	8082	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3550B	8270C	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	5035	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	5035	8260B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	5035	8260B SIM	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	8330	8330A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	300.0	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	314.0	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	7471A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	8315A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0	6315633	N	METHOD	9012B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3050B	6010B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3050B	6020	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3060A	7199	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3546	1625C	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3550B	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3550B	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3550B	8082	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3550B	8270C	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	3550B	8270C SIM	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	5035	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	5035	8260B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	5035	8260B SIM	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	8330	8330A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	300.0	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	7471A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	8315A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0MS	6315634	MS	METHOD	9012B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	3050B	6010B	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	3050B	6020	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	3060A	7199	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	METHOD	300.0	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	METHOD	314.0	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	METHOD	7471A	III
14-Jun-2011	SL-033-SA5DN-SB-4.0-5.0DU	6315636	DUP	METHOD	9012B	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3050B	6010B	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3050B	6020	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3060A	7199	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3546	1625C	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3550B	8015B	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3550B	8015M	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3550B	8082	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3550B	8270C	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	3550B	8270C SIM	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	5035	8015M	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	5035	8260B	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	5035	8260B SIM	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	8330	8330A	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	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
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	314.0	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	7471A	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	8015B	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	8015M	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	8315A	III
14-Jun-2011	DUP14-SA5DN-QC-061411	6315642	FD	METHOD	9012B	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3050B	6010B	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3050B	6020	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3060A	7199	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3546	1625C	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3550B	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3550B	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3550B	8082	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3550B	8270C	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	3550B	8270C SIM	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	5035	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	5035	8260B	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	5035	8260B SIM	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	8330	8330A	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	300.0	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	314.0	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	6850	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	7471A	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	8015B	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	8015M	III
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	8315A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-033-SA5DN-SB-11.0-12.0	6315637	N	METHOD	9012B	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3050B	6010B	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3050B	6020	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3060A	7199	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3546	1625C	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3550B	8015B	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3550B	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3550B	8082	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3550B	8270C	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	3550B	8270C SIM	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	5035	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	5035	8260B	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	5035	8260B SIM	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	8330	8330A	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	300.0	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	314.0	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	7471A	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	8015B	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	8315A	III
14-Jun-2011	SL-032-SA5DN-SB-4.0-5.0	6315631	N	METHOD	9012B	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3050B	6010B	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3050B	6020	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3060A	7199	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3546	1625C	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3550B	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3550B	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3550B	8082	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3550B	8270C	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	3550B	8270C SIM	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	5035	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	5035	8260B	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	5035	8260B SIM	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	8330	8330A	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	300.0	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	314.0	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	6850	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	7471A	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	8015B	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	8015M	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	8315A	III
14-Jun-2011	SL-032-SA5DN-SB-10.0-11.0	6315632	N	METHOD	9012B	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	3005A	6010B	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	3020A	6020	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	3510C	8082	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	3510C	8270C	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	3510C	8270C SIM	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	5030B	8260B	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	5030B	8260B SIM	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	Gen Prep	300.0	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	Gen Prep	314.0	III
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	Gen Prep	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	EB17-SA5DN-SB-061411	6315644	EB	METHOD	7470A	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3050B	6010B	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3050B	6020	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3060A	7199	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3546	1625C	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3550B	8015B	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3550B	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3550B	8082	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3550B	8270C	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	3550B	8270C SIM	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	5035	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	5035	8260B	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	5035	8260B SIM	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	8330	8330A	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	300.0	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	314.0	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	7471A	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	8015B	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	8315A	III
14-Jun-2011	SL-044-SA5DN-SB-4.0-5.0	6315640	N	METHOD	9012B	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3050B	6010B	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3050B	6020	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3060A	7199	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3546	1625C	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3550B	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3550B	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3550B	8082	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3550B	8270C	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	3550B	8270C SIM	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	5035	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	5035	8260B	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	5035	8260B SIM	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	8330	8330A	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	300.0	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	314.0	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	7471A	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	8015B	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	8015M	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	8315A	III
14-Jun-2011	SL-044-SA5DN-SB-12.0-13.0	6315641	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: DUP14-SA5DN-QC-061411 ***Collected:*** 6/14/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.4		0.93	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.93	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA5DN-SB-10.0-11.0 ***Collected:*** 6/14/2011 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
FLUORIDE	5.8		0.87	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-032-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 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	20.7		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-033-SA5DN-SB-11.0-12.0 ***Collected:*** 6/14/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.9		0.89	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.89	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.2		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-035-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 8:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.6		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.6	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-9.5-10.5 ***Collected:*** 6/14/2011 9:05:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.6		0.90	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.9		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.8		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Method Category: GENCHEM

Method: 314.0 **Matrix:** AQ

Sample ID: EB17-SA5DN-SB-061411 *Collected:* 6/14/2011 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
PERCHLORATE	0.70	U	0.70	MDL	2.0	PQL	ug/L	UJ	L

Method Category: METALS

Method: 6010B **Matrix:** AQ

Sample ID: EB17-SA5DN-SB-061411 *Collected:* 6/14/2011 1:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0053	J	0.0022	MDL	0.0500	PQL	mg/L	U	B

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1340		0.0802	MDL	1.13	PQL	mg/Kg	J	L

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 ***Collected:*** 6/14/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.66	J	0.419	MDL	5.82	PQL	mg/Kg	J	Z
CALCIUM	11400		2.91	MDL	23.3	PQL	mg/Kg	J	E
MANGANESE	441		0.0419	MDL	0.582	PQL	mg/Kg	J	E
PHOSPHORUS	334		0.407	MDL	11.6	PQL	mg/Kg	J	Q
POTASSIUM	3760		13.2	MDL	58.2	PQL	mg/Kg	J	Q
TIN	4.07	J	0.373	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	4.55	J	0.536	MDL	5.82	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA5DN-SB-10.0-11.0 ***Collected:*** 6/14/2011 12:25:00 ***Analysis Type:*** REA3 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1260		0.0760	MDL	1.07	PQL	mg/Kg	J	L

Sample ID: SL-032-SA5DN-SB-10.0-11.0 ***Collected:*** 6/14/2011 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
CALCIUM	4030		2.60	MDL	20.8	PQL	mg/Kg	J	E
MANGANESE	318		0.0374	MDL	0.520	PQL	mg/Kg	J	E
PHOSPHORUS	316		0.364	MDL	10.4	PQL	mg/Kg	J	Q
POTASSIUM	2370		11.7	MDL	52.0	PQL	mg/Kg	J	Q
TIN	2.65	J	0.333	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	3.55	J	0.478	MDL	5.20	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 12:20:00 ***Analysis Type:*** REA3 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1110		0.0810	MDL	1.14	PQL	mg/Kg	J	L

Sample ID: SL-032-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 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
BORON	2.82	J	0.399	MDL	5.54	PQL	mg/Kg	J	Z
CALCIUM	9080		2.77	MDL	22.1	PQL	mg/Kg	J	E
MANGANESE	268		0.0399	MDL	0.554	PQL	mg/Kg	J	E
PHOSPHORUS	209		0.387	MDL	11.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-032-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 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
POTASSIUM	2950		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	2.84	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	5.06	J	0.509	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-11.0-12.0 *Collected:* 6/14/2011 11:50:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1310		0.0778	MDL	1.10	PQL	mg/Kg	J	L

Sample ID: SL-033-SA5DN-SB-11.0-12.0 *Collected:* 6/14/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	18700		2.71	MDL	21.7	PQL	mg/Kg	J	E
MANGANESE	341		0.0391	MDL	0.542	PQL	mg/Kg	J	E
PHOSPHORUS	608		0.380	MDL	10.8	PQL	mg/Kg	J	Q
POTASSIUM	2290		12.3	MDL	54.2	PQL	mg/Kg	J	Q
TIN	2.61	J	0.347	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.43	J	0.499	MDL	5.42	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1240		0.0817	MDL	1.15	PQL	mg/Kg	J	L

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.35	J	0.419	MDL	5.81	PQL	mg/Kg	U	B, F
CALCIUM	15300		2.91	MDL	23.3	PQL	mg/Kg	J	E
MANGANESE	290		0.0419	MDL	0.581	PQL	mg/Kg	J	E
PHOSPHORUS	228		0.407	MDL	11.6	PQL	mg/Kg	J	Q
POTASSIUM	3130		13.1	MDL	58.1	PQL	mg/Kg	J	Q
TIN	3.08	J	0.372	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	4.48	J	0.535	MDL	5.81	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 Laboratory: LL

EDD Filename: PrepDE180_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-035-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 8:55:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1150		0.0807	MDL	1.14	PQL	mg/Kg	J	L

Sample ID: SL-035-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.31	J	0.422	MDL	5.85	PQL	mg/Kg	U	B, F
CALCIUM	16500		2.93	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	169		0.0422	MDL	0.585	PQL	mg/Kg	J	E
PHOSPHORUS	127		0.410	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	2480		13.2	MDL	58.5	PQL	mg/Kg	J	Q
TIN	2.96	J	0.375	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	5.04	J	0.539	MDL	5.85	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-9.5-10.5 *Collected:* 6/14/2011 9:05:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1500		0.0779	MDL	1.10	PQL	mg/Kg	J	L

Sample ID: SL-035-SA5DN-SB-9.5-10.5 *Collected:* 6/14/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	8730		2.80	MDL	22.4	PQL	mg/Kg	J	E
MANGANESE	370		0.0403	MDL	0.560	PQL	mg/Kg	J	E
PHOSPHORUS	498		0.392	MDL	11.2	PQL	mg/Kg	J	Q
POTASSIUM	2430		12.7	MDL	56.0	PQL	mg/Kg	J	Q
TIN	2.35	J	0.358	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	4.61	J	0.515	MDL	5.60	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1190		0.0779	MDL	1.10	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.699	J	0.399	MDL	5.54	PQL	mg/Kg	U	B, F
CALCIUM	17100		2.77	MDL	22.2	PQL	mg/Kg	J	E
MANGANESE	269		0.0399	MDL	0.554	PQL	mg/Kg	J	E
PHOSPHORUS	355		0.388	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	2570		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	2.57	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.50	J	0.510	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1240		0.0819	MDL	1.15	PQL	mg/Kg	J	L

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.63	J	0.415	MDL	5.77	PQL	mg/Kg	J	Z
CALCIUM	10300		2.88	MDL	23.1	PQL	mg/Kg	J	E
MANGANESE	392		0.0415	MDL	0.577	PQL	mg/Kg	J	E
PHOSPHORUS	282		0.404	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	3570		13.0	MDL	57.7	PQL	mg/Kg	J	Q
TIN	2.62	J	0.369	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	5.41	J	0.531	MDL	5.77	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0974	J	0.0675	MDL	0.466	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 Laboratory: LL

EDD Filename: PrepDE180_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 **Collected:** 6/14/2011 10:45:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0861	U	0.0861	MDL	0.233	PQL	mg/Kg	UJ	Q, E, FD
CHROMIUM	28.1		0.140	MDL	0.466	PQL	mg/Kg	J	A
COBALT	10.8		0.0233	MDL	0.116	PQL	mg/Kg	J	A
COPPER	14.9		0.0931	MDL	0.466	PQL	mg/Kg	J	Q, A
LEAD	9.10		0.0119	MDL	0.233	PQL	mg/Kg	J	Q, A
NICKEL	18.7		0.116	MDL	0.466	PQL	mg/Kg	J	Q, A
SILVER	0.0521	J	0.0165	MDL	0.116	PQL	mg/Kg	J	Z
VANADIUM	42.7		0.0256	MDL	0.116	PQL	mg/Kg	J	A
ZINC	77.4		0.652	MDL	3.49	PQL	mg/Kg	J	E, A

Sample ID: SL-032-SA5DN-SB-10.0-11.0 **Collected:** 6/14/2011 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
ANTIMONY	0.0792	U	0.0792	MDL	0.214	PQL	mg/Kg	UJ	Q, E
CHROMIUM	20.2		0.128	MDL	0.428	PQL	mg/Kg	J	A
COBALT	5.75		0.0214	MDL	0.107	PQL	mg/Kg	J	A
COPPER	8.82		0.0856	MDL	0.428	PQL	mg/Kg	J	Q, A
LEAD	4.07		0.0109	MDL	0.214	PQL	mg/Kg	J	Q, A
NICKEL	12.9		0.107	MDL	0.428	PQL	mg/Kg	J	Q, A
SILVER	0.0409	J	0.0152	MDL	0.107	PQL	mg/Kg	J	Z
VANADIUM	39.3		0.0235	MDL	0.107	PQL	mg/Kg	J	A
ZINC	48.8		0.599	MDL	3.21	PQL	mg/Kg	J	E, A

Sample ID: SL-032-SA5DN-SB-4.0-5.0 **Collected:** 6/14/2011 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
ANTIMONY	0.0872	J	0.0827	MDL	0.224	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	28.9		0.134	MDL	0.447	PQL	mg/Kg	J	A
COBALT	9.65		0.0224	MDL	0.112	PQL	mg/Kg	J	A
COPPER	12.2		0.0894	MDL	0.447	PQL	mg/Kg	J	Q, A
LEAD	8.23		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, A
NICKEL	16.3		0.112	MDL	0.447	PQL	mg/Kg	J	Q, A
SILVER	0.104	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	52.0		0.0246	MDL	0.112	PQL	mg/Kg	J	A
ZINC	55.8		0.626	MDL	3.35	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-033-SA5DN-SB-11.0-12.0 ***Collected:*** 6/14/2011 11:50:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0825	J	0.0648	MDL	0.447	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-11.0-12.0 ***Collected:*** 6/14/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0827	U	0.0827	MDL	0.223	PQL	mg/Kg	UJ	Q, E
CHROMIUM	21.0		0.134	MDL	0.447	PQL	mg/Kg	J	A
COBALT	7.18		0.0223	MDL	0.112	PQL	mg/Kg	J	A
COPPER	9.05		0.0894	MDL	0.447	PQL	mg/Kg	J	Q, A
LEAD	4.72		0.0114	MDL	0.223	PQL	mg/Kg	J	Q, A
NICKEL	12.6		0.112	MDL	0.447	PQL	mg/Kg	J	Q, A
SILVER	0.0300	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	39.4		0.0246	MDL	0.112	PQL	mg/Kg	J	A
ZINC	56.5		0.626	MDL	3.35	PQL	mg/Kg	J	E, A

Sample ID: SL-033-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 10:35:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.106	J	0.0668	MDL	0.461	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0937	J	0.0852	MDL	0.230	PQL	mg/Kg	J	Z, Q, E, FD
CHROMIUM	30.0		0.138	MDL	0.461	PQL	mg/Kg	J	A
COBALT	10.9		0.0230	MDL	0.115	PQL	mg/Kg	J	A
COPPER	14.2		0.0921	MDL	0.461	PQL	mg/Kg	J	Q, A
LEAD	9.16		0.0117	MDL	0.230	PQL	mg/Kg	J	Q, A
NICKEL	18.4		0.115	MDL	0.461	PQL	mg/Kg	J	Q, A
SILVER	0.0490	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	52.7		0.0253	MDL	0.115	PQL	mg/Kg	J	A
ZINC	75.0		0.645	MDL	3.45	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-035-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 8:55:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0973	J	0.0850	MDL	0.230	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.0996	J	0.0505	MDL	0.115	PQL	mg/Kg	J	Z
CHROMIUM	30.6		0.138	MDL	0.459	PQL	mg/Kg	J	A
COBALT	6.73		0.0230	MDL	0.115	PQL	mg/Kg	J	A
COPPER	12.6		0.0918	MDL	0.459	PQL	mg/Kg	J	Q, A
LEAD	8.82		0.0117	MDL	0.230	PQL	mg/Kg	J	Q, A
NICKEL	14.5		0.115	MDL	0.459	PQL	mg/Kg	J	Q, A
SILVER	0.0255	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	52.8		0.0253	MDL	0.115	PQL	mg/Kg	J	A
ZINC	52.6		0.643	MDL	3.44	PQL	mg/Kg	J	E, A

Sample ID: SL-035-SA5DN-SB-9.5-10.5 ***Collected:*** 6/14/2011 9:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0829	U	0.0829	MDL	0.224	PQL	mg/Kg	UJ	Q, E
CADMIUM	0.110	J	0.0493	MDL	0.112	PQL	mg/Kg	J	Z
CHROMIUM	42.7		0.134	MDL	0.448	PQL	mg/Kg	J	A
COBALT	8.41		0.0224	MDL	0.112	PQL	mg/Kg	J	A
COPPER	13.1		0.0896	MDL	0.448	PQL	mg/Kg	J	Q, A
LEAD	7.27		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, A
NICKEL	27.2		0.112	MDL	0.448	PQL	mg/Kg	J	Q, A
SILVER	0.0244	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	46.5		0.0246	MDL	0.112	PQL	mg/Kg	J	A
ZINC	53.9		0.627	MDL	3.36	PQL	mg/Kg	J	E, A

Sample ID: SL-044-SA5DN-SB-12.0-13.0 ***Collected:*** 6/14/2011 3:05:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0661	J	0.0655	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 ***Collected:*** 6/14/2011 3:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0836	U	0.0836	MDL	0.226	PQL	mg/Kg	UJ	Q, E
CHROMIUM	19.6		0.136	MDL	0.452	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	5.99		0.0226	MDL	0.113	PQL	mg/Kg	J	A
COPPER	10.1		0.0904	MDL	0.452	PQL	mg/Kg	J	Q, A
LEAD	4.67		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	10.5		0.113	MDL	0.452	PQL	mg/Kg	J	Q, A
SILVER	0.0265	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	37.1		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	53.9		0.633	MDL	3.39	PQL	mg/Kg	J	E, A

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *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	0.0656	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0965	J	0.0837	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	31.5		0.136	MDL	0.452	PQL	mg/Kg	J	A
COBALT	11.6		0.0226	MDL	0.113	PQL	mg/Kg	J	A
COPPER	18.6		0.0905	MDL	0.452	PQL	mg/Kg	J	Q, A
LEAD	11.8		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	20.3		0.113	MDL	0.452	PQL	mg/Kg	J	Q, A
SILVER	0.0884	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	56.3		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	107		0.633	MDL	3.39	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.60	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-032-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 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
HEXAVALENT CHROMIUM	0.62	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.79	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-9.5-10.5 *Collected:* 6/14/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.30	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.45	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.267		0.0078	MDL	0.111	PQL	mg/Kg	J	FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-032-SA5DN-SB-10.0-11.0 *Collected:* 6/14/2011 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
MERCURY	0.0361	J	0.0076	MDL	0.108	PQL	mg/Kg	U	B, B

Sample ID: SL-032-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 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	0.0265	J	0.0079	MDL	0.113	PQL	mg/Kg	U	B, B

Sample ID: SL-033-SA5DN-SB-11.0-12.0 *Collected:* 6/14/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0264	J	0.0075	MDL	0.107	PQL	mg/Kg	U	B, B

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0691	J	0.0079	MDL	0.112	PQL	mg/Kg	UJ	FD, B

Sample ID: SL-035-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0388	J	0.0079	MDL	0.112	PQL	mg/Kg	U	B, B

Sample ID: SL-035-SA5DN-SB-9.5-10.5 *Collected:* 6/14/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0538	J	0.0075	MDL	0.107	PQL	mg/Kg	U	B, B

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0151	J	0.0077	MDL	0.109	PQL	mg/Kg	U	B, B

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0399	J	0.0077	MDL	0.109	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 Laboratory: LL

EDD Filename: PrepDE180_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS
Method: 7471A **Matrix:** SO

Method Category: SVOA
Method: 1625C **Matrix:** SO

Sample ID: SL-035-SA5DN-SB-9.5-10.5 *Collected:* 6/14/2011 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
N-NITROSODIMETHYLAMINE	28.5	J	18.7	MDL	37.3	PQL	ng/Kg	J	Z

Method Category: SVOA
Method: 6850 **Matrix:** SO

Sample ID: SL-032-SA5DN-SB-10.0-11.0 *Collected:* 6/14/2011 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
PERCHLORATE	3.2	J	2.3	MDL	5.5	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	22		2.3	MDL	7.0	PQL	mg/Kg	J	FD
EFH (C30-C40)	75		2.3	MDL	7.0	PQL	mg/Kg	J	FD
EFH (C8-C11)	2.3	U	2.3	MDL	7.0	PQL	mg/Kg	UJ	FD

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	11		0.46	MDL	1.4	PQL	mg/Kg	J	FD
EFH (C30-C40)	25		0.46	MDL	1.4	PQL	mg/Kg	J	FD
EFH (C8-C11)	0.54	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z, Q, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-035-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 8:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.47	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 2:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.49	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.83	J	0.45	MDL	2.0	PQL	ug/Kg	J	Z, FD
Aroclor 5460	1.2	U	1.2	MDL	3.8	PQL	ug/Kg	UJ	FD

Sample ID: SL-033-SA5DN-SB-11.0-12.0 *Collected:* 6/14/2011 11:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.60	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.4	J	0.45	MDL	2.0	PQL	ug/Kg	J	Z, FD
Aroclor 5460	1.8	J	1.2	MDL	3.8	PQL	ug/Kg	J	Z, FD

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.3	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 Laboratory: LL

EDD Filename: PrepDE180_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	35	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	19	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	62	J	19	MDL	190	PQL	ug/Kg	J	Z
Butylbenzylphthalate	22	J	19	MDL	190	PQL	ug/Kg	J	Z
CARBAZOLE	25	J	19	MDL	190	PQL	ug/Kg	J	Z
CHRYSENE	68	J	19	MDL	190	PQL	ug/Kg	J	Z
PHENANTHRENE	69	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	110	J	19	MDL	190	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** AQ

Sample ID: EB17-SA5DN-SB-061411 *Collected:* 6/14/2011 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-METHYLNAPHTHALENE	0.014	J	0.010	MDL	0.050	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.015	J	0.010	MDL	0.050	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.20	J	0.050	MDL	1.0	PQL	ug/L	J	Z
Diethylphthalate	0.059	J	0.050	MDL	1.0	PQL	ug/L	U	B
Di-n-butylphthalate	0.081	J	0.050	MDL	1.0	PQL	ug/L	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *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(A)PYRENE	0.78	U	0.78	MDL	1.9	PQL	ug/Kg	UJ	FD
BENZO(B)FLUORANTHENE	0.88	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z, FD
BENZO(G,H,I)PERYLENE	0.78	U	0.78	MDL	1.9	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *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(K)FLUORANTHENE	0.78	U	0.78	MDL	1.9	PQL	ug/Kg	UJ	FD
Butylbenzylphthalate	7.0	U	7.0	MDL	21	PQL	ug/Kg	UJ	FD
CHRYSENE	0.73	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	7.3	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.99	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z, FD
BENZO(B)FLUORANTHENE	0.77	U	0.77	MDL	1.9	PQL	ug/Kg	UJ	FD
BENZO(G,H,I)PERYLENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z, FD
BENZO(K)FLUORANTHENE	1.3	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z, FD
Butylbenzylphthalate	8.3	J	6.9	MDL	21	PQL	ug/Kg	J	Z, FD
CHRYSENE	1.1	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	9.6	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 *Collected:* 6/14/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZO(A,H)ANTHRACENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-octylphthalate	16	J	6.8	MDL	20	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B **Matrix: SO**

Sample ID: SL-033-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 10:35:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.7	U	1.7	MDL	4.1	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** AQ

Sample ID: EB17-SA5DN-SB-061411 *Collected:* 6/14/2011 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
TOLUENE	1	J	0.7	MDL	5	PQL	ug/L	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP14-SA5DN-QC-061411 *Collected:* 6/14/2011 10:45:00 *Analysis Type:* RES *Dilution:* 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.2	MDL	7.4	PQL	ug/Kg	UJ	B, FD
CHLOROFORM	0.19	J	0.11	MDL	3.7	PQL	ug/Kg	J	Z, FD
METHYLENE CHLORIDE	15		0.22	MDL	3.7	PQL	ug/Kg	J	FD
TOLUENE	0.33	J	0.07	MDL	3.7	PQL	ug/Kg	J	Z

Sample ID: SL-032-SA5DN-SB-10.0-11.0 *Collected:* 6/14/2011 12:25:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.6		6.2	MDL	7.5	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	3.2	J	0.22	MDL	3.7	PQL	ug/Kg	U	B
TOLUENE	0.29	J	0.07	MDL	3.7	PQL	ug/Kg	J	Z

Sample ID: SL-032-SA5DN-SB-4.0-5.0 *Collected:* 6/14/2011 12:20:00 *Analysis Type:* RES *Dilution:* 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	11		6.9	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	3.2	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.31	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-033-SA5DN-SB-11.0-12.0 *Collected:* 6/14/2011 11:50:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	10		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	4.5		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.35	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory:** LL

EDD Filename: PrepDE180_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-033-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.6	U	6.6	MDL	7.9	PQL	ug/Kg	UJ	FD
CHLOROFORM	0.12	U	0.12	MDL	3.9	PQL	ug/Kg	UJ	FD
Chlorotrifluoroethylene	0.49	U	0.49	MDL	4.9	PQL	ug/Kg	UJ	Q
METHYLENE CHLORIDE	3.6	J	0.24	MDL	3.9	PQL	ug/Kg	UJ	Q, B, FD
TOLUENE	0.24	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 8:55:00 ***Analysis Type:*** RES ***Dilution:*** 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.8		6.6	MDL	7.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	4.2		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.47	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-035-SA5DN-SB-9.5-10.5 ***Collected:*** 6/14/2011 9:05:00 ***Analysis Type:*** RES ***Dilution:*** 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.0		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	5.2		0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.45	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-12.0-13.0 ***Collected:*** 6/14/2011 3:05:00 ***Analysis Type:*** RES ***Dilution:*** 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.6		7.2	MDL	8.7	PQL	ug/Kg	U	B
CHLOROFORM	0.14	J	0.13	MDL	4.3	PQL	ug/Kg	J	Z
TOLUENE	0.42	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z

Sample ID: SL-044-SA5DN-SB-4.0-5.0 ***Collected:*** 6/14/2011 2:55:00 ***Analysis Type:*** RES ***Dilution:*** 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.8	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	4.9		0.24	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.33	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE180

Method Blank Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17248BB221736	6/24/2011 5:36:00 PM	BORON MAGNESIUM	0.0034 mg/L 0.0092 mg/L	EB17-SA5DN-SB-061411

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
EB17-SA5DN-SB-061411(REA2)	BORON	0.0053 mg/L	0.0053U mg/L

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16808CB221824	6/24/2011 6:24:00 PM	BORON CALCIUM IRON MAGNESIUM MANGANESE PHOSPHORUS STRONTIUM TIN	0.483 mg/Kg 10.7 mg/Kg 3.28 mg/Kg 1.44 mg/Kg 0.0550 mg/Kg 1.59 mg/Kg 0.0550 mg/Kg 2.05 mg/Kg	DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-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
DUP14-SA5DN-QC-061411(RES)	TIN	4.07 mg/Kg	4.07U mg/Kg
SL-032-SA5DN-SB-10.0-11.0(RES)	TIN	2.65 mg/Kg	2.65U mg/Kg
SL-032-SA5DN-SB-4.0-5.0(RES)	TIN	2.84 mg/Kg	2.84U mg/Kg
SL-033-SA5DN-SB-11.0-12.0(RES)	TIN	2.61 mg/Kg	2.61U mg/Kg
SL-033-SA5DN-SB-4.0-5.0(RES)	BORON	2.35 mg/Kg	2.35U mg/Kg
SL-033-SA5DN-SB-4.0-5.0(RES)	TIN	3.08 mg/Kg	3.08U mg/Kg
SL-035-SA5DN-SB-4.0-5.0(RES)	BORON	1.31 mg/Kg	1.31U mg/Kg
SL-035-SA5DN-SB-4.0-5.0(RES)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-035-SA5DN-SB-9.5-10.5(RES)	TIN	2.35 mg/Kg	2.35U mg/Kg
SL-044-SA5DN-SB-12.0-13.0(RES)	BORON	0.699 mg/Kg	0.699U mg/Kg
SL-044-SA5DN-SB-12.0-13.0(RES)	TIN	2.57 mg/Kg	2.57U mg/Kg
SL-044-SA5DN-SB-4.0-5.0(RES)	TIN	2.62 mg/Kg	2.62U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16826BB220933A	6/20/2011 9:33:00 AM	COPPER	0.109 mg/Kg	DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0

Method: 7471A
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16811DB220706	6/21/2011 7:06:00 AM	MERCURY	0.0133 mg/Kg	DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-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-032-SA5DN-SB-10.0-11.0(RES)	MERCURY	0.0361 mg/Kg	0.0361U mg/Kg
SL-032-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0265 mg/Kg	0.0265U mg/Kg
SL-033-SA5DN-SB-11.0-12.0(RES)	MERCURY	0.0264 mg/Kg	0.0264U mg/Kg
SL-035-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0388 mg/Kg	0.0388U mg/Kg
SL-035-SA5DN-SB-9.5-10.5(RES)	MERCURY	0.0538 mg/Kg	0.0538U mg/Kg
SL-044-SA5DN-SB-12.0-13.0(RES)	MERCURY	0.0151 mg/Kg	0.0151U mg/Kg
SL-044-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0399 mg/Kg	0.0399U mg/Kg

Method: 8015B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P66660AB322325A	6/15/2011 11:25:00 PM	ETHANOL	150 ug/Kg	DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB90B210115A	6/20/2011 1:15:00 AM	ACETONE METHYLENE CHLORIDE	11 ug/Kg 1.0 ug/Kg	DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-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
DUP14-SA5DN-QC-061411(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-032-SA5DN-SB-10.0-11.0(RES)	ACETONE	8.6 ug/Kg	8.6U ug/Kg
SL-032-SA5DN-SB-10.0-11.0(RES)	METHYLENE CHLORIDE	3.2 ug/Kg	3.7U ug/Kg
SL-032-SA5DN-SB-4.0-5.0(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-032-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	3.2 ug/Kg	4.1U ug/Kg
SL-033-SA5DN-SB-11.0-12.0(RES)	ACETONE	10 ug/Kg	10U ug/Kg
SL-033-SA5DN-SB-11.0-12.0(RES)	METHYLENE CHLORIDE	4.5 ug/Kg	4.5U ug/Kg
SL-033-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	3.6 ug/Kg	3.9U ug/Kg
SL-035-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.8 ug/Kg	8.8U ug/Kg
SL-035-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	4.2 ug/Kg	4.2U ug/Kg
SL-035-SA5DN-SB-9.5-10.5(RES)	ACETONE	9.0 ug/Kg	9.0U ug/Kg
SL-035-SA5DN-SB-9.5-10.5(RES)	METHYLENE CHLORIDE	5.2 ug/Kg	5.2U ug/Kg
SL-044-SA5DN-SB-12.0-13.0(RES)	ACETONE	9.6 ug/Kg	9.6U ug/Kg
SL-044-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-044-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	4.9 ug/Kg	4.9U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWE16B260803	7/1/2011 8:03:00 AM	Diethylphthalate	0.057 ug/L	EB17-SA5DN-SB-061411

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
EB17-SA5DN-SB-061411(RES)	Diethylphthalate	0.059 ug/L	1.0U ug/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	DIETHYLENE GLYCOL	50	53	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	m-Terphenyl	68	69	75.00-125.00	-	m-Terphenyl	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-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	EFH (C15-C20) EFH (C30-C40)	344 5317	139 171	49.00-123.00 49.00-123.00	85 (20.00) 142 (20.00)	EFH (C15-C20) EFH (C30-C40)	J(all detects) EFH (C30-C40), No Qual, >4x
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	EFH (C12-C14) EFH (C8-C11)	0 0	- 36	49.00-123.00 49.00-123.00	200 (20.00) 200 (20.00)	EFH (C12-C14) EFH (C8-C11)	J(all detects) UJ(all non-detects) MS Diluted Out
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	EFH (C21-C30)	2840	21	49.00-123.00	151 (20.00)	EFH (C21-C30)	No Qual, >4x

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	ZINC	156	-29	75.00-125.00	26 (20.00)	ZINC	J(all detects) UJ(all non-detects) No Qual %R, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	ANTIMONY COPPER LEAD NICKEL	33 - 65 -	45 70 62 64	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	27 (20.00) - - -	ANTIMONY COPPER LEAD NICKEL	J(all detects) UJ(all non-detects)
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	BARIUM	9	-52	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	ALUMINUM IRON MANGANESE PHOSPHORUS POTASSIUM	1095 3647 195 147 142	1773 4280 270 197 156	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM IRON MANGANESE PHOSPHORUS POTASSIUM	J(all detects) Al, Fe, Mn, No Qual, >4x
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	CALCIUM MAGNESIUM	-439 1	-253 325	75.00-125.00 75.00-125.00	- -	CALCIUM MAGNESIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	FLUORIDE	72	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	TITANIUM	235	220	75.00-125.00	-	TITANIUM	No Qual, >4x

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-033-SA5DN-SB-4.0-5.0MS (SL-033-SA5DN-SB-4.0-5.0)	ACETONE METHYLENE CHLORIDE	216 144	- -	15.00-210.00 61.00-141.00	- -	ACETONE METHYLENE CHLORIDE	J(all detects)
SL-033-SA5DN-SB-4.0-5.0MS SL-033-SA5DN-SB-4.0-5.0MSD (SL-033-SA5DN-SB-4.0-5.0)	Chlorotrifluoroethylene	61	59	70.00-130.00	-	Chlorotrifluoroethylene	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-033-SA5DN-SB-4.0-5.0DUP (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	FLUORIDE	37	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-033-SA5DN-SB-4.0-5.0DUP (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	CALCIUM MANGANESE	49 59	20.00 20.00	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-033-SA5DN-SB-4.0-5.0DUP (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	ANTIMONY SELENIUM	200 26	20.00 20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-033-SA5DN-SB-4.0-5.0DUP (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	MERCURY	46	20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 314.0
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Q1173Y271530B (EB17-SA5DN-SB-061411)	PERCHLORATE	-	-	85.00-115.00	16 (15.00)	PERCHLORATE	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16826BQ220936A (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	ANTIMONY	65	-	80.00-120.00	-	ANTIMONY	No Qual SRM within QC Limits

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16808CQ221828 (DUP14-SA5DN-QC-061411 SL-032-SA5DN-SB-10.0-11.0 SL-032-SA5DN-SB-4.0-5.0 SL-033-SA5DN-SB-11.0-12.0 SL-033-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-4.0-5.0 SL-035-SA5DN-SB-9.5-10.5 SL-044-SA5DN-SB-12.0-13.0 SL-044-SA5DN-SB-4.0-5.0)	IRON	79	-	80.00-120.00	-	IRON	No Qual, SRM within QC Limits

Field Duplicate RPD Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-033-SA5DN-SB-4.0-5.0	DUP14-SA5DN-QC-061411			
MOISTURE	14.0	14.1	1		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-033-SA5DN-SB-4.0-5.0	DUP14-SA5DN-QC-061411			
FLUORIDE	5.2	6.4	21	50.00	No Qualifiers Applied
Nitrate-NO3	1.9	1.4	30	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-033-SA5DN-SB-4.0-5.0	DUP14-SA5DN-QC-061411			
ALUMINUM	29000	28600	1	50.00	No Qualifiers Applied
BORON	2.35	3.66	44	50.00	
CALCIUM	15300	11400	29	50.00	
IRON	30400	34800	13	50.00	
LITHIUM	25.2	25.0	1	50.00	
MAGNESIUM	6920	6820	1	50.00	
MANGANESE	290	441	41	50.00	
PHOSPHORUS	228	334	38	50.00	
POTASSIUM	3130	3760	18	50.00	
SODIUM	416	386	7	50.00	
STRONTIUM	43.7	43.8	0	50.00	
TIN	3.08	4.07	28	50.00	
TITANIUM	1240	1340	8	50.00	
Zirconium	4.48	4.55	2	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-033-SA5DN-SB-4.0-5.0	DUP14-SA5DN-QC-061411			
ARSENIC	5.90	4.97	17	50.00	No Qualifiers Applied
BARIUM	145	161	10	50.00	
BERYLLIUM	0.816	0.850	4	50.00	
CADMIUM	0.288	0.348	19	50.00	
CHROMIUM	30.0	28.1	7	50.00	
COBALT	10.9	10.8	1	50.00	
COPPER	14.2	14.9	5	50.00	
LEAD	9.16	9.10	1	50.00	
MOLYBDENUM	0.321	0.259	21	50.00	
NICKEL	18.4	18.7	2	50.00	
SELENIUM	0.106	0.0974	8	50.00	
SILVER	0.0490	0.0521	6	50.00	
THALLIUM	0.346	0.355	3	50.00	
VANADIUM	52.7	42.7	21	50.00	
ZINC	75.0	77.4	3	50.00	
ANTIMONY	0.0937	0.233 U	200	50.00	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	0.79	0.60	27	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0691	0.267	118	50.00	J(all detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	11	22	67	50.00	J(all detects)
EFH (C30-C40)	25	75	100	50.00	
EFH (C8-C11)	0.54	7.0 U	200	50.00	UJ(all non-detects)

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (ug/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
AROCLOR 1260	1.4	0.83	51	50.00	J(all detects)
Aroclor 5460	1.8	3.8 U	200	50.00	UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (ug/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
TOLUENE	0.24	0.33	32	50.00	No Qualifiers Applied
ACETONE	7.9 U	8.4	200	50.00	J(all detects)
CHLOROFORM	3.9 U	0.19	200	50.00	
METHYLENE CHLORIDE	3.6	15	123	50.00	UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg) SL-033-SA5DN-SB-4.0-5.0	Concentration (ug/Kg) DUP14-SA5DN-QC-061411	Sample RPD	eQAPP RPD	Flag
CHRYSENE	1.1	0.73	40	50.00	No Qualifiers Applied
Di-n-butylphthalate	9.6	7.3	27	50.00	
BENZO(A)PYRENE	0.99	1.9 U	200	50.00	J(all detects)
BENZO(B)FLUORANTHENE	1.9 U	0.88	200	50.00	
BENZO(G,H,I)PERYLENE	1.2	1.9 U	200	50.00	
BENZO(K)FLUORANTHENE	1.3	1.9 U	200	50.00	UJ(all non-detects)
Butylbenzylphthalate	8.3	21 U	200	50.00	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: PrepDE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-033-SA5DN-SB-4.0-5.0	DUP14-SA5DN-QC-061411			
PH	8.58	8.17	5	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB17-SA5DN-SB-061411	BORON	J	0.0053	0.0500	PQL	mg/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB17-SA5DN-SB-061411	TOLUENE	J	1	5	PQL	ug/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB17-SA5DN-SB-061411	1-METHYLNAPHTHALENE	J	0.014	0.050	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.015	0.050	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.20	1.0	PQL	ug/L	
	Diethylphthalate	J	0.059	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.081	1.0	PQL	ug/L	

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-035-SA5DN-SB-9.5-10.5	N-NITROSODIMETHYLAMINE	J	28.5	37.3	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	Nitrate-NO3	J	1.4	1.7	PQL	mg/Kg	J (all detects)
SL-033-SA5DN-SB-11.0-12.0	Nitrate-NO3	J	1.4	1.7	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.6	1.8	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	BORON	J	3.66	5.82	PQL	mg/Kg	J (all detects)
	TIN	J	4.07	11.6	PQL	mg/Kg	
	Zirconium	J	4.55	5.82	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA5DN-SB-10.0-11.0	TIN	J	2.65	10.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.55	5.20	PQL	mg/Kg	
SL-032-SA5DN-SB-4.0-5.0	BORON	J	2.82	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	2.84	11.1	PQL	mg/Kg	
	Zirconium	J	5.06	5.54	PQL	mg/Kg	
SL-033-SA5DN-SB-11.0-12.0	TIN	J	2.61	10.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.43	5.42	PQL	mg/Kg	
SL-033-SA5DN-SB-4.0-5.0	BORON	J	2.35	5.81	PQL	mg/Kg	J (all detects)
	TIN	J	3.08	11.6	PQL	mg/Kg	
	Zirconium	J	4.48	5.81	PQL	mg/Kg	
SL-035-SA5DN-SB-4.0-5.0	BORON	J	1.31	5.85	PQL	mg/Kg	J (all detects)
	TIN	J	2.96	11.7	PQL	mg/Kg	
	Zirconium	J	5.04	5.85	PQL	mg/Kg	
SL-035-SA5DN-SB-9.5-10.5	TIN	J	2.35	11.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.61	5.60	PQL	mg/Kg	
SL-044-SA5DN-SB-12.0-13.0	BORON	J	0.699	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	2.57	11.1	PQL	mg/Kg	
	Zirconium	J	4.50	5.54	PQL	mg/Kg	
SL-044-SA5DN-SB-4.0-5.0	BORON	J	3.63	5.77	PQL	mg/Kg	J (all detects)
	TIN	J	2.62	11.5	PQL	mg/Kg	
	Zirconium	J	5.41	5.77	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	SELENIUM	J	0.0974	0.466	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0521	0.116	PQL	mg/Kg	
SL-032-SA5DN-SB-10.0-11.0	SILVER	J	0.0409	0.107	PQL	mg/Kg	J (all detects)
SL-032-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0872	0.224	PQL	mg/Kg	J (all detects)
	SILVER	J	0.104	0.112	PQL	mg/Kg	
SL-033-SA5DN-SB-11.0-12.0	SELENIUM	J	0.0825	0.447	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0300	0.112	PQL	mg/Kg	
SL-033-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0937	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.106	0.461	PQL	mg/Kg	
	SILVER	J	0.0490	0.115	PQL	mg/Kg	
SL-035-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0973	0.230	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0996	0.115	PQL	mg/Kg	
	SILVER	J	0.0255	0.115	PQL	mg/Kg	
SL-035-SA5DN-SB-9.5-10.5	CADMIUM	J	0.110	0.112	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0244	0.112	PQL	mg/Kg	
SL-044-SA5DN-SB-12.0-13.0	SELENIUM	J	0.0661	0.452	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0265	0.113	PQL	mg/Kg	
SL-044-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0965	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.116	0.452	PQL	mg/Kg	
	SILVER	J	0.0884	0.113	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6850

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA5DN-SB-10.0-11.0	PERCHLORATE	J	3.2	5.5	PQL	ug/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	HEXAVALENT CHROMIUM	J	0.60	1.2	PQL	mg/Kg	J (all detects)
SL-032-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.62	1.1	PQL	mg/Kg	J (all detects)
SL-033-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.79	1.2	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.39	1.2	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-9.5-10.5	HEXAVALENT CHROMIUM	J	0.30	1.1	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-12.0-13.0	HEXAVALENT CHROMIUM	J	0.38	1.1	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.45	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA5DN-SB-10.0-11.0	MERCURY	J	0.0361	0.108	PQL	mg/Kg	J (all detects)
SL-032-SA5DN-SB-4.0-5.0	MERCURY	J	0.0265	0.113	PQL	mg/Kg	J (all detects)
SL-033-SA5DN-SB-11.0-12.0	MERCURY	J	0.0264	0.107	PQL	mg/Kg	J (all detects)
SL-033-SA5DN-SB-4.0-5.0	MERCURY	J	0.0691	0.112	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-4.0-5.0	MERCURY	J	0.0388	0.112	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-9.5-10.5	MERCURY	J	0.0538	0.107	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-12.0-13.0	MERCURY	J	0.0151	0.109	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-4.0-5.0	MERCURY	J	0.0399	0.109	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-033-SA5DN-SB-4.0-5.0	EFH (C8-C11)	J	0.54	1.4	PQL	mg/Kg	J (all detects)
SL-035-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.47	1.4	PQL	mg/Kg	J (all detects)
SL-044-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.49	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	AROCLOR 1260	J	0.83	2.0	PQL	ug/Kg	J (all detects)
SL-033-SA5DN-SB-11.0-12.0	AROCLOR 1260	J	0.60	1.9	PQL	ug/Kg	J (all detects)
SL-033-SA5DN-SB-4.0-5.0	AROCLOR 1260 Aroclor 5460	J J	1.4 1.8	2.0 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-044-SA5DN-SB-12.0-13.0	AROCLOR 1260	J	1.3	1.9	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	CHLOROFORM TOLUENE	J J	0.19 0.33	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-032-SA5DN-SB-10.0-11.0	METHYLENE CHLORIDE TOLUENE	J J	3.2 0.29	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-032-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	3.2 0.31	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-033-SA5DN-SB-11.0-12.0	TOLUENE	J	0.35	4.0	PQL	ug/Kg	J (all detects)
SL-033-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	3.6 0.24	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-035-SA5DN-SB-4.0-5.0	TOLUENE	J	0.47	4.0	PQL	ug/Kg	J (all detects)
SL-035-SA5DN-SB-9.5-10.5	TOLUENE	J	0.45	4.0	PQL	ug/Kg	J (all detects)
SL-044-SA5DN-SB-12.0-13.0	CHLOROFORM TOLUENE	J J	0.14 0.42	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-044-SA5DN-SB-4.0-5.0	TOLUENE	J	0.33	4.1	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP14-SA5DN-QC-061411	BIS(2-ETHYLHEXYL)PHTHALATE	J	35	390	PQL	ug/Kg	J (all detects)
SL-044-SA5DN-SB-12.0-13.0	ANTHRACENE BENZO(A)ANTHRACENE Butylbenzylphthalate CARBAZOLE CHRYSENE PHENANTHRENE PYRENE	J J J J J J J	19 62 22 25 68 69 110	190 190 190 190 190 190 190	PQL PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE180 **Laboratory: LL**

EDD Filename: DE180_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
DUP14-SA5DN-QC-061411	BENZO(B)FLUORANTHENE	J	0.88	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.73	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	7.3	21	PQL	ug/Kg	
SL-033-SA5DN-SB-4.0-5.0	BENZO(A)PYRENE	J	0.99	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	
	Butylbenzylphthalate	J	8.3	21	PQL	ug/Kg	
	CHRYSENE	J	1.1	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	9.6	21	PQL	ug/Kg	
SL-044-SA5DN-SB-12.0-13.0	DIBENZO(A,H)ANTHRACENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	16	20	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.6	1.9	PQL	ug/Kg	

LDC #: 26277K4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11
SDG #: DE180 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Mg, Mn, Ti, Zn >4X, No qual % R RPD
VII.	Duplicate Sample Analysis	SW	Sb, Hg, Se <5X
VIII.	Laboratory Control Samples (LCS)	SW	SKM Ti J+/P
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, Co, Cu, Pb, Ni, V, Zn
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=10

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-032-SA5DN-SB-4.0-5.0	11	SL-033-SA5DN-SB-4.0-5.0MS	21		31	
2	SL-032-SA5DN-SB-10.0-11.0	12	SL-033-SA5DN-SB-4.0-5.0MSD	22		32	
3	SL-033-SA5DN-SB-4.0-5.0	13	SL-033-SA5DN-SB-4.0-5.0DUP	23		33	
4	SL-033-SA5DN-SB-11.0-12.0	14		24		34	
5	SL-035-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-035-SA5DN-SB-9.5-10.5	16		26		36	
7	SL-044-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-044-SA5DN-SB-12.0-13.0	18		28		38	
9	DUP14-SA5DN-QC-061411	19		29		39	
10	EB17-SA5DN-SB-061411	20		30		40	

Notes:

LDC #: 26277K4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: 1
2nd Reviewer: A

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Sample Concentration units, unless otherwise noted: mg/Kg

Soil preparation factor applied: 166.7X
Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7	8		
Hg			0.15	0.125	0.027	0.036	0.069	0.026	0.039	0.054	0.040	0.015		

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 #: 26277K4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010B/7000)

(Y) N N/A Were field blanks identified in this SDG?

(Y) N N/A Were target analytes detected in the field blanks?

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 6/14/11 Soil factor applied 100X

Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	10	Action Level	3	5	8								
B	0.0053	2.65	2.3	1.3	0.70								

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".

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE180
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6315633BKG Matrix Spike Lab Sample ID: 6315634MS Matrix Spike Duplicate Lab Sample ID: 6315635MSD
% Solids for Sample: 86.0
Batch Id(s): P16808C, P16826B, P16811D, P17908D

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		28964.6000		31413.4951		32930.2572		223.6136	223.6136	MG/KG	1095		1773		5			20	P
Antimony	121	0.0937	B	0.5475		0.7214		1.3547	1.3815	MG/KG	33	N	45	N	27	*	75 - 125	20	MS
Arsenic	75	5.9015		7.6834		8.0129		2.2578	2.3026	MG/KG	79		92		4		75 - 125	20	MS
Barium	137	145.4294		146.4213		139.3967		11.2892	11.5128	MG/KG	9		-52		5			20	MS
Beryllium	9	0.8160		1.6390		1.6081		0.9031	0.9210	MG/KG	91		86		2		75 - 125	20	MS
Boron		2.3453	B	211.0946		215.7021		223.6136	223.6136	MG/KG	93		95		2		84 - 115	20	P
Cadmium	111	0.2883		1.2992		1.4674		1.1289	1.1513	MG/KG	90		102		12		75 - 125	20	MS
Calcium		15286.5791		13322.2920		14155.5926		447.2272	447.2272	MG/KG	-439		-253		6			20	P
Chromium	52	30.0253		40.6864		39.4658		11.2892	11.5128	MG/KG	94		82		3		75 - 125	20	MS
Cobalt	59	10.8589		61.2102		62.4683		56.4462	57.5639	MG/KG	89		90		2		75 - 125	20	MS
Copper	63	14.1999		23.4816		22.2634		11.2892	11.5128	MG/KG	82		70	N	5		75 - 125	20	MS
Iron		30417.1837		34494.9307		35203.0613		111.8068	111.8068	MG/KG	3647		4280		2			20	P
Lead	208	9.1596		11.3502		11.3009		3.3868	3.4538	MG/KG	65	N	62	N	0		75 - 125	20	MS
Lithium		25.2093		135.1878		139.1391		111.8068	111.8068	MG/KG	98		102		3		82 - 114	20	P
Magnesium		6918.9779		6921.5686		7644.9620		223.6136	223.6136	MG/KG	1		325		10			20	P
Manganese		289.5174		398.3318		440.2381		55.9034	55.9034	MG/KG	195		270		10			20	P
Mercury		0.0691	B	0.2273		0.1980		0.1894	0.1904	MG/KG	84		68	N	14		80 - 120	20	CV
Molybdenum	98	0.3210		10.5464		11.4575		11.2892	11.5128	MG/KG	91		97		8		75 - 125	20	MS
Nickel	60	18.4227		26.8909		25.8347		11.2892	11.5128	MG/KG	75		64	N	4		75 - 125	20	MS
Phosphorus		228.0291		392.2585		448.4571		111.8068	111.8068	MG/KG	147	N	197	N	13		75 - 125	20	P
Potassium		3127.1547		4717.4519		4875.0190		1118.0680	1118.0680	MG/KG	142	N	156	N	3		75 - 125	20	P
Selenium	78	0.1065	B	2.1752		2.3440		2.2578	2.3026	MG/KG	92		97		7		75 - 125	20	MS
Silver	107	0.0490	B	11.3976		11.8490		11.2892	11.5128	MG/KG	101		102		4		75 - 125	20	MS
Sodium		416.0919		1412.8790		1469.5874		1118.0680	1118.0680	MG/KG	89		94		4		75 - 125	20	P
Strontium		43.7453		146.0711		150.2873		111.8068	111.8068	MG/KG	92		95		3		75 - 115	20	P
Thallium	203	0.3463		0.8438		0.8195		0.4516	0.4605	MG/KG	110		103		3		75 - 125	20	MS
Tin		3.0802	B	385.1733		392.7952		447.2272	447.2272	MG/KG	85		87		2		80 - 110	20	P
Titanium		1236.5266		1502.3188		1492.2512		112.8923	116.2791	MG/KG	235		220		1			20	P
Vanadium	51	52.7285		65.1840		62.4914		11.2892	11.5128	MG/KG	110		85		4			20	MS
Zinc	66	74.9712		92.5943		71.5865		11.2892	11.5128	MG/KG	156		-29		26	*		20	MS
Zirconium		4.4849	B	110.3880		111.9041		111.8068	111.8068	MG/KG	95		96		1		75 - 125	20	P

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:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE180
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6315633BKG
% Solids for Duplicate: 84.7
Batch ID(s): P16808C, P16826B, P16811D, P17908D
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6315636DUP
% Solids for Sample: 86.0

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			28964.6000		27434.5992		5		P
Antimony	121		0.0937	B	0.0819	U	200		MS
Arsenic	75		5.9015		5.1717		13		MS
Barium	137		145.4294		137.8295		5		MS
Beryllium	9		0.8160		0.8514		4		MS
Boron			2.3453	B	2.1822	B	7		P
Cadmium	111	0.1	0.2883		0.2963		3		MS
Calcium			15286.5791		25285.6695		49	*	P
Chromium	52		30.0253		28.5271		5		MS
Cobalt	59		10.8589		11.0676		2		MS
Copper	63		14.1999		13.6412		4		MS
Iron			30417.1837		31126.8480		2		P
Lead	208		9.1596		9.2071		1		MS
Lithium			25.2093		24.1533		4		P
Magnesium			6918.9779		6614.2052		5		P
Manganese			289.5174		529.2797		59	*	P
Mercury			0.0691	B	0.0431	B	46		CV
Molybdenum	98	0.1	0.3210		0.3386		5		MS
Nickel	60		18.4227		18.4009		0		MS
Phosphorus			228.0291		242.9702		6		P
Potassium			3127.1547		3161.6471		1		P
Selenium	78		0.1065	B	0.1388	B	26		MS
Silver	107		0.0490	B	0.0574	B	16		MS
Sodium		116.3	416.0919		397.6225		5		P
Strontium			43.7453		45.1163		3		P
Thallium	203	0.1	0.3463		0.3331		4		MS
Tin			3.0802	B	2.7252	B	12		P
Titanium			1236.5266		1203.0323		3		P
Vanadium	51		52.7285		44.7619		16		MS
Zinc	66		74.9712		72.7353		3		MS
Zirconium			4.4849	B	5.2213	B	15		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.

DE180 4495

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

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: DE180
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Limit	.	%R	M	In Spec
Aluminum		P16808CQ	MG/KG	14146.0	12124.1		8676.7	15560.3	86	P	Yes
Antimony	121	P16826BQ	MG/KG	99.2	64.2		26.3	179.7	65	MS	Yes
Arsenic	75	P16826BQ	MG/KG	109.0	109.5		90.5	123.5	100	MS	Yes
Barium	137	P16826BQ	MG/KG	345.0	341.8		280.4	381.6	99	MS	Yes
Beryllium	9	P16826BQ	MG/KG	75.2	75.8		64.4	83.8	101	MS	Yes
Boron		P16808CQ	MG/KG	167.0	147.8		130.6	183.9	89	P	Yes
Cadmium	111	P16826BQ	MG/KG	244.0	248.8		200.0	288.0	102	MS	Yes
Calcium		P16808CQ	MG/KG	9858.0	9613.6		8634.5	10843.6	98	P	Yes
Chromium	52	P16826BQ	MG/KG	80.6	82.6		64.1	97.0	102	MS	Yes
Cobalt	59	P16826BQ	MG/KG	85.8	83.0		70.3	101.0	97	MS	Yes
Copper	63	P16826BQ	MG/KG	67.4	62.4		56.2	74.4	93	MS	Yes
Iron		P16808CQ	MG/KG	23615.0	18617.5		14448.8	25976.6	79	P	Yes
Lead	208	P16826BQ	MG/KG	111.0	105.0		91.9	122.1	95	MS	Yes
Lithium		P16808CQ	UG/L	1000.0	986.2		800.0	1200.0	99	P	Yes
Magnesium		P16808CQ	MG/KG	4434.0	4067.8		3649.7	4877.1	92	P	Yes
Manganese		P16808CQ	MG/KG	450.0	423.9		400.6	503.4	94	P	Yes
Mercury		P16811DQ	MG/KG	2.8	2.9		2.5	3.5	104	CV	Yes
Molybdenum	98	P16826BQ	MG/KG	47.2	48.4		36.8	57.5	103	MS	Yes
Nickel	60	P16826BQ	MG/KG	103.5	92.7		83.5	113.9	90	MS	Yes
Phosphorus		P16808CQ	UG/L	1000.0	1021.2		800.0	1200.0	102	P	Yes
Potassium		P16808CQ	MG/KG	5021.0	4620.2		3926.8	5523.2	92	P	Yes
Selenium	78	P16826BQ	MG/KG	183.0	183.6		151.6	202.4	100	MS	Yes
Silver	107	P16826BQ	MG/KG	48.0	47.2		39.0	53.4	98	MS	Yes
Sodium		P16808CQ	MG/KG	1099.0	1034.7		957.0	1209.1	94	P	Yes
Strontium		P16808CQ	MG/KG	105.6	102.5		90.4	116.2	97	P	Yes
Thallium	203	P16826BQ	MG/KG	286.0	284.5		237.4	314.6	99	MS	Yes
Tin		P16808CQ	MG/KG	180.0	169.9		161.3	204.7	94	P	Yes
Titanium		P17908DQ	MG/KG	579.0	707.2		463.2	694.8	122	P	No
Vanadium	51	P16826BQ	MG/KG	130.0	121.2		108.8	151.2	93	MS	Yes
Zinc	66	P16826BQ	MG/KG	390.0	390.8		317.4	438.6	100	MS	Yes
Zirconium		P16808CQ	UG/L	1000.0	989.9		800.0	1200.0	99	P	Yes

JLH 8/P (L)

DE408 5406

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE180
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6315633BKG Serial Dilution Lab Sample ID: 6315633L
Batch ID(s): P16808C, P16826B, P17908D
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		249095.5600		233454.6000		6		P
Antimony	121	0.4071	B	1.8500	U	100		MS
Arsenic	75	25.6300		29.3100		14		MS
Barium	137	631.6000		688.0000		9		MS
Beryllium	9	3.5440		4.2985		21		MS
Boron		20.1700	B	35.9000	B	78		P
Cadmium	111	1.2520		2.1350	B	71		MS
Calcium		131464.5800		138201.6000		5		P
Chromium	52	130.4000		163.5500		25	E	MS
Cobalt	59	47.1600		52.8500		12	E	MS
Copper	63	61.6700		76.6000		24	E	MS
Iron		261587.7800		266115.1000		2		P
Lead	208	39.7800		49.0950		23	E	MS
Lithium		216.8000		223.3500		3		P
Magnesium		59503.2100		61422.7000		3		P
Manganese		2489.8500		2652.0500		7		P
Molybdenum	98	1.3940		1.5930	B	14		MS
Nickel	60	80.0100		100.6000		26	E	MS
Phosphorus		1961.0500		1983.3000		1		P
Potassium		26893.5300		27027.0000		0		P
Selenium	78	0.4625	B	1.4500	U	100		MS
Silver	107	0.2129	B	0.3550	U	100		MS
Sodium		3578.3900		3601.1000	B	1		P
Strontium		376.2100		388.5500		3		P
Thallium	203	1.5040		1.5435	B	3		MS
Tin		26.4900	B	31.5000	B	19		P
Titanium		10740.4700		11601.6500		8		P
Vanadium	51	229.0000		276.7500		21	E	MS
Zinc	66	325.6000		378.0000		16	E	MS
Zirconium		38.5700	B	44.0500	B	14		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.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: DE180 #497
U= Below MDL
B= Below LOQ

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE181

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Jun-2011	TB-061511	6316989	TB	5030B	8015M	III
15-Jun-2011	TB-061511	6316989	TB	5030B	8260B	III
15-Jun-2011	TB-061511	6316989	TB	5030B	8260B SIM	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3050B	6010B	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3050B	6020	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3060A	7199	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3546	1625C	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3550B	8015B	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3550B	8015M	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3550B	8082	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3550B	8270C	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	3550B	8270C SIM	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	5035	8015M	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	5035	8260B	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	5035	8260B SIM	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	8330	8330A	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	300.0	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	314.0	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	7471A	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	8015B	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	8015M	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	8315A	III
15-Jun-2011	SL-029-SA5DN-SB-4.0-5.0	6316977	N	METHOD	9012B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3050B	6010B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3050B	6020	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3546	1625C	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3550B	8015B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3550B	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3550B	8082	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3550B	8270C	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	3550B	8270C SIM	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	5035	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	5035	8260B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	5035	8260B SIM	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	8330	8330A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	300.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	314.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	7471A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	8015B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	8315A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0	6316978	N	METHOD	9012B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3050B	6010B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3050B	6020	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3060A	7199	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3546	1625C	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3550B	8015B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3550B	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3550B	8082	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3550B	8270C	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	5035	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	5035	8260B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	5035	8260B SIM	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	8330	8330A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	300.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	314.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	7471A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	8015B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	8015M	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	8315A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316979	MS	METHOD	9012B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316980	MS	3050B	6010B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0MS	6316980	MS	5035	8260B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	3050B	6010B	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	3050B	6020	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	3060A	7199	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	METHOD	300.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	METHOD	314.0	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	METHOD	7471A	III
15-Jun-2011	SL-030-SA5DN-SB-4.0-5.0DU	6316981	DUP	METHOD	9012B	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3050B	6010B	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3050B	6020	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3060A	7199	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3546	1625C	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3550B	8015B	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3550B	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
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3550B	8082	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3550B	8270C	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	3550B	8270C SIM	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	5035	8015M	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	5035	8260B	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	5035	8260B SIM	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	8330	8330A	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	300.0	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	314.0	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	7471A	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	8015B	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	8015M	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	8315A	III
15-Jun-2011	DUP15-SA5DN-QC-061511	6316988	FD	METHOD	9012B	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3050B	6010B	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3050B	6020	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3060A	7199	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3546	1625C	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3550B	8015B	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3550B	8015M	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3550B	8082	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3550B	8270C	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	3550B	8270C SIM	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	5035	8015M	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	5035	8260B	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	5035	8260B 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
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	8330	8330A	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	300.0	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	314.0	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	7471A	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	8015B	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	8015M	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	8315A	III
15-Jun-2011	SL-020-SA5DN-SB-3.5-4.5	6316976	N	METHOD	9012B	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3050B	6010B	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3050B	6020	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3060A	7199	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3546	1625C	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3550B	8015B	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3550B	8015M	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3550B	8082	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3550B	8270C	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	3550B	8270C SIM	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	5035	8015M	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	5035	8260B	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	5035	8260B SIM	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	8330	8330A	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	300.0	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	314.0	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	6850	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	7471A	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	8015B	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
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	8015M	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	8315A	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0	6316982	N	METHOD	9012B	III
15-Jun-2011	SL-031-SA5DN-SB-4.0-5.0MS	P316982R241925A	MS	METHOD	6850	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3050B	6010B	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3050B	6020	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3060A	7199	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3546	1625C	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3550B	8015B	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3550B	8015M	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3550B	8082	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3550B	8270C	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	3550B	8270C SIM	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	5035	8015M	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	5035	8260B	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	5035	8260B SIM	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	8330	8330A	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	300.0	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	314.0	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	7471A	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	8015B	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	8015M	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	8315A	III
15-Jun-2011	SL-034-SA5DN-SB-4.0-5.0	6316983	N	METHOD	9012B	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3005A	6010B	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3020A	6020	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
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3510C	8015B	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3510C	8015M	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3510C	8082	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3510C	8270C	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3510C	8270C SIM	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	3520C	1625C	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	5030B	8015M	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	5030B	8260B	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	5030B	8260B SIM	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	8330	8330A	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	Gen Prep	300.0	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	Gen Prep	314.0	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	Gen Prep	7199	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	Gen Prep	8015B	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	Gen Prep	8015M	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	METHOD	7470A	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	METHOD	8315A	III
15-Jun-2011	EB18-SA5DN-SB-061511	6316990	EB	METHOD	9012B	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3050B	6010B	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3050B	6020	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3060A	7199	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3550B	8082	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3550B	8270C	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	3550B	8270C SIM	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	5035	8260B	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	5035	8260B 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
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	METHOD	300.0	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	METHOD	314.0	III
15-Jun-2011	SL-055-SA5DN-SB-4.0-5.0	6316984	N	METHOD	7471A	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3050B	6010B	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3050B	6020	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3060A	7199	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3550B	8082	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3550B	8270C	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	3550B	8270C SIM	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	METHOD	300.0	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	METHOD	314.0	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	METHOD	6850	III
15-Jun-2011	SL-055-SA5DN-SB-9.0-10.0	6316985	N	METHOD	7471A	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3050B	6010B	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3050B	6020	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3060A	7199	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3550B	8082	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3550B	8270C	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	3550B	8270C SIM	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	5035	8260B	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	5035	8260B SIM	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	METHOD	300.0	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	METHOD	314.0	III
15-Jun-2011	SL-056-SA5DN-SB-4.0-5.0	6316986	N	METHOD	7471A	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3050B	6010B	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3050B	6020	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
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3060A	7199	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3550B	8082	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3550B	8270C	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	3550B	8270C SIM	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	METHOD	300.0	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	METHOD	314.0	III
15-Jun-2011	SL-056-SA5DN-SB-9.0-10.0	6316987	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE181 Laboratory: LL

EDD Filename: DE181_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 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
FLUORIDE	5.2		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.8		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.2		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
FLUORIDE	6.1		0.92	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.8		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
FLUORIDE	11.0		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	7.0		0.94	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.3		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	7.5		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 3:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.7		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: GENCHEM

Method: 314.0 **Matrix: AQ**

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
PERCHLORATE	0.70	U	0.70	MDL	2.0	PQL	ug/L	UJ	L

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
BORON	0.0033	J	0.0022	MDL	0.0500	PQL	mg/L	U	B

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4520		2.76	MDL	22.1	PQL	mg/Kg	J	E, E, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	156		0.0398	MDL	0.552	PQL	mg/Kg	J	Q, E
PHOSPHORUS	215		0.387	MDL	11.0	PQL	mg/Kg	J	Q
POTASSIUM	2240		12.5	MDL	55.2	PQL	mg/Kg	J	Q
STRONTIUM	20.7		0.0276	MDL	0.552	PQL	mg/Kg	J	FD
TIN	2.52	J	0.353	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.00	J	0.508	MDL	5.52	PQL	mg/Kg	J	Z

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	9140		2.78	MDL	22.3	PQL	mg/Kg	J	E, E
MANGANESE	276		0.0401	MDL	0.557	PQL	mg/Kg	J	Q, E
PHOSPHORUS	272		0.390	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	2350		12.6	MDL	55.7	PQL	mg/Kg	J	Q
TIN	2.36	J	0.356	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.03	J	0.512	MDL	5.57	PQL	mg/Kg	J	Z

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	15300		2.72	MDL	21.8	PQL	mg/Kg	J	E, E
MANGANESE	232		0.0392	MDL	0.544	PQL	mg/Kg	J	Q, E
PHOSPHORUS	185		0.381	MDL	10.9	PQL	mg/Kg	J	Q
POTASSIUM	1960		12.3	MDL	54.4	PQL	mg/Kg	J	Q
TIN	2.28	J	0.348	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.41	J	0.501	MDL	5.44	PQL	mg/Kg	J	Z

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
CALCIUM	22100		2.76	MDL	22.1	PQL	mg/Kg	J	E, E, FD
MANGANESE	179		0.0398	MDL	0.553	PQL	mg/Kg	J	Q, E
PHOSPHORUS	174		0.387	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	2440		12.5	MDL	55.3	PQL	mg/Kg	J	Q
STRONTIUM	36.3		0.0276	MDL	0.553	PQL	mg/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
TIN	2.87	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.79	J	0.508	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	201		0.0413	MDL	0.573	PQL	mg/Kg	J	Q, E
PHOSPHORUS	314		0.401	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	2680		13.0	MDL	57.3	PQL	mg/Kg	J	Q
TIN	2.11	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.15	J	0.528	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	73600		14.3	MDL	115	PQL	mg/Kg	J	E, E

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 12:25:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	42900		2.88	MDL	23.0	PQL	mg/Kg	J	E, E
MANGANESE	263		0.0414	MDL	0.575	PQL	mg/Kg	J	Q, E
PHOSPHORUS	306		0.403	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	3320		13.0	MDL	57.5	PQL	mg/Kg	J	Q
TIN	2.27	J	0.368	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.45	J	0.529	MDL	5.75	PQL	mg/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
CALCIUM	60600		2.93	MDL	23.4	PQL	mg/Kg	J	E, E
MANGANESE	270		0.0422	MDL	0.586	PQL	mg/Kg	J	Q, E
PHOSPHORUS	439		0.410	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	3350		13.2	MDL	58.6	PQL	mg/Kg	J	Q
TIN	2.36	J	0.375	MDL	11.7	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-055-SA5DN-SB-4.0-5.0 **Collected:** 6/15/2011 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
Zirconium	5.17	J	0.539	MDL	5.86	PQL	mg/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-9.0-10.0 **Collected:** 6/15/2011 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
BORON	5.16	J	0.386	MDL	5.36	PQL	mg/Kg	J	Z
CALCIUM	3590		2.68	MDL	21.4	PQL	mg/Kg	J	E, E
MANGANESE	147		0.0386	MDL	0.536	PQL	mg/Kg	J	Q, E
PHOSPHORUS	132		0.375	MDL	10.7	PQL	mg/Kg	J	Q
POTASSIUM	1810		12.1	MDL	53.6	PQL	mg/Kg	J	Q
TIN	2.56	J	0.343	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.55	J	0.493	MDL	5.36	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA5DN-SB-4.0-5.0 **Collected:** 6/15/2011 3:20:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	37800		2.85	MDL	22.8	PQL	mg/Kg	J	E, E
MANGANESE	353		0.0411	MDL	0.571	PQL	mg/Kg	J	Q, E
PHOSPHORUS	419		0.400	MDL	11.4	PQL	mg/Kg	J	Q
POTASSIUM	3570		12.9	MDL	57.1	PQL	mg/Kg	J	Q
TIN	2.40	J	0.365	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	5.25	J	0.525	MDL	5.71	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA5DN-SB-9.0-10.0 **Collected:** 6/15/2011 3:25:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	150		0.0412	MDL	0.572	PQL	mg/Kg	J	Q, E
PHOSPHORUS	235		0.400	MDL	11.4	PQL	mg/Kg	J	Q
POTASSIUM	2190		12.9	MDL	57.2	PQL	mg/Kg	J	Q
TIN	2.26	J	0.366	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.94	J	0.526	MDL	5.72	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-056-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 3:25:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	86800		14.3	MDL	114	PQL	mg/Kg	J	E, E

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.265		0.0563	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	101		0.119	MDL	0.451	PQL	mg/Kg	J	E, A

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	20.3		0.0892	MDL	0.446	PQL	mg/Kg	J	Q, E

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 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
ANTIMONY	0.0834	U	0.0834	MDL	0.225	PQL	mg/Kg	UJ	Q, FD
ARSENIC	6.78		0.0901	MDL	0.451	PQL	mg/Kg	J	Q
BERYLLIUM	0.793		0.0180	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.151		0.0496	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	24.2		0.135	MDL	0.451	PQL	mg/Kg	J	Q
COBALT	14.2		0.0225	MDL	0.113	PQL	mg/Kg	J	Q, E, FD
LEAD	10.7		0.0115	MDL	0.225	PQL	mg/Kg	J	Q
NICKEL	19.4		0.113	MDL	0.451	PQL	mg/Kg	J	Q, E
SILVER	0.0470	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, Q, FD
THALLIUM	0.269		0.0338	MDL	0.113	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.358		0.0557	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	101		0.118	MDL	0.445	PQL	mg/Kg	J	E, A

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	13.8		0.0874	MDL	0.437	PQL	mg/Kg	J	Q, E

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.114	J	0.0824	MDL	0.223	PQL	mg/Kg	UJ	Q, B
ARSENIC	7.41		0.0891	MDL	0.445	PQL	mg/Kg	J	Q
BERYLLIUM	0.827		0.0178	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.114		0.0490	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	25.7		0.134	MDL	0.445	PQL	mg/Kg	J	Q
COBALT	15.1		0.0223	MDL	0.111	PQL	mg/Kg	J	Q, E
LEAD	11.1		0.0114	MDL	0.223	PQL	mg/Kg	J	Q
NICKEL	21.2		0.111	MDL	0.445	PQL	mg/Kg	J	Q, E
SILVER	0.0575	J	0.0158	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.330		0.0334	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
MOLYBDENUM	0.164		0.0566	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	79.2		0.120	MDL	0.453	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 Laboratory: LL

EDD Filename: DE181_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	12.1		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, E

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0838	U	0.0838	MDL	0.227	PQL	mg/Kg	UJ	Q
ARSENIC	4.42		0.0906	MDL	0.453	PQL	mg/Kg	J	Q
BERYLLIUM	0.627		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.176		0.0498	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	22.6		0.136	MDL	0.453	PQL	mg/Kg	J	Q
COBALT	4.48		0.0227	MDL	0.113	PQL	mg/Kg	J	Q, E
LEAD	5.44		0.0116	MDL	0.227	PQL	mg/Kg	J	Q
NICKEL	13.6		0.113	MDL	0.453	PQL	mg/Kg	J	Q, E
SILVER	0.0293	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.271		0.0340	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.269		0.0569	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:55:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	118		0.121	MDL	0.455	PQL	mg/Kg	J	E, A

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:55:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	17.0		0.0902	MDL	0.451	PQL	mg/Kg	J	Q, E

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
ANTIMONY	0.114	J	0.0842	MDL	0.228	PQL	mg/Kg	UJ	Q, B, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
ARSENIC	6.20		0.0910	MDL	0.455	PQL	mg/Kg	J	Q
BERYLLIUM	0.982		0.0182	MDL	0.114	PQL	mg/Kg	J	Q
CADMIUM	0.138		0.0501	MDL	0.114	PQL	mg/Kg	J	Q
CHROMIUM	30.0		0.137	MDL	0.455	PQL	mg/Kg	J	Q
COBALT	5.52		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E, FD
LEAD	8.11		0.0116	MDL	0.228	PQL	mg/Kg	J	Q
NICKEL	20.6		0.114	MDL	0.455	PQL	mg/Kg	J	Q, E
SILVER	0.0864	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z, Q, FD
THALLIUM	0.375		0.0341	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.389		0.0557	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	177		0.118	MDL	0.445	PQL	mg/Kg	J	E, A

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	14.4		0.0899	MDL	0.450	PQL	mg/Kg	J	Q, E

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.155	J	0.0824	MDL	0.223	PQL	mg/Kg	UJ	Q, B
ARSENIC	9.64		0.0891	MDL	0.445	PQL	mg/Kg	J	Q
BERYLLIUM	1.03		0.0178	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.489		0.0490	MDL	0.111	PQL	mg/Kg	J	Q
CHROMIUM	35.1		0.134	MDL	0.445	PQL	mg/Kg	J	Q
COBALT	13.1		0.0223	MDL	0.111	PQL	mg/Kg	J	Q, E
LEAD	11.8		0.0114	MDL	0.223	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-031-SA5DN-SB-4.0-5.0** ***Collected:*** **6/15/2011 11:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	28.9		0.111	MDL	0.445	PQL	mg/Kg	J	Q, E
SILVER	0.0672	J	0.0158	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.431		0.0334	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: **SL-034-SA5DN-SB-4.0-5.0** ***Collected:*** **6/15/2011 12:25:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.390		0.0570	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: **SL-034-SA5DN-SB-4.0-5.0** ***Collected:*** **6/15/2011 12:25:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	168		0.121	MDL	0.456	PQL	mg/Kg	J	E, A

Sample ID: **SL-034-SA5DN-SB-4.0-5.0** ***Collected:*** **6/15/2011 12:25:00** ***Analysis Type:*** **REA8** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	11.9		0.0911	MDL	0.456	PQL	mg/Kg	J	Q, E

Sample ID: **SL-034-SA5DN-SB-4.0-5.0** ***Collected:*** **6/15/2011 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
ANTIMONY	0.188	J	0.0843	MDL	0.228	PQL	mg/Kg	UJ	Q, B
ARSENIC	9.14		0.0911	MDL	0.456	PQL	mg/Kg	J	Q
BERYLLIUM	0.913		0.0182	MDL	0.114	PQL	mg/Kg	J	Q
CADMIUM	0.358		0.0501	MDL	0.114	PQL	mg/Kg	J	Q
CHROMIUM	35.4		0.137	MDL	0.456	PQL	mg/Kg	J	Q
COBALT	10.6		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E
LEAD	10.7		0.0116	MDL	0.228	PQL	mg/Kg	J	Q
NICKEL	25.1		0.114	MDL	0.456	PQL	mg/Kg	J	Q, E
SILVER	0.0862	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z, Q
THALLIUM	0.392		0.0342	MDL	0.114	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0749	J	0.0667	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.392		0.0575	MDL	0.115	PQL	mg/Kg	J	Q

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	164		0.122	MDL	0.460	PQL	mg/Kg	J	E, A

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	14.2		0.0929	MDL	0.464	PQL	mg/Kg	J	Q, E

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.144	J	0.0851	MDL	0.230	PQL	mg/Kg	UJ	Q, B
ARSENIC	7.42		0.0919	MDL	0.460	PQL	mg/Kg	J	Q
BERYLLIUM	0.958		0.0184	MDL	0.115	PQL	mg/Kg	J	Q
CADMIUM	0.434		0.0506	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	36.7		0.138	MDL	0.460	PQL	mg/Kg	J	Q
COBALT	13.3		0.0230	MDL	0.115	PQL	mg/Kg	J	Q, E
LEAD	11.7		0.0117	MDL	0.230	PQL	mg/Kg	J	Q
NICKEL	25.0		0.115	MDL	0.460	PQL	mg/Kg	J	Q, E
SILVER	0.0714	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z, Q
THALLIUM	0.436		0.0345	MDL	0.115	PQL	mg/Kg	J	Q

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 2:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.371		0.0552	MDL	0.110	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 2:35:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	67.4		0.117	MDL	0.442	PQL	mg/Kg	J	E, A

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 2:35:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	9.41		0.0883	MDL	0.442	PQL	mg/Kg	J	Q, E

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 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
ANTIMONY	0.0817	U	0.0817	MDL	0.221	PQL	mg/Kg	UJ	Q
ARSENIC	4.91		0.0883	MDL	0.442	PQL	mg/Kg	J	Q
BERYLLIUM	0.591		0.0177	MDL	0.110	PQL	mg/Kg	J	Q
CADMIUM	0.0884	J	0.0486	MDL	0.110	PQL	mg/Kg	J	Z, Q
CHROMIUM	21.1		0.132	MDL	0.442	PQL	mg/Kg	J	Q
COBALT	9.00		0.0221	MDL	0.110	PQL	mg/Kg	J	Q, E
LEAD	6.05		0.0113	MDL	0.221	PQL	mg/Kg	J	Q
NICKEL	13.8		0.110	MDL	0.442	PQL	mg/Kg	J	Q, E
SILVER	0.0860	J	0.0157	MDL	0.110	PQL	mg/Kg	J	Z, Q
THALLIUM	0.250		0.0331	MDL	0.110	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 3:20:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0743	J	0.0662	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 3:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.290		0.0571	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 3:20:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	157		0.121	MDL	0.457	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-056-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 3:20:00 ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	17.6		0.0950	MDL	0.475	PQL	mg/Kg	J	Q, E

Sample ID: SL-056-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 3:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.150	J	0.0845	MDL	0.228	PQL	mg/Kg	UJ	Q, B
ARSENIC	7.53		0.0914	MDL	0.457	PQL	mg/Kg	J	Q
BERYLLIUM	0.913		0.0183	MDL	0.114	PQL	mg/Kg	J	Q
CADMIUM	0.442		0.0502	MDL	0.114	PQL	mg/Kg	J	Q
CHROMIUM	34.8		0.137	MDL	0.457	PQL	mg/Kg	J	Q
COBALT	13.5		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E
LEAD	11.0		0.0116	MDL	0.228	PQL	mg/Kg	J	Q
NICKEL	29.4		0.114	MDL	0.457	PQL	mg/Kg	J	Q, E
SILVER	0.0527	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z, Q
THALLIUM	0.402		0.0343	MDL	0.114	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-9.0-10.0 ***Collected:*** 6/15/2011 3:25:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.316		0.0561	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA5DN-SB-9.0-10.0 ***Collected:*** 6/15/2011 3:25:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	117		0.119	MDL	0.449	PQL	mg/Kg	J	E, A

Sample ID: SL-056-SA5DN-SB-9.0-10.0 ***Collected:*** 6/15/2011 3:25:00 ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	11.3		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, E

Sample ID: SL-056-SA5DN-SB-9.0-10.0 ***Collected:*** 6/15/2011 3:25:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.136	J	0.0830	MDL	0.224	PQL	mg/Kg	UJ	Q, B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-056-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 3:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.71		0.0897	MDL	0.449	PQL	mg/Kg	J	Q
BERYLLIUM	1.02		0.0179	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.234		0.0494	MDL	0.112	PQL	mg/Kg	J	Q
CHROMIUM	35.3		0.135	MDL	0.449	PQL	mg/Kg	J	Q
COBALT	9.37		0.0224	MDL	0.112	PQL	mg/Kg	J	Q, E
LEAD	10.9		0.0114	MDL	0.224	PQL	mg/Kg	J	Q
NICKEL	23.0		0.112	MDL	0.449	PQL	mg/Kg	J	Q, E
SILVER	0.0836	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z, Q
THALLIUM	0.376		0.0337	MDL	0.112	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.52	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.27	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.27	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.24	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.65	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 3:25:00 *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	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 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	0.0103	J	0.0076	MDL	0.109	PQL	mg/Kg	J	Z, FD

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
MERCURY	0.0215	J	0.0077	MDL	0.110	PQL	mg/Kg	J	Z, FD

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
MERCURY	0.0124	J	0.0077	MDL	0.109	PQL	mg/Kg	J	Z

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 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
N-NITROSODIMETHYLAMINE	24.5	J	19.0	MDL	37.9	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 Laboratory: LL

EDD Filename: DE181_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	34.4	J	18.8	MDL	37.5	PQL	ng/Kg	J	Z

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	33.3	J	18.9	MDL	37.8	PQL	ng/Kg	J	Z

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
N-NITROSODIMETHYLAMINE	36.3	J	18.9	MDL	37.8	PQL	ng/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	36.0	J	19.1	MDL	38.2	PQL	ng/Kg	J	Z

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 12:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	30.4	J	19.2	MDL	38.4	PQL	ng/Kg	J	Z

Method Category: SVOA

Method: 6850 **Matrix:** SO

Sample ID: SL-031-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.6	J	2.4	MDL	5.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.48	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z, FD

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 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
DIETHYLENE GLYCOL	5.7	U	5.7	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-030-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.46	U	0.46	MDL	1.4	PQL	mg/Kg	UJ	FD

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 12:25:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.2	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	0.50	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-056-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 3:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	20	MDL	400	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** AQ

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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-METHYLNAPHTHALENE	0.013	J	0.010	MDL	0.050	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.014	J	0.010	MDL	0.050	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.21	J	0.050	MDL	1.0	PQL	ug/L	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C SIM **Matrix:** AQ

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
Dimethylphthalate	0.050	U	0.050	MDL	1.0	PQL	ug/L	UJ	L
Di-n-butylphthalate	0.11	J	0.050	MDL	1.0	PQL	ug/L	J	Z

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *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(A)ANTHRACENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.7	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.93	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.6	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	0.87	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-034-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 12:25:00 *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(K)FLUORANTHENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	0.97	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-9.0-10.0 *Collected:* 6/15/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	7.5	J	6.6	MDL	20	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8330A **Matrix:** AQ

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
1,3,5-TRINITROBENZENE	0.20	U	0.20	MDL	0.60	PQL	ug/L	UJ	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory:** LL

EDD Filename: DE181_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8330A **Matrix:** AQ

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
Tetryl	0.40	U	0.40	MDL	0.60	PQL	ug/L	UJ	L, E

Method Category: VOA **Method:** 8260B **Matrix:** AQ

Sample ID: EB18-SA5DN-SB-061511 *Collected:* 6/15/2011 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
TOLUENE	0.8	J	0.7	MDL	5	PQL	ug/L	J	Z

Method Category: VOA **Method:** 8260B **Matrix:** SO

Sample ID: DUP15-SA5DN-QC-061511 *Collected:* 6/15/2011 10:05:00 *Analysis Type:* RES *Dilution:* 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.8	U	6.8	MDL	8.2	PQL	ug/Kg	UJ	FD
METHYLENE CHLORIDE	1.9	J	0.24	MDL	4.1	PQL	ug/Kg	UJ	B, FD
TOLUENE	0.1	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-020-SA5DN-SB-3.5-4.5 *Collected:* 6/15/2011 10:45:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.1	J	0.23	MDL	3.9	PQL	ug/Kg	U	B
TOLUENE	0.13	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-029-SA5DN-SB-4.0-5.0 *Collected:* 6/15/2011 9:00:00 *Analysis Type:* RES *Dilution:* 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.0	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.1	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-030-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 9:55:00 ***Analysis Type:*** RES ***Dilution:*** 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.1		6.6	MDL	7.9	PQL	ug/Kg	J	FD
Chlorotrifluoroethylene	0.50	U	0.50	MDL	5.0	PQL	ug/Kg	UJ	Q
METHYLENE CHLORIDE	1.1	J	0.24	MDL	4.0	PQL	ug/Kg	UJ	B, FD
TOLUENE	0.10	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

Sample ID: SL-031-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 11:25:00 ***Analysis Type:*** RES ***Dilution:*** 0.94

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.6	J	0.26	MDL	4.3	PQL	ug/Kg	U	B
TOLUENE	0.10	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z

Sample ID: SL-034-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 12:25:00 ***Analysis Type:*** RES ***Dilution:*** 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.7	J	0.24	MDL	3.9	PQL	ug/Kg	U	B
TOLUENE	0.09	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-055-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 2:30:00 ***Analysis Type:*** RES ***Dilution:*** 0.94

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.5	J	0.26	MDL	4.4	PQL	ug/Kg	U	B
TOLUENE	0.1	J	0.09	MDL	4.4	PQL	ug/Kg	J	Z

Sample ID: SL-056-SA5DN-SB-4.0-5.0 ***Collected:*** 6/15/2011 3:20:00 ***Analysis Type:*** RES ***Dilution:*** 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.3	J	0.26	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.1	J	0.09	MDL	4.2	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE181

Method Blank Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17248BB221736	6/24/2011 5:36:00 PM	BORON MAGNESIUM	0.0034 mg/L 0.0092 mg/L	EB18-SA5DN-SB-061511

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
EB18-SA5DN-SB-061511(RES)	BORON	0.0033 mg/L	0.0033U mg/L

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17208DB220350	6/29/2011 3:50:00 AM	CALCIUM PHOSPHORUS STRONTIUM TIN	4.41 mg/Kg 1.56 mg/Kg 0.0245 mg/Kg 1.59 mg/Kg	DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-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
DUP15-SA5DN-QC-061511(REA)	TIN	2.52 mg/Kg	2.52U mg/Kg
SL-020-SA5DN-SB-3.5-4.5(REA)	TIN	2.36 mg/Kg	2.36U mg/Kg
SL-029-SA5DN-SB-4.0-5.0(REA)	TIN	2.28 mg/Kg	2.28U mg/Kg
SL-030-SA5DN-SB-4.0-5.0(REA)	TIN	2.87 mg/Kg	2.87U mg/Kg
SL-031-SA5DN-SB-4.0-5.0(REA)	TIN	2.11 mg/Kg	2.11U mg/Kg
SL-034-SA5DN-SB-4.0-5.0(REA)	TIN	2.27 mg/Kg	2.27U mg/Kg
SL-055-SA5DN-SB-4.0-5.0(REA)	TIN	2.36 mg/Kg	2.36U mg/Kg
SL-055-SA5DN-SB-9.0-10.0(REA)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-056-SA5DN-SB-4.0-5.0(REA)	TIN	2.40 mg/Kg	2.40U mg/Kg
SL-056-SA5DN-SB-9.0-10.0(REA)	TIN	2.26 mg/Kg	2.26U mg/Kg

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17226CB221020A	6/23/2011 10:20:00 AM	ANTIMONY	0.0869 mg/Kg	DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
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-020-SA5DN-SB-3.5-4.5(RES)	ANTIMONY	0.114 mg/Kg	0.114U mg/Kg
SL-030-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.114 mg/Kg	0.114U mg/Kg
SL-031-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.155 mg/Kg	0.155U mg/Kg
SL-034-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.188 mg/Kg	0.188U mg/Kg
SL-055-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.144 mg/Kg	0.144U mg/Kg
SL-056-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.150 mg/Kg	0.150U mg/Kg
SL-056-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.136 mg/Kg	0.136U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB91B211352A	6/20/2011 1:52:00 PM	METHYLENE CHLORIDE	0.87 ug/Kg	DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-056-SA5DN-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
DUP15-SA5DN-QC-061511(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	4.1U ug/Kg
SL-020-SA5DN-SB-3.5-4.5(RES)	METHYLENE CHLORIDE	1.1 ug/Kg	3.9U ug/Kg
SL-029-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.0 ug/Kg	4.1U ug/Kg
SL-030-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.1 ug/Kg	4.0U ug/Kg
SL-031-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.3U ug/Kg
SL-034-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	3.9U ug/Kg
SL-055-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.4U ug/Kg
SL-056-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.2U ug/Kg

Method: 8270C SIM
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWB17B261133	6/28/2011 11:33:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE	0.069 ug/L	EB18-SA5DN-SB-061511

Method Blank Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **AQ**

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
EB18-SA5DN-SB-061511(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.21 ug/L	1.0U ug/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (SL-030-SA5DN-SB-4.0-5.0)	DIETHYLENE GLYCOL	36	33	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (SL-030-SA5DN-SB-4.0-5.0)	EFH (C21-C30) EFH (C30-C40)	130 137	- -	49.00-123.00 49.00-123.00	24 (20.00) -	EFH (C21-C30) EFH (C30-C40)	J(all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT LEAD SILVER THALLIUM VANADIUM ZINC	311 160 148 188 170 291 148 166 311 361	295 141 146 128 148 212 140 141 220 247	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 75.00-125.00	- - - - - - - - - -	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT LEAD SILVER THALLIUM VANADIUM ZINC	J(all detects) V, Zn, No Qual, >4x
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	ANTIMONY NICKEL	41 272	51 183	75.00-125.00 75.00-125.00	- 23 (20.00)	ANTIMONY NICKEL	J(all detects) UJ(all non-detects)
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	MOLYBDENUM	140	139	75.00-125.00	-	MOLYBDENUM	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	BARIUM	559	204	75.00-125.00	25 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual, %R, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	ALUMINUM IRON PHOSPHORUS POTASSIUM TITANIUM	915 374 - 139 162	1212 1119 131 168 201	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM IRON PHOSPHORUS POTASSIUM TITANIUM	J(all detects) Al, Fe, Ti, No Qual, >4x
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	CALCIUM	1476	-1992	75.00-125.00	73 (20.00)	CALCIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x
SL-030-SA5DN-SB-4.0-5.0MSD (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	MAGNESIUM MANGANESE	- -	43 346	75.00-125.00 75.00-125.00	- 45 (20.00)	MAGNESIUM MANGANESE	J(all detects) UJ(all non-detects) Mg, No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	COPPER	67	-	75.00-125.00	-	COPPER	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-030-SA5DN-SB-4.0-5.0MS (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	FLUORIDE	70	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MSD (SL-030-SA5DN-SB-4.0-5.0)	2,4-DINITROPHENOL	-	-	20.00-143.00	49 (30.00)	2,4-DINITROPHENOL	J(all detects)
	2-CHLORONAPHTHALENE	-	-	50.00-141.00	44 (30.00)	2-CHLORONAPHTHALENE	
	BENZOIC ACID	-	-	10.00-173.00	44 (30.00)	BENZOIC ACID	

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-030-SA5DN-SB-4.0-5.0MS SL-030-SA5DN-SB-4.0-5.0MSD (SL-030-SA5DN-SB-4.0-5.0)	Chlorotrifluoroethylene	55	53	70.00-130.00	-	Chlorotrifluoroethylene	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-030-SA5DN-SB-4.0-5.0DUP (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	CALCIUM	31	20.00	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-030-SA5DN-SB-4.0-5.0DUP (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	COBALT COPPER SILVER THALLIUM	58 23 55 24	20.00 20.00 20.00 20.00	J(all detects) UJ(all non-detects) Ag, Tl, No Qual, OK by Difference

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-030-SA5DN-SB-4.0-5.0DUP (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	HEXAVALENT CHROMIUM	200	20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-030-SA5DN-SB-4.0-5.0DUP (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	MERCURY	88	20.00	No Qual OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11671AQ240424A P11671AY240507A (EB18-SA5DN-SB-061511)	3-NITROTOLUENE	110	110	69.00-107.00	-	3-NITROTOLUENE	J (all detects)
P11671AQ240424A P11671AY240507A (EB18-SA5DN-SB-061511)	1,3,5-TRINITROBENZENE Tetryl	- 44	- -	53.00-129.00 72.00-141.00	33 (30.00) 59 (30.00)	1,3,5-TRINITROBENZENE Tetryl	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2WBLCSY261525 (EB18-SA5DN-SB-061511)	Dimethylphthalate	-	39	40.00-119.00	-	Dimethylphthalate	J(all detects) UJ(all non-detects)

Method: 314.0
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Q1173Y271530B (EB18-SA5DN-SB-061511)	PERCHLORATE	-	-	85.00-115.00	16 (15.00)	PERCHLORATE	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P17226CQ221023A (DUP15-SA5DN-QC-061511 SL-020-SA5DN-SB-3.5-4.5 SL-029-SA5DN-SB-4.0-5.0 SL-030-SA5DN-SB-4.0-5.0 SL-031-SA5DN-SB-4.0-5.0 SL-034-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-4.0-5.0 SL-055-SA5DN-SB-9.0-10.0 SL-056-SA5DN-SB-4.0-5.0 SL-056-SA5DN-SB-9.0-10.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB18-SA5DN-SB-061511	BORON	J	0.0033	0.0500	PQL	mg/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB18-SA5DN-SB-061511	TOLUENE	J	0.8	5	PQL	ug/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB18-SA5DN-SB-061511	1-METHYLNAPHTHALENE	J	0.013	0.050	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.014	0.050	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.21	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.11	1.0	PQL	ug/L	

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	N-NITROSODIMETHYLAMINE	J	24.5	37.9	PQL	ng/Kg	J (all detects)
SL-020-SA5DN-SB-3.5-4.5	N-NITROSODIMETHYLAMINE	J	34.4	37.5	PQL	ng/Kg	J (all detects)
SL-029-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	33.3	37.8	PQL	ng/Kg	J (all detects)
SL-030-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	36.3	37.8	PQL	ng/Kg	J (all detects)
SL-031-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	36.0	38.2	PQL	ng/Kg	J (all detects)
SL-034-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	30.4	38.4	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	TIN	J	2.52	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.00	5.52	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-020-SA5DN-SB-3.5-4.5	TIN	J	2.36	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.03	5.57	PQL	mg/Kg	
SL-029-SA5DN-SB-4.0-5.0	TIN	J	2.28	10.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.41	5.44	PQL	mg/Kg	
SL-030-SA5DN-SB-4.0-5.0	TIN	J	2.87	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.79	5.53	PQL	mg/Kg	
SL-031-SA5DN-SB-4.0-5.0	TIN	J	2.11	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.15	5.73	PQL	mg/Kg	
SL-034-SA5DN-SB-4.0-5.0	TIN	J	2.27	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.45	5.75	PQL	mg/Kg	
SL-055-SA5DN-SB-4.0-5.0	TIN	J	2.36	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.17	5.86	PQL	mg/Kg	
SL-055-SA5DN-SB-9.0-10.0	BORON	J	5.16	5.36	PQL	mg/Kg	J (all detects)
	TIN	J	2.56	10.7	PQL	mg/Kg	
	Zirconium	J	2.55	5.36	PQL	mg/Kg	
SL-056-SA5DN-SB-4.0-5.0	TIN	J	2.40	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.25	5.71	PQL	mg/Kg	
SL-056-SA5DN-SB-9.0-10.0	TIN	J	2.26	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.94	5.72	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	SILVER	J	0.0470	0.113	PQL	mg/Kg	J (all detects)
SL-020-SA5DN-SB-3.5-4.5	ANTIMONY	J	0.114	0.223	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0575	0.111	PQL	mg/Kg	
SL-029-SA5DN-SB-4.0-5.0	SILVER	J	0.0293	0.113	PQL	mg/Kg	J (all detects)
SL-030-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.114	0.228	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0864	0.114	PQL	mg/Kg	
SL-031-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.155	0.223	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0672	0.111	PQL	mg/Kg	
SL-034-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.188	0.228	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0862	0.114	PQL	mg/Kg	
SL-055-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.144	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0749	0.460	PQL	mg/Kg	
	SILVER	J	0.0714	0.115	PQL	mg/Kg	
SL-055-SA5DN-SB-9.0-10.0	CADMIUM	J	0.0884	0.110	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0860	0.110	PQL	mg/Kg	
SL-056-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.150	0.228	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0743	0.457	PQL	mg/Kg	
	SILVER	J	0.0527	0.114	PQL	mg/Kg	
SL-056-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.136	0.224	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0836	0.112	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6850

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-031-SA5DN-SB-4.0-5.0	PERCHLORATE	J	3.6	5.7	PQL	ug/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-020-SA5DN-SB-3.5-4.5	HEXAVALENT CHROMIUM	J	0.52	1.1	PQL	mg/Kg	J (all detects)
SL-029-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.27	1.1	PQL	mg/Kg	J (all detects)
SL-031-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.27	1.1	PQL	mg/Kg	J (all detects)
SL-055-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.24	1.2	PQL	mg/Kg	J (all detects)
SL-055-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.65	1.1	PQL	mg/Kg	J (all detects)
SL-056-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.24	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	MERCURY	J	0.0103	0.109	PQL	mg/Kg	J (all detects)
SL-030-SA5DN-SB-4.0-5.0	MERCURY	J	0.0215	0.110	PQL	mg/Kg	J (all detects)
SL-034-SA5DN-SB-4.0-5.0	MERCURY	J	0.0124	0.109	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	EFH (C21-C30)	J	0.48	1.4	PQL	mg/Kg	J (all detects)
SL-034-SA5DN-SB-4.0-5.0	EFH (C15-C20) EFH (C8-C11)	J J	1.2 0.50	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA5DN-QC-061511	METHYLENE CHLORIDE TOLUENE	J J	1.9 0.1	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-020-SA5DN-SB-3.5-4.5	METHYLENE CHLORIDE TOLUENE	J J	1.1 0.13	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-029-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.0 0.1	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: DE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-030-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.1	4.0	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.10	4.0	PQL	ug/Kg	
SL-031-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.6	4.3	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.10	4.3	PQL	ug/Kg	
SL-034-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.7	3.9	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.09	3.9	PQL	ug/Kg	
SL-055-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.5	4.4	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.1	4.4	PQL	ug/Kg	
SL-056-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.3	4.2	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.1	4.2	PQL	ug/Kg	

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	400	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-020-SA5DN-SB-3.5-4.5	BENZO(A)ANTHRACENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.2	1.9	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.7	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.93	1.9	PQL	ug/Kg	
	CHRYSENE	J	1.6	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	0.87	1.9	PQL	ug/Kg	
SL-034-SA5DN-SB-4.0-5.0	BENZO(K)FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.1	1.9	PQL	ug/Kg	
	PYRENE	J	0.97	1.9	PQL	ug/Kg	
SL-055-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.5	20	PQL	ug/Kg	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: PrepDE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg) SL-030-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP15-SA5DN-QC-061511	Sample RPD	eQAPP RPD	Flag
ARSENIC	6.20	6.78	9	50.00	No Qualifiers Applied
BARIUM	118	101	16	50.00	
BERYLLIUM	0.982	0.793	21	50.00	
CADMIUM	0.138	0.151	9	50.00	
CHROMIUM	30.0	24.2	21	50.00	
COPPER	17.0	20.3	18	50.00	
LEAD	8.11	10.7	28	50.00	
MOLYBDENUM	0.269	0.265	1	50.00	
NICKEL	20.6	19.4	6	50.00	
THALLIUM	0.375	0.269	33	50.00	
VANADIUM	51.0	44.7	13	50.00	
ZINC	57.8	49.8	15	50.00	
ANTIMONY	0.114	0.225 U	200	50.00	J(all detects) UJ(all non-detects)
COBALT	5.52	14.2	88	50.00	
SILVER	0.0864	0.0470	59	50.00	

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-030-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP15-SA5DN-QC-061511	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0215	0.0103	70	50.00	J(all detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-030-SA5DN-SB-4.0-5.0	Concentration (mg/Kg) DUP15-SA5DN-QC-061511	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	1.4 U	0.48	200	50.00	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg) SL-030-SA5DN-SB-4.0-5.0	Concentration (ug/Kg) DUP15-SA5DN-QC-061511	Sample RPD	eQAPP RPD	Flag
TOLUENE	0.10	0.1	0	50.00	No Qualifiers Applied
ACETONE	8.1	8.2 U	200	50.00	J(all detects) UJ(all non-detects)
METHYLENE CHLORIDE	1.1	1.9	53	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit) SL-030-SA5DN-SB-4.0-5.0	Concentration (pH unit) DUP15-SA5DN-QC-061511	Sample RPD	eQAPP RPD	Flag
PH	8.59	8.36	3	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: DE181 **Laboratory: LL**

EDD Filename: PrepDE181_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-030-SA5DN-SB-4.0-5.0	DUP15-SA5DN-QC-061511			
MOISTURE	13.0	12.1	7		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-030-SA5DN-SB-4.0-5.0	DUP15-SA5DN-QC-061511			
N-NITROSODIMETHYLAMINE	36.3	24.5	39	50.00	No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-030-SA5DN-SB-4.0-5.0	DUP15-SA5DN-QC-061511			
FLUORIDE	6.1	5.2	16	50.00	No Qualifiers Applied
Nitrate-NO3	1.3	1.9	37	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-030-SA5DN-SB-4.0-5.0	DUP15-SA5DN-QC-061511			
ALUMINUM	30100	20100	40	50.00	No Qualifiers Applied
BORON	8.77	6.15	35	50.00	
IRON	29300	23700	21	50.00	
LITHIUM	25.7	21.7	17	50.00	
MAGNESIUM	5950	4650	25	50.00	
MANGANESE	179	156	14	50.00	
PHOSPHORUS	174	215	21	50.00	
POTASSIUM	2440	2240	9	50.00	
SODIUM	338	250	30	50.00	
TIN	2.87	2.52	13	50.00	
TITANIUM	1170	1020	14	50.00	
Zirconium	3.79	3.00	23	50.00	
CALCIUM	22100	4520	132	50.00	J(all detects)
STRONTIUM	36.3	20.7	55	50.00	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

LDC #: 26277L4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11
SDG #: DE181 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: MM
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No qual
V.	ICP Interference Check Sample (ICS) Analysis	N	RPD
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Mg, Ti, V, Zn >4X %R
VII.	Duplicate Sample Analysis	N	Hg, Ag, Tl <5X
VIII.	Laboratory Control Samples (LCS)	NA	SRM.
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ba
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=11 (No qual >5X)

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-020-SA5DN-SB-3.5-4.5	11	EB18-SA5DN-SB-061511	21		31	
2	SL-029-SA5DN-SB-4.0-5.0	12	SL-030-SA5DN-SB-4.0-5.0MS	22		32	
3	SL-030-SA5DN-SB-4.0-5.0	13	SL-030-SA5DN-SB-4.0-5.0MSD	23		33	
4	SL-031-SA5DN-SB-4.0-5.0	14	SL-030-SA5DN-SB-4.0-5.0DUP	24		34	
5	SL-034-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-055-SA5DN-SB-4.0-5.0	16		26		36	
7	SL-055-SA5DN-SB-9.0-10.0	17		27		37	
8	SL-056-SA5DN-SB-4.0-5.0	18		28		38	
9	SL-056-SA5DN-SB-9.0-10.0	19		29		39	
10	DUP15-SA5DN-QC-061511	20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE181
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6316978BKG Matrix Spike Lab Sample ID: 6316979MS Matrix Spike Duplicate Lab Sample ID: 6316980MSD
% Solids for Sample: 87.0
Batch Id(s): P17208D, P17226C, P17526A, P17211G

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		30063.5290		32146.4903		32717.3421		227.6090	218.9381	MG/KG	915		1212		2			20	P
Antimony	121	0.1139	B	0.6728		0.7916		1.3523	1.3263	MG/KG	41	N	51	N	16		75 - 125	20	MS
Arsenic	75	6.2001		13.2184		12.7299		2.2538	2.2104	MG/KG	311	N	295	N	4		75 - 125	20	MS
Barium	137	118.4477		181.4740		141.0035		11.2689	11.0522	MG/KG	559		204		25	*		20	MS
Beryllium	9	0.9817		2.4228		2.2325		0.9015	0.8842	MG/KG	160	N	141	N	8		75 - 125	20	MS
Boron		8.7721		226.7111		220.5090		227.6090	218.9381	MG/KG	96		97		3		84 - 115	20	P
Cadmium	111	0.1380		1.8005		1.7471		1.1269	1.1052	MG/KG	148	N	146	N	3		75 - 125	20	MS
Calcium		22142.7122		28861.9313		13421.3136		455.2179	437.8763	MG/KG	1476		-1992		73	*		20	P
Chromium	52	30.0444		51.2058		44.2087		11.2689	11.0522	MG/KG	188	N	128	N	15		75 - 125	20	MS
Cobalt	59	5.5241		101.3523		87.4889		56.3444	55.2608	MG/KG	170	N	148	N	15		75 - 125	20	MS
Copper	63	16.9799		24.5211		25.6221		11.2689	11.1595	MG/KG	67	N	77		4		75 - 125	20	MS
Iron		29294.2197		29719.8828		30519.1024		113.8045	109.4691	MG/KG	374		1119		3			20	P
Lead	208	8.1097		17.9310		15.1238		3.3807	3.3156	MG/KG	291	N	212	N	17		75 - 125	20	MS
Lithium		25.7261		141.0265		138.3492		113.8045	109.4691	MG/KG	101		103		2		82 - 114	20	P
Magnesium		5951.8557		6211.8379		6046.9622		227.6090	218.9381	MG/KG	114		43		3			20	P
Manganese		179.1888		232.6391		368.7761		56.9022	54.7345	MG/KG	94		346	N	45	*	75 - 125	20	P
Mercury		0.0215	B	0.1835		0.1732		0.1835	0.1861	MG/KG	88		82		6		65 - 135	20	CV
Molybdenum	98	0.2695		16.0694		15.6432		11.2689	11.0522	MG/KG	140	N	139	N	3		75 - 125	20	MS
Nickel	60	20.5622		51.2283		40.7825		11.2689	11.0522	MG/KG	272	N	183	N	23	*	75 - 125	20	MS
Phosphorus		174.2485		314.5294		317.2271		113.8045	109.4691	MG/KG	123		131	N	1		75 - 125	20	P
Potassium		2436.8501		4017.6977		4277.6289		1138.0448	1094.6907	MG/KG	139	N	168	N	6		75 - 125	20	P
Selenium	78	0.0660	U	1.9482		2.0447		2.2538	2.2104	MG/KG	86		93		5		75 - 125	20	MS
Silver	107	0.0864	B	16.7771		15.5990		11.2689	11.0522	MG/KG	148	N	140	N	7		75 - 125	20	MS
Sodium		338.4173		1376.5153		1360.5999		1138.0448	1094.6907	MG/KG	91		93		1		75 - 125	20	P
Strontium		36.3141		147.7854		138.5441		113.8045	109.4691	MG/KG	98		93		6		75 - 115	20	P
Thallium	203	0.3751		1.1222		0.9985		0.4508	0.4421	MG/KG	166	N	141	N	12		75 - 125	20	MS
Tin		2.8691	B	385.1633		382.6305		455.2179	437.8763	MG/KG	84		87		1		80 - 110	20	P
Titanium		1170.6421		1355.3090		1390.5944		113.8045	109.4691	MG/KG	162		201		3			20	P
Vanadium	51	51.0072		86.0041		75.2874		11.2689	11.0522	MG/KG	311		220		13			20	MS
Zinc	66	57.8127		98.4674		85.1017		11.2689	11.0522	MG/KG	361		247		15			20	MS
Zirconium		3.7931	B	112.6460		110.7148		113.8045	109.4691	MG/KG	96		98		2		75 - 125	20	P

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:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE181
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6316978BKG
% Solids for Duplicate: 87.8
Batch ID(s): P17208D, P17226C, P17526A, P17211G
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6316981DUP
% Solids for Sample: 87.0

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			30063.5290		28300.6305		6		P
Antimony	121		0.1139	B	0.0972	B	16		MS
Arsenic	75		6.2001		5.4541		13		MS
Barium	137		118.4477		102.3214		15		MS
Beryllium	9		0.9817		0.8003		20		MS
Boron		5.5	8.7721		7.7190		13		P
Cadmium	111	0.1	0.1380		0.1380		0		MS
Calcium			22142.7122		30332.6883		31	*	P
Chromium	52		30.0444		25.8283		15		MS
Cobalt	59		5.5241		10.0045		58	*	MS
Copper	63		16.9799		13.5154		23	*	MS
Iron			29294.2197		28368.8283		3		P
Lead	208		8.1097		7.7733		4		MS
Lithium			25.7261		24.0074		7		P
Magnesium			5951.8557		5674.5330		5		P
Manganese			179.1888		159.9922		11		P
Mercury			0.0215	B	0.0084	B	88		CV
Molybdenum	98	0.1	0.2695		0.2294		16		MS
Nickel	60		20.5622		19.8783		3		MS
Phosphorus			174.2485		168.8048		3		P
Potassium			2436.8501		2315.0251		5		P
Selenium	78		0.0660	U	0.0654	U			MS
Silver	107		0.0864	B	0.0492	B	55		MS
Sodium		110.5	338.4173		328.3741		3		P
Strontium			36.3141		38.4566		6		P
Thallium	203	0.1	0.3751		0.2948		24		MS
Tin			2.8691	B	2.6984	B	6		P
Titanium			1170.6421		1096.6265		7		P
Vanadium	51		51.0072		44.5571		13		MS
Zinc	66		57.8127		50.6649		13		MS
Zirconium			3.7931	B	4.0308	B	6		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.

DE181 4456

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

SAMPLE DELIVERY GROUP

DE182

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Jun-2011	TB-061611	6318831	TB	5030B	8260B	III
16-Jun-2011	TB-061611	6318831	TB	5030B	8260B SIM	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3050B	6010B	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3050B	6020	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3060A	7199	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3550B	8082	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3550B	8270C	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	3550B	8270C SIM	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	5035	8260B	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	5035	8260B SIM	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	METHOD	300.0	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	METHOD	314.0	III
16-Jun-2011	SL-059-SA5DN-SB-4.0-5.0	6318826	N	METHOD	7471A	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3050B	6010B	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3050B	6020	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3060A	7199	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3550B	8082	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3550B	8270C	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	3550B	8270C SIM	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	METHOD	300.0	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	METHOD	314.0	III
16-Jun-2011	SL-059-SA5DN-SB-9.0-10.0	6318827	N	METHOD	7471A	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3050B	6010B	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3050B	6020	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3060A	7199	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3550B	8270C	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	3550B	8270C SIM	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	5035	8260B	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	5035	8260B SIM	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	METHOD	300.0	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	METHOD	314.0	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0	6318822	N	METHOD	7471A	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0DU	P318822D270243A	DUP	METHOD	300.0	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0DU	P318822D272127A	DUP	METHOD	314.0	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0MS	P318822R260033	MS	3550B	8270C SIM	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0MS	P318822R270257A	MS	METHOD	300.0	III
16-Jun-2011	SL-057-SA5DN-SB-4.0-5.0MS	P318822R272151A	MS	METHOD	314.0	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3050B	6010B	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3050B	6020	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3060A	7199	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3550B	8082	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3550B	8270C	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	3550B	8270C SIM	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	METHOD	300.0	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	METHOD	314.0	III
16-Jun-2011	SL-057-SA5DN-SB-9.0-10.0	6318823	N	METHOD	7471A	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3050B	6010B	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3050B	6020	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3060A	7199	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3550B	8082	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3550B	8270C	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-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	3550B	8270C SIM	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	5035	8260B	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	5035	8260B SIM	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	METHOD	300.0	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	METHOD	314.0	III
16-Jun-2011	SL-058-SA5DN-SB-4.0-5.0	6318824	N	METHOD	7471A	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3050B	6010B	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3050B	6020	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3060A	7199	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3550B	8082	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3550B	8270C	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	3550B	8270C SIM	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	METHOD	300.0	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	METHOD	314.0	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	METHOD	6850	III
16-Jun-2011	SL-058-SA5DN-SB-9.0-10.0	6318825	N	METHOD	7471A	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3050B	6010B	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3050B	6020	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3060A	7199	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3550B	8082	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3550B	8270C	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	3550B	8270C SIM	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	5035	8260B	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	5035	8260B SIM	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	METHOD	300.0	III
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Jun-2011	SL-061-SA5DN-SB-4.0-5.0	6318828	N	METHOD	7471A	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3050B	6010B	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3050B	6020	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3060A	7199	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3550B	8082	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3550B	8270C	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	3550B	8270C SIM	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	METHOD	300.0	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	METHOD	314.0	III
16-Jun-2011	SL-061-SA5DN-SB-9.0-10.0	6318829	N	METHOD	7471A	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3050B	6010B	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3050B	6020	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3060A	7199	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3550B	8082	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3550B	8270C	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	3550B	8270C SIM	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	5035	8260B	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	5035	8260B SIM	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	METHOD	300.0	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	METHOD	314.0	III
16-Jun-2011	SL-062-SA5DN-SB-4.0-5.0	6318830	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE182 Laboratory: LL

EDD Filename: PrepDE182_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 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	5.5		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-057-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 9:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.1		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-058-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 10:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.7		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-058-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 10:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.3		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-059-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 8:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.1		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-059-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 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
FLUORIDE	6.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-061-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 2:20:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.1		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-061-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.0		0.94	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-062-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	11.7		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 9:35:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1030		0.0796	MDL	1.12	PQL	mg/Kg	J	L

Sample ID: SL-057-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
BORON	1.06	J	0.400	MDL	5.55	PQL	mg/Kg	U	B
CALCIUM	5230		2.78	MDL	22.2	PQL	mg/Kg	J	E
MANGANESE	337		0.0400	MDL	0.555	PQL	mg/Kg	J	E
PHOSPHORUS	175		0.389	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	2360		12.5	MDL	55.5	PQL	mg/Kg	J	Q
TIN	2.48	J	0.355	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.60	J	0.511	MDL	5.55	PQL	mg/Kg	J	Z

Sample ID: SL-057-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 9:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1260		0.0782	MDL	1.10	PQL	mg/Kg	J	L

Sample ID: SL-057-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3750		2.73	MDL	21.8	PQL	mg/Kg	J	E
MANGANESE	158		0.0392	MDL	0.545	PQL	mg/Kg	J	E
PHOSPHORUS	76.8		0.382	MDL	10.9	PQL	mg/Kg	J	Q
POTASSIUM	1510		12.3	MDL	54.5	PQL	mg/Kg	J	Q
SODIUM	102	J	6.49	MDL	109	PQL	mg/Kg	J	Z
TIN	2.59	J	0.349	MDL	10.9	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 Laboratory: LL

EDD Filename: PrepDE182_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	3.10	J	0.501	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 10:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1130		0.0802	MDL	1.13	PQL	mg/Kg	J	L

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.82	J	0.423	MDL	5.88	PQL	mg/Kg	J	Z
CALCIUM	10600		2.94	MDL	23.5	PQL	mg/Kg	J	E
MANGANESE	395		0.0423	MDL	0.588	PQL	mg/Kg	J	E
PHOSPHORUS	278		0.411	MDL	11.8	PQL	mg/Kg	J	Q
POTASSIUM	4080		13.3	MDL	58.8	PQL	mg/Kg	J	Q
TIN	2.58	J	0.376	MDL	11.8	PQL	mg/Kg	U	B

Sample ID: SL-058-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 10:45:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1400		0.0794	MDL	1.12	PQL	mg/Kg	J	L

Sample ID: SL-058-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.843	J	0.414	MDL	5.76	PQL	mg/Kg	U	B
CALCIUM	4850		2.88	MDL	23.0	PQL	mg/Kg	J	E
MANGANESE	216		0.0414	MDL	0.576	PQL	mg/Kg	J	E
PHOSPHORUS	211		0.403	MDL	11.5	PQL	mg/Kg	J	Q
POTASSIUM	2610		13.0	MDL	57.6	PQL	mg/Kg	J	Q
TIN	3.08	J	0.368	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.20	J	0.530	MDL	5.76	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-059-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 8:45:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1280		0.0820	MDL	1.15	PQL	mg/Kg	J	L

Sample ID: SL-059-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 8:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.57	J	0.396	MDL	5.50	PQL	mg/Kg	J	Z
CALCIUM	7430		2.75	MDL	22.0	PQL	mg/Kg	J	E
MANGANESE	380		0.0396	MDL	0.550	PQL	mg/Kg	J	E
PHOSPHORUS	310		0.385	MDL	11.0	PQL	mg/Kg	J	Q
POTASSIUM	3860		12.4	MDL	55.0	PQL	mg/Kg	J	Q
TIN	2.49	J	0.352	MDL	11.0	PQL	mg/Kg	U	B

Sample ID: SL-059-SA5DN-SB-9.0-10.0 ***Collected:*** 6/16/2011 8:50:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1280		0.0838	MDL	1.18	PQL	mg/Kg	J	L

Sample ID: SL-059-SA5DN-SB-9.0-10.0 ***Collected:*** 6/16/2011 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
BORON	4.78	J	0.425	MDL	5.90	PQL	mg/Kg	J	Z
CALCIUM	62400		2.95	MDL	23.6	PQL	mg/Kg	J	E
MANGANESE	267		0.0425	MDL	0.590	PQL	mg/Kg	J	E
PHOSPHORUS	418		0.413	MDL	11.8	PQL	mg/Kg	J	Q
POTASSIUM	3010		13.3	MDL	59.0	PQL	mg/Kg	J	Q
TIN	2.25	J	0.378	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	5.44	J	0.543	MDL	5.90	PQL	mg/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 2:20:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	743		0.0798	MDL	1.12	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-061-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 2:20:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.21	J	0.421	MDL	5.84	PQL	mg/Kg	U	B
CALCIUM	6410		2.92	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	406		0.0421	MDL	0.584	PQL	mg/Kg	J	E
PHOSPHORUS	308		0.409	MDL	11.7	PQL	mg/Kg	J	Q
POTASSIUM	3950		13.2	MDL	58.4	PQL	mg/Kg	J	Q
TIN	2.81	J	0.374	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	4.45	J	0.537	MDL	5.84	PQL	mg/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 2:25:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	1470		0.0807	MDL	1.14	PQL	mg/Kg	J	L

Sample ID: SL-061-SA5DN-SB-9.0-10.0 **Collected:** 6/16/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.89	J	0.405	MDL	5.63	PQL	mg/Kg	J	Z
CALCIUM	27000		2.81	MDL	22.5	PQL	mg/Kg	J	E
MANGANESE	204		0.0405	MDL	0.563	PQL	mg/Kg	J	E
PHOSPHORUS	314		0.394	MDL	11.3	PQL	mg/Kg	J	Q
POTASSIUM	3090		12.7	MDL	56.3	PQL	mg/Kg	J	Q
TIN	2.54	J	0.360	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	5.15	J	0.518	MDL	5.63	PQL	mg/Kg	J	Z

Sample ID: SL-062-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 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
TITANIUM	1270		0.0827	MDL	1.16	PQL	mg/Kg	J	L

Sample ID: SL-062-SA5DN-SB-4.0-5.0 **Collected:** 6/16/2011 2:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.43	J	0.419	MDL	5.82	PQL	mg/Kg	J	Z
CALCIUM	9270		2.91	MDL	23.3	PQL	mg/Kg	J	E
MANGANESE	414		0.0419	MDL	0.582	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-062-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 2:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	392		0.408	MDL	11.6	PQL	mg/Kg	J	Q
POTASSIUM	3280		13.2	MDL	58.2	PQL	mg/Kg	J	Q
TIN	2.53	J	0.373	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	5.05	J	0.536	MDL	5.82	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 9:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.113	J	0.0830	MDL	0.224	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	25.7		0.135	MDL	0.448	PQL	mg/Kg	J	A
COBALT	9.81		0.0224	MDL	0.112	PQL	mg/Kg	J	A
COPPER	10.6		0.0897	MDL	0.448	PQL	mg/Kg	J	Q, A
LEAD	6.99		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, A
NICKEL	19.0		0.112	MDL	0.448	PQL	mg/Kg	J	Q, A
SILVER	0.0208	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	47.8		0.0247	MDL	0.112	PQL	mg/Kg	J	A
ZINC	46.0		0.628	MDL	3.36	PQL	mg/Kg	J	E, A

Sample ID: SL-057-SA5DN-SB-9.0-10.0 ***Collected:*** 6/16/2011 9:40:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0839	U	0.0839	MDL	0.227	PQL	mg/Kg	UJ	Q, E
CADMIUM	0.0805	J	0.0499	MDL	0.113	PQL	mg/Kg	J	Z
CHROMIUM	20.9		0.136	MDL	0.454	PQL	mg/Kg	J	A
COBALT	6.36		0.0227	MDL	0.113	PQL	mg/Kg	J	A
COPPER	6.98		0.0907	MDL	0.454	PQL	mg/Kg	J	Q, A
LEAD	4.95		0.0116	MDL	0.227	PQL	mg/Kg	J	Q, A
NICKEL	9.98		0.113	MDL	0.454	PQL	mg/Kg	J	Q, A
VANADIUM	34.8		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	38.3		0.635	MDL	3.40	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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	0.136	J	0.0655	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
ANTIMONY	0.0935	J	0.0836	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	35.0		0.136	MDL	0.452	PQL	mg/Kg	J	A
COBALT	10.3		0.0226	MDL	0.113	PQL	mg/Kg	J	A
COPPER	13.8		0.0904	MDL	0.452	PQL	mg/Kg	J	Q, A
LEAD	9.35		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	20.3		0.113	MDL	0.452	PQL	mg/Kg	J	Q, A
SILVER	0.0509	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	59.0		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	72.6		0.633	MDL	3.39	PQL	mg/Kg	J	E, A

Sample ID: SL-058-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 10:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0819	U	0.0819	MDL	0.221	PQL	mg/Kg	UJ	Q, E
CADMIUM	0.0932	J	0.0487	MDL	0.111	PQL	mg/Kg	J	Z
CHROMIUM	30.3		0.133	MDL	0.443	PQL	mg/Kg	J	A
COBALT	5.24		0.0221	MDL	0.111	PQL	mg/Kg	J	A
COPPER	11.5		0.0886	MDL	0.443	PQL	mg/Kg	J	Q, A
LEAD	7.07		0.0113	MDL	0.221	PQL	mg/Kg	J	Q, A
NICKEL	13.7		0.111	MDL	0.443	PQL	mg/Kg	J	Q, A
SILVER	0.0591	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	52.6		0.0244	MDL	0.111	PQL	mg/Kg	J	A
ZINC	58.8		0.620	MDL	3.32	PQL	mg/Kg	J	E, A

Sample ID: SL-059-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 8:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.100	J	0.0657	MDL	0.453	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 Laboratory: LL

EDD Filename: PrepDE182_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-059-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 8:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.144	J	0.0838	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	38.6		0.136	MDL	0.453	PQL	mg/Kg	J	A
COBALT	12.3		0.0226	MDL	0.113	PQL	mg/Kg	J	A
COPPER	15.4		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, A
LEAD	9.75		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	22.3		0.113	MDL	0.453	PQL	mg/Kg	J	Q, A
SILVER	0.0320	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	67.6		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	85.0		0.634	MDL	3.40	PQL	mg/Kg	J	E, A

Sample ID: SL-059-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 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
ANTIMONY	0.0865	U	0.0865	MDL	0.234	PQL	mg/Kg	UJ	Q, E
CHROMIUM	27.9		0.140	MDL	0.468	PQL	mg/Kg	J	A
COBALT	9.49		0.0234	MDL	0.117	PQL	mg/Kg	J	A
COPPER	12.8		0.0935	MDL	0.468	PQL	mg/Kg	J	Q, A
LEAD	8.06		0.0119	MDL	0.234	PQL	mg/Kg	J	Q, A
NICKEL	17.7		0.117	MDL	0.468	PQL	mg/Kg	J	Q, A
SILVER	0.0363	J	0.0166	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	50.2		0.0257	MDL	0.117	PQL	mg/Kg	J	A
ZINC	53.5		0.655	MDL	3.51	PQL	mg/Kg	J	E, A

Sample ID: SL-061-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:20:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.103	J	0.0658	MDL	0.454	PQL	mg/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.153	J	0.0839	MDL	0.227	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	34.6		0.136	MDL	0.454	PQL	mg/Kg	J	A
COBALT	15.2		0.0227	MDL	0.113	PQL	mg/Kg	J	A
COPPER	16.0		0.0907	MDL	0.454	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-061-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	11.2		0.0116	MDL	0.227	PQL	mg/Kg	J	Q, A
NICKEL	22.3		0.113	MDL	0.454	PQL	mg/Kg	J	Q, A
SILVER	0.0591	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	59.1		0.0250	MDL	0.113	PQL	mg/Kg	J	A
ZINC	74.8		0.635	MDL	3.40	PQL	mg/Kg	J	E, A

Sample ID: SL-061-SA5DN-SB-9.0-10.0 ***Collected:*** 6/16/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.136	J	0.0833	MDL	0.225	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	33.0		0.135	MDL	0.450	PQL	mg/Kg	J	A
COBALT	12.1		0.0225	MDL	0.113	PQL	mg/Kg	J	A
COPPER	14.2		0.0901	MDL	0.450	PQL	mg/Kg	J	Q, A
LEAD	8.97		0.0115	MDL	0.225	PQL	mg/Kg	J	Q, A
NICKEL	21.6		0.113	MDL	0.450	PQL	mg/Kg	J	Q, A
SILVER	0.0319	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	62.5		0.0248	MDL	0.113	PQL	mg/Kg	J	A
ZINC	65.7		0.631	MDL	3.38	PQL	mg/Kg	J	E, A

Sample ID: SL-062-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 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	0.0670	J	0.0656	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-062-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 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
ANTIMONY	0.131	J	0.0837	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	37.3		0.136	MDL	0.452	PQL	mg/Kg	J	A
COBALT	12.7		0.0226	MDL	0.113	PQL	mg/Kg	J	A
COPPER	17.0		0.0905	MDL	0.452	PQL	mg/Kg	J	Q, A
LEAD	9.70		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	23.3		0.113	MDL	0.452	PQL	mg/Kg	J	Q, A
SILVER	0.0477	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	66.6		0.0249	MDL	0.113	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 Laboratory: LL

EDD Filename: PrepDE182_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-062-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
ZINC	77.4		0.633	MDL	3.39	PQL	mg/Kg	J	E, A

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
HEXAVALENT CHROMIUM	0.43	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-057-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.51	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-058-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-059-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 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
HEXAVALENT CHROMIUM	0.26	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.41	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-061-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.27	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-062-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.81	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
MERCURY	0.0323	J	0.0076	MDL	0.108	PQL	mg/Kg	U	B, B

Sample ID: SL-057-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0253	J	0.0074	MDL	0.105	PQL	mg/Kg	U	B, B

Sample ID: SL-058-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0229	J	0.0077	MDL	0.109	PQL	mg/Kg	U	B, B

Sample ID: SL-058-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0157	J	0.0078	MDL	0.111	PQL	mg/Kg	U	B, B

Sample ID: SL-059-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0199	J	0.0080	MDL	0.113	PQL	mg/Kg	U	B, B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 Laboratory: LL

EDD Filename: PrepDE182_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: SL-061-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0135	J	0.0081	MDL	0.116	PQL	mg/Kg	U	B, B

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-062-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	20	MDL	400	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-061-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.65	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-9.0-10.0 *Collected:* 6/16/2011 2:25:00 *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(A)PYRENE	1.3	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-062-SA5DN-SB-4.0-5.0 *Collected:* 6/16/2011 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(A)PYRENE	1.9	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.3	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.8	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
CHRYSENE	1.8	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: PrepDE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-057-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 9:35:00 ***Analysis Type:*** RES ***Dilution:*** 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.2	J	0.22	MDL	3.7	PQL	ug/Kg	U	B
TOLUENE	0.08	J	0.07	MDL	3.7	PQL	ug/Kg	J	Z

Sample ID: SL-058-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 10:40:00 ***Analysis Type:*** RES ***Dilution:*** 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.3		6.8	MDL	8.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	3.8	J	0.24	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.14	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-059-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 8:45:00 ***Analysis Type:*** RES ***Dilution:*** 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.3	J	0.23	MDL	3.8	PQL	ug/Kg	U	B
TOLUENE	0.11	J	0.08	MDL	3.8	PQL	ug/Kg	J	Z

Sample ID: SL-061-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.2	J	0.24	MDL	3.9	PQL	ug/Kg	U	B
TOLUENE	0.1	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-062-SA5DN-SB-4.0-5.0 ***Collected:*** 6/16/2011 2:35:00 ***Analysis Type:*** RES ***Dilution:*** 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		7.0	MDL	8.4	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.3	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: PrepDE182_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: PrepDE182_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: PrepDE182_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE182

Method Blank Outlier Report

Lab Reporting Batch ID: DE182 **Laboratory:** LL

EDD Filename: DE182_v1 **eQAPP Name:** CDM_SSFL_110509

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16808CB221824	6/24/2011 6:24:00 PM	BORON	0.483 mg/Kg	SL-057-SA5DN-SB-4.0-5.0
		CALCIUM	10.7 mg/Kg	SL-057-SA5DN-SB-9.0-10.0
		IRON	3.28 mg/Kg	SL-058-SA5DN-SB-4.0-5.0
		MAGNESIUM	1.44 mg/Kg	SL-058-SA5DN-SB-9.0-10.0
		MANGANESE	0.0550 mg/Kg	SL-059-SA5DN-SB-4.0-5.0
		PHOSPHORUS	1.59 mg/Kg	SL-059-SA5DN-SB-9.0-10.0
		STRONTIUM	0.0550 mg/Kg	SL-061-SA5DN-SB-4.0-5.0
		TIN	2.05 mg/Kg	SL-061-SA5DN-SB-9.0-10.0
				SL-062-SA5DN-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-057-SA5DN-SB-4.0-5.0(RES)	BORON	1.06 mg/Kg	1.06U mg/Kg
SL-057-SA5DN-SB-4.0-5.0(RES)	TIN	2.48 mg/Kg	2.48U mg/Kg
SL-057-SA5DN-SB-9.0-10.0(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-058-SA5DN-SB-4.0-5.0(RES)	TIN	2.58 mg/Kg	2.58U mg/Kg
SL-058-SA5DN-SB-9.0-10.0(RES)	BORON	0.843 mg/Kg	0.843U mg/Kg
SL-058-SA5DN-SB-9.0-10.0(RES)	TIN	3.08 mg/Kg	3.08U mg/Kg
SL-059-SA5DN-SB-4.0-5.0(RES)	TIN	2.49 mg/Kg	2.49U mg/Kg
SL-059-SA5DN-SB-9.0-10.0(RES)	TIN	2.25 mg/Kg	2.25U mg/Kg
SL-061-SA5DN-SB-4.0-5.0(RES)	BORON	2.21 mg/Kg	2.21U mg/Kg
SL-061-SA5DN-SB-4.0-5.0(RES)	TIN	2.81 mg/Kg	2.81U mg/Kg
SL-061-SA5DN-SB-9.0-10.0(RES)	TIN	2.54 mg/Kg	2.54U mg/Kg
SL-062-SA5DN-SB-4.0-5.0(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16826BB220933A	6/20/2011 9:33:00 AM	COPPER	0.109 mg/Kg	SL-057-SA5DN-SB-4.0-5.0
				SL-057-SA5DN-SB-9.0-10.0
				SL-058-SA5DN-SB-4.0-5.0
				SL-058-SA5DN-SB-9.0-10.0
				SL-059-SA5DN-SB-4.0-5.0
				SL-059-SA5DN-SB-9.0-10.0
				SL-061-SA5DN-SB-4.0-5.0
				SL-061-SA5DN-SB-9.0-10.0
				SL-062-SA5DN-SB-4.0-5.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P16811DB220706	6/21/2011 7:06:00 AM	MERCURY	0.0133 mg/Kg	SL-057-SA5DN-SB-4.0-5.0 SL-057-SA5DN-SB-9.0-10.0 SL-058-SA5DN-SB-4.0-5.0 SL-058-SA5DN-SB-9.0-10.0 SL-059-SA5DN-SB-4.0-5.0 SL-059-SA5DN-SB-9.0-10.0 SL-061-SA5DN-SB-4.0-5.0 SL-061-SA5DN-SB-9.0-10.0 SL-062-SA5DN-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-057-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0323 mg/Kg	0.0323U mg/Kg
SL-057-SA5DN-SB-9.0-10.0(RES)	MERCURY	0.0253 mg/Kg	0.0253U mg/Kg
SL-058-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0229 mg/Kg	0.0229U mg/Kg
SL-058-SA5DN-SB-9.0-10.0(RES)	MERCURY	0.0157 mg/Kg	0.0157U mg/Kg
SL-059-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0199 mg/Kg	0.0199U mg/Kg
SL-061-SA5DN-SB-4.0-5.0(RES)	MERCURY	0.0135 mg/Kg	0.0135U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB90B210115A	6/20/2011 1:15:00 AM	ACETONE METHYLENE CHLORIDE	11 ug/Kg 1.0 ug/Kg	SL-057-SA5DN-SB-4.0-5.0 SL-058-SA5DN-SB-4.0-5.0 SL-059-SA5DN-SB-4.0-5.0 SL-061-SA5DN-SB-4.0-5.0 SL-062-SA5DN-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-057-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	3.7U ug/Kg
SL-058-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.3 ug/Kg	8.3U ug/Kg
SL-058-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	3.8 ug/Kg	4.1U ug/Kg
SL-059-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	3.8U ug/Kg
SL-061-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.2 ug/Kg	3.9U ug/Kg
SL-062-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-062-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.3 ug/Kg	4.2U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-057-SA5DN-SB-4.0-5.0MS (SL-057-SA5DN-SB-4.0-5.0 SL-057-SA5DN-SB-9.0-10.0 SL-058-SA5DN-SB-4.0-5.0 SL-058-SA5DN-SB-9.0-10.0 SL-059-SA5DN-SB-4.0-5.0 SL-059-SA5DN-SB-9.0-10.0 SL-061-SA5DN-SB-4.0-5.0 SL-061-SA5DN-SB-9.0-10.0 SL-062-SA5DN-SB-4.0-5.0)	FLUORIDE	49	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-057-SA5DN-SB-4.0-5.0DUP (SL-057-SA5DN-SB-4.0-5.0 SL-057-SA5DN-SB-9.0-10.0 SL-058-SA5DN-SB-4.0-5.0 SL-058-SA5DN-SB-9.0-10.0 SL-059-SA5DN-SB-4.0-5.0 SL-059-SA5DN-SB-9.0-10.0 SL-061-SA5DN-SB-4.0-5.0 SL-061-SA5DN-SB-9.0-10.0 SL-062-SA5DN-SB-4.0-5.0)	FLUORIDE	25	20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16826BQ220936A (SL-057-SA5DN -SB-4.0-5.0 SL -057-SA5DN -SB-9.0-10.0 SL -058-SA5DN -SB-4.0-5.0 SL -058-SA5DN -SB-9.0-10.0 SL -059-SA5DN -SB-4.0-5.0 SL -059-SA5DN -SB-9.0-10.0 SL -061-SA5DN -SB-4.0-5.0 SL -061-SA5DN -SB-9.0-10.0 SL -062-SA5DN -SB-4.0-5.0)	ANTIMONY	65	-	80.00-120.00	-	ANTIMONY	No Qual SRM within QC Limits

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P16808CQ221828 (SL-057-SA5DN -SB-4.0-5.0 SL -057-SA5DN -SB-9.0-10.0 SL -058-SA5DN -SB-4.0-5.0 SL -058-SA5DN -SB-9.0-10.0 SL -059-SA5DN -SB-4.0-5.0 SL -059-SA5DN -SB-9.0-10.0 SL -061-SA5DN -SB-4.0-5.0 SL -061-SA5DN -SB-9.0-10.0 SL -062-SA5DN -SB-4.0-5.0)	IRON	79	-	80.00-120.00	-	IRON	No Qual, SRM within QC Limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA5DN-SB-4.0-5.0	BORON	J	1.06	5.55	PQL	mg/Kg	J (all detects)
	TIN	J	2.48	11.1	PQL	mg/Kg	
	Zirconium	J	4.60	5.55	PQL	mg/Kg	
SL-057-SA5DN-SB-9.0-10.0	SODIUM	J	102	109	PQL	mg/Kg	J (all detects)
	TIN	J	2.59	10.9	PQL	mg/Kg	
	Zirconium	J	3.10	5.45	PQL	mg/Kg	
SL-058-SA5DN-SB-4.0-5.0	BORON	J	3.82	5.88	PQL	mg/Kg	J (all detects)
	TIN	J	2.58	11.8	PQL	mg/Kg	
SL-058-SA5DN-SB-9.0-10.0	BORON	J	0.843	5.76	PQL	mg/Kg	J (all detects)
	TIN	J	3.08	11.5	PQL	mg/Kg	
	Zirconium	J	4.20	5.76	PQL	mg/Kg	
SL-059-SA5DN-SB-4.0-5.0	BORON	J	3.57	5.50	PQL	mg/Kg	J (all detects)
	TIN	J	2.49	11.0	PQL	mg/Kg	
SL-059-SA5DN-SB-9.0-10.0	BORON	J	4.78	5.90	PQL	mg/Kg	J (all detects)
	TIN	J	2.25	11.8	PQL	mg/Kg	
	Zirconium	J	5.44	5.90	PQL	mg/Kg	
SL-061-SA5DN-SB-4.0-5.0	BORON	J	2.21	5.84	PQL	mg/Kg	J (all detects)
	TIN	J	2.81	11.7	PQL	mg/Kg	
	Zirconium	J	4.45	5.84	PQL	mg/Kg	
SL-061-SA5DN-SB-9.0-10.0	BORON	J	2.89	5.63	PQL	mg/Kg	J (all detects)
	TIN	J	2.54	11.3	PQL	mg/Kg	
	Zirconium	J	5.15	5.63	PQL	mg/Kg	
SL-062-SA5DN-SB-4.0-5.0	BORON	J	3.43	5.82	PQL	mg/Kg	J (all detects)
	TIN	J	2.53	11.6	PQL	mg/Kg	
	Zirconium	J	5.05	5.82	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.113	0.224	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0208	0.112	PQL	mg/Kg	
SL-057-SA5DN-SB-9.0-10.0	CADMIUM	J	0.0805	0.113	PQL	mg/Kg	J (all detects)
SL-058-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0935	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.136	0.452	PQL	mg/Kg	
	SILVER	J	0.0509	0.113	PQL	mg/Kg	
SL-058-SA5DN-SB-9.0-10.0	CADMIUM	J	0.0932	0.111	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0591	0.111	PQL	mg/Kg	
SL-059-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.144	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.100	0.453	PQL	mg/Kg	
	SILVER	J	0.0320	0.113	PQL	mg/Kg	
SL-059-SA5DN-SB-9.0-10.0	SILVER	J	0.0363	0.117	PQL	mg/Kg	J (all detects)
SL-061-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.153	0.227	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.103	0.454	PQL	mg/Kg	
	SILVER	J	0.0591	0.113	PQL	mg/Kg	
SL-061-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.136	0.225	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0319	0.113	PQL	mg/Kg	
SL-062-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.131	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0670	0.452	PQL	mg/Kg	
	SILVER	J	0.0477	0.113	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)
SL-057-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.39	1.1	PQL	mg/Kg	J (all detects)
SL-058-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.51	1.2	PQL	mg/Kg	J (all detects)
SL-058-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.32	1.2	PQL	mg/Kg	J (all detects)
SL-059-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.26	1.2	PQL	mg/Kg	J (all detects)
SL-061-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.41	1.2	PQL	mg/Kg	J (all detects)
SL-061-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.27	1.2	PQL	mg/Kg	J (all detects)
SL-062-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.81	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA5DN-SB-4.0-5.0	MERCURY	J	0.0323	0.108	PQL	mg/Kg	J (all detects)
SL-057-SA5DN-SB-9.0-10.0	MERCURY	J	0.0253	0.105	PQL	mg/Kg	J (all detects)
SL-058-SA5DN-SB-4.0-5.0	MERCURY	J	0.0229	0.109	PQL	mg/Kg	J (all detects)
SL-058-SA5DN-SB-9.0-10.0	MERCURY	J	0.0157	0.111	PQL	mg/Kg	J (all detects)
SL-059-SA5DN-SB-4.0-5.0	MERCURY	J	0.0199	0.113	PQL	mg/Kg	J (all detects)
SL-061-SA5DN-SB-4.0-5.0	MERCURY	J	0.0135	0.116	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.2 0.08	3.7 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-058-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	3.8 0.14	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-059-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.3 0.11	3.8 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-061-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.2 0.1	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-062-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.3	4.2	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE182 **Laboratory: LL**

EDD Filename: DE182_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-062-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	400	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-061-SA5DN-SB-4.0-5.0	CHRYSENE	J	0.65	1.9	PQL	ug/Kg	J (all detects)
SL-061-SA5DN-SB-9.0-10.0	BENZO(A)PYRENE	J	1.3	1.9	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.1	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.1	1.9	PQL	ug/Kg	
SL-062-SA5DN-SB-4.0-5.0	BENZO(A)PYRENE	J	1.9	2.0	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.3	2.0	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.8	2.0	PQL	ug/Kg	
	CHRYSENE	J	1.8	2.0	PQL	ug/Kg	

LDC #: 26277M4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11

SDG #: DE182 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: MM

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	DZ180
VII.	Duplicate Sample Analysis	N	↓ (grnd Ca, Mn)
VIII.	Laboratory Control Samples (LCS)	SW	SRM see DZ180
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, Co, Cu, Pb, Ni, V, Zn
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-057-SA5DN-SB-4.0-5.0	11		21		31	
2	SL-057-SA5DN-SB-9.0-10.0	12		22		32	
3	SL-058-SA5DN-SB-4.0-5.0	13		23		33	
4	SL-058-SA5DN-SB-9.0-10.0	14		24		34	
5	SL-059-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-059-SA5DN-SB-9.0-10.0	16		26		36	
7	SL-061-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-061-SA5DN-SB-9.0-10.0	18		28		38	
9	SL-062-SA5DN-SB-4.0-5.0	19		29		39	
10		20		30		40	

Notes:

LDC #: 26277M4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: WC
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 166.7X
Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-5

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5					
Hg			0.15	0.125	0.032	0.025	0.023	0.016	0.020					

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 6-9

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	7									
Hg			0.073	0.061	0.013									

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.

SAMPLE DELIVERY GROUP

DE184

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2011	TB-062011	6322170	TB	5030B	8015M	III
20-Jun-2011	TB-062011	6322170	TB	5030B	8260B	III
20-Jun-2011	TB-062011	6322170	TB	5030B	8260B SIM	III
20-Jun-2011	SL-073-SA5DN-SB-5.0	6322169	N	5035	8260B	III
20-Jun-2011	SL-073-SA5DN-SB-5.0	6322169	N	5035	8260B SIM	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3050B	6010B	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3050B	6020	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3060A	7199	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3550B	8082	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3550B	8270C	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	3550B	8270C SIM	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	5035	8260B	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	5035	8260B SIM	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	METHOD	300.0	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	METHOD	314.0	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0	6322164	N	METHOD	7471A	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0DU	P322164D271511A	DUP	METHOD	314.0	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0DU	P322164D271739B	DUP	METHOD	300.0	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0MS	P322164R241715A	MS	3550B	8082	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0MS	P322164R261216	MS	3550B	8270C SIM	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0MS	P322164R271534A	MS	METHOD	314.0	III
20-Jun-2011	SL-093-SA5DN-SB-4.0-5.0MS	P322164R271754B	MS	METHOD	300.0	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3050B	6010B	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3050B	6020	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3060A	7199	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3550B	8270C	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	3550B	8270C SIM	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	METHOD	300.0	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	METHOD	314.0	III
20-Jun-2011	SL-093-SA5DN-SB-9.0-10.0	6322165	N	METHOD	7471A	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3050B	6010B	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3050B	6020	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3060A	7199	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3546	1625C	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3550B	8015B	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3550B	8015M	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3550B	8082	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3550B	8270C	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	3550B	8270C SIM	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	5035	8015M	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	5035	8260B	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	5035	8260B SIM	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	8330	8330A	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	300.0	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	314.0	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	7471A	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	8015B	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	8015M	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	8315A	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0	6322166	N	METHOD	9012B	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0DU	P322166D271816A	DUP	METHOD	9012B	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
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0MS	P322166R242012A	MS	METHOD	8315A	III
20-Jun-2011	SL-117-SA5DN-SB-4.0-5.0MS	P322166R271817A	MS	METHOD	9012B	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3050B	6010B	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3050B	6020	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3060A	7199	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3546	1625C	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3550B	8015B	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3550B	8015M	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3550B	8082	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3550B	8270C	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	3550B	8270C SIM	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	5035	8015M	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	5035	8260B	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	5035	8260B SIM	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	8330	8330A	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	300.0	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	314.0	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	7471A	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	8015B	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	8015M	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	8315A	III
20-Jun-2011	SL-118-SA5DN-SB-4.0-5.0	6322167	N	METHOD	9012B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3050B	6010B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3050B	6020	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3060A	7199	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3546	1625C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3550B	8015B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3550B	8015M	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3550B	8082	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3550B	8270C	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	3550B	8270C SIM	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	5035	8015M	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	5035	8260B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	5035	8260B SIM	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	8330	8330A	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	300.0	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	314.0	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	7471A	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	8015B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	8015M	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	8315A	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0	6322168	N	METHOD	9012B	III
20-Jun-2011	SL-119-SA5DN-SB-4.0-5.0MS	P322168R322008A	MS	METHOD	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 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
FLUORIDE	3.3		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-093-SA5DN-SB-9.0-10.0 *Collected:* 6/20/2011 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	8.2		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-117-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.89	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.89	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.3		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 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
CALCIUM	9230		2.85	MDL	22.8	PQL	mg/Kg	J	E
PHOSPHORUS	474		0.399	MDL	11.4	PQL	mg/Kg	J	Q
POTASSIUM	4060		12.9	MDL	57.0	PQL	mg/Kg	J	Q
TIN	2.79	J	0.365	MDL	11.4	PQL	mg/Kg	U	B
TITANIUM	1560		0.0809	MDL	1.14	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-9.0-10.0 *Collected:* 6/20/2011 12:30:00 *Analysis Type:* REA *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	113000		13.8	MDL	111	PQL	mg/Kg	J	E

Sample ID: SL-093-SA5DN-SB-9.0-10.0 *Collected:* 6/20/2011 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
BORON	2.56	J	0.399	MDL	5.54	PQL	mg/Kg	J	Z
PHOSPHORUS	286		0.388	MDL	11.1	PQL	mg/Kg	J	Q
POTASSIUM	2240		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	2.71	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
TITANIUM	1210		0.0787	MDL	1.11	PQL	mg/Kg	J	L
Zirconium	4.16	J	0.510	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.99	J	0.394	MDL	5.47	PQL	mg/Kg	J	Z
CALCIUM	6460		2.73	MDL	21.9	PQL	mg/Kg	J	E
PHOSPHORUS	360		0.383	MDL	10.9	PQL	mg/Kg	J	Q
POTASSIUM	3690		12.4	MDL	54.7	PQL	mg/Kg	J	Q
TIN	2.94	J	0.350	MDL	10.9	PQL	mg/Kg	U	B
TITANIUM	1240		0.0776	MDL	1.09	PQL	mg/Kg	J	L
Zirconium	5.02	J	0.503	MDL	5.47	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.49	J	0.395	MDL	5.49	PQL	mg/Kg	J	Z
CALCIUM	5750		2.74	MDL	22.0	PQL	mg/Kg	J	E
PHOSPHORUS	337		0.384	MDL	11.0	PQL	mg/Kg	J	Q
POTASSIUM	3230		12.4	MDL	54.9	PQL	mg/Kg	J	Q
TIN	3.10	J	0.351	MDL	11.0	PQL	mg/Kg	U	B
TITANIUM	1510		0.0779	MDL	1.10	PQL	mg/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 Laboratory: LL

EDD Filename: DE184_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-119-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.32	J	0.405	MDL	5.62	PQL	mg/Kg	J	Z
CALCIUM	5670		2.81	MDL	22.5	PQL	mg/Kg	J	E
PHOSPHORUS	309		0.394	MDL	11.2	PQL	mg/Kg	J	Q
POTASSIUM	3340		12.7	MDL	56.2	PQL	mg/Kg	J	Q
TIN	3.34	J	0.360	MDL	11.2	PQL	mg/Kg	U	B
TITANIUM	1480		0.0798	MDL	1.12	PQL	mg/Kg	J	L

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 12:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.324	J	0.0661	MDL	0.456	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 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
ANTIMONY	0.369		0.0843	MDL	0.228	PQL	mg/Kg	UJ	B, Q
COPPER	28.7		0.0911	MDL	0.456	PQL	mg/Kg	J	E
LEAD	14.4		0.0116	MDL	0.228	PQL	mg/Kg	J	Q, E, E
SILVER	0.0543	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SB-9.0-10.0 *Collected:* 6/20/2011 12:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0865	J	0.0649	MDL	0.448	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SB-9.0-10.0 *Collected:* 6/20/2011 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
ANTIMONY	0.247		0.0828	MDL	0.224	PQL	mg/Kg	UJ	B, Q
COPPER	19.4		0.0895	MDL	0.448	PQL	mg/Kg	J	E
LEAD	11.8		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, E, E
SILVER	0.0584	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-117-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 2:20:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0650	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.285		0.0801	MDL	0.217	PQL	mg/Kg	UJ	B, Q
COPPER	19.5		0.0866	MDL	0.433	PQL	mg/Kg	J	E
LEAD	11.3		0.0110	MDL	0.217	PQL	mg/Kg	J	Q, E, E
SILVER	0.0647	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 3:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0846	J	0.0618	MDL	0.426	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 3:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.390		0.0789	MDL	0.213	PQL	mg/Kg	UJ	B, Q
COPPER	23.0		0.0853	MDL	0.426	PQL	mg/Kg	J	E
LEAD	13.5		0.0109	MDL	0.213	PQL	mg/Kg	J	Q, E, E
SILVER	0.0859	J	0.0151	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 3:40:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0832	J	0.0640	MDL	0.441	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 3:40:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.383		0.0816	MDL	0.221	PQL	mg/Kg	UJ	B, Q
COPPER	24.9		0.0882	MDL	0.441	PQL	mg/Kg	J	E
LEAD	14.8		0.0112	MDL	0.221	PQL	mg/Kg	J	Q, E, E
SILVER	0.0699	J	0.0157	MDL	0.110	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 Laboratory: LL

EDD Filename: DE184_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 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
HEXAVALENT CHROMIUM	0.56	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.53	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 12:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.55	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 12:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	20	MDL	390	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-117-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.39	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-073-SA5DN-SB-5.0 *Collected:* 6/20/2011 9:45:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.8	J	0.25	MDL	4.2	PQL	ug/Kg	U	B
TOLUENE	0.16	J	0.08	MDL	4.2	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 12:25:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	12		7.3	MDL	8.7	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.1	J	0.26	MDL	4.3	PQL	ug/Kg	U	B
TOLUENE	0.11	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1.01

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	10		7.6	MDL	9.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.0	J	0.27	MDL	4.6	PQL	ug/Kg	U	B
TOLUENE	0.10	J	0.09	MDL	4.6	PQL	ug/Kg	J	Z

Sample ID: SL-118-SA5DN-SB-4.0-5.0 *Collected:* 6/20/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1.01

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	10		7.5	MDL	9.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	3.0	J	0.27	MDL	4.5	PQL	ug/Kg	U	B
TOLUENE	0.15	J	0.09	MDL	4.5	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-119-SA5DN-SB-4.0-5.0 ***Collected:*** 6/20/2011 3:40:00 ***Analysis Type:*** RES ***Dilution:*** 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.8		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.1	J	0.24	MDL	4.0	PQL	ug/Kg	U	B
TOLUENE	0.10	J	0.08	MDL	4.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE184

Method Blank Outlier Report

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17208BB221009	6/24/2011 10:09:00 AM	IRON	4.19 mg/Kg	SL-093-SA5DN-SB-4.0-5.0
		MAGNESIUM	0.703 mg/Kg	SL-093-SA5DN-SB-9.0-10.0
		MANGANESE	0.0380 mg/Kg	SL-117-SA5DN-SB-4.0-5.0
		PHOSPHORUS	1.71 mg/Kg	SL-118-SA5DN-SB-4.0-5.0
		TIN	1.71 mg/Kg	SL-119-SA5DN-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-093-SA5DN-SB-4.0-5.0(RES)	TIN	2.79 mg/Kg	2.79U mg/Kg
SL-093-SA5DN-SB-9.0-10.0(RES)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-117-SA5DN-SB-4.0-5.0(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-118-SA5DN-SB-4.0-5.0(RES)	TIN	3.10 mg/Kg	3.10U mg/Kg
SL-119-SA5DN-SB-4.0-5.0(RES)	TIN	3.34 mg/Kg	3.34U mg/Kg

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17226AB220808A	6/22/2011 8:08:00 AM	ANTIMONY	0.101 mg/Kg	SL-093-SA5DN-SB-4.0-5.0 SL-093-SA5DN-SB-9.0-10.0 SL-117-SA5DN-SB-4.0-5.0 SL-118-SA5DN-SB-4.0-5.0 SL-119-SA5DN-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-093-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.369 mg/Kg	0.369U mg/Kg
SL-093-SA5DN-SB-9.0-10.0(RES)	ANTIMONY	0.247 mg/Kg	0.247U mg/Kg
SL-117-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.285 mg/Kg	0.285U mg/Kg
SL-118-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.390 mg/Kg	0.390U mg/Kg
SL-119-SA5DN-SB-4.0-5.0(RES)	ANTIMONY	0.383 mg/Kg	0.383U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB96B211423A	6/23/2011 2:23:00 PM	ACETONE	11 ug/Kg	SL-073-SA5DN-SB-5.0
		METHYLENE CHLORIDE	2.0 ug/Kg	SL-093-SA5DN-SB-4.0-5.0 SL-117-SA5DN-SB-4.0-5.0 SL-118-SA5DN-SB-4.0-5.0 SL-119-SA5DN-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-073-SA5DN-SB-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.2U ug/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
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-093-SA5DN-SB-4.0-5.0(RES)	ACETONE	12 ug/Kg	12U ug/Kg
SL-093-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.1 ug/Kg	4.3U ug/Kg
SL-117-SA5DN-SB-4.0-5.0(RES)	ACETONE	10 ug/Kg	10U ug/Kg
SL-117-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.0 ug/Kg	4.6U ug/Kg
SL-118-SA5DN-SB-4.0-5.0(RES)	ACETONE	10 ug/Kg	10U ug/Kg
SL-118-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	3.0 ug/Kg	4.5U ug/Kg
SL-119-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.8 ug/Kg	8.8U ug/Kg
SL-119-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.1 ug/Kg	4.0U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

***Method:* 300.0**
***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-093-SA5DN-SB-4.0-5.0MS (SL-093-SA5DN-SB-4.0-5.0 SL-093-SA5DN-SB-9.0-10.0 SL-117-SA5DN-SB-4.0-5.0 SL-118-SA5DN-SB-4.0-5.0 SL-119-SA5DN-SB-4.0-5.0)	FLUORIDE	72	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11743AQ241637A P11743AY241619A (SL-093-SA5DN -SB-4.0-5.0 SL -093-SA5DN -SB-9.0-10.0 SL -117-SA5DN -SB-4.0-5.0 SL -118-SA5DN -SB-4.0-5.0 SL -119-SA5DN -SB-4.0-5.0)	Aroclor 5442	119	111	36.00-106.00	-	Aroclor 5432, 5442, 5460	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P17226AQ220811A (SL-093-SA5DN -SB-4.0-5.0 SL -093-SA5DN -SB-9.0-10.0 SL -117-SA5DN -SB-4.0-5.0 SL -118-SA5DN -SB-4.0-5.0 SL -119-SA5DN -SB-4.0-5.0)	ANTIMONY	142	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE184 **Laboratory:** LL

EDD Filename: DE184_v1 **eQAPP Name:** CDM_SSFL_110509

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)
SL-118-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-093-SA5DN-SB-4.0-5.0	TIN	J	2.79	11.4	PQL	mg/Kg	J (all detects)
SL-093-SA5DN-SB-9.0-10.0	BORON	J	2.56	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	2.71	11.1	PQL	mg/Kg	
	Zirconium	J	4.16	5.54	PQL	mg/Kg	
SL-117-SA5DN-SB-4.0-5.0	BORON	J	2.99	5.47	PQL	mg/Kg	J (all detects)
	TIN	J	2.94	10.9	PQL	mg/Kg	
	Zirconium	J	5.02	5.47	PQL	mg/Kg	
SL-118-SA5DN-SB-4.0-5.0	BORON	J	3.49	5.49	PQL	mg/Kg	J (all detects)
	TIN	J	3.10	11.0	PQL	mg/Kg	
SL-119-SA5DN-SB-4.0-5.0	BORON	J	2.32	5.62	PQL	mg/Kg	J (all detects)
	TIN	J	3.34	11.2	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-093-SA5DN-SB-4.0-5.0	SELENIUM	J	0.324	0.456	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0543	0.114	PQL	mg/Kg	
SL-093-SA5DN-SB-9.0-10.0	SELENIUM	J	0.0865	0.448	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0584	0.112	PQL	mg/Kg	
SL-117-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0650	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0647	0.108	PQL	mg/Kg	
SL-118-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0846	0.426	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0859	0.107	PQL	mg/Kg	
SL-119-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0832	0.441	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0699	0.110	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-093-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.56	1.2	PQL	mg/Kg	J (all detects)
SL-117-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.54	1.1	PQL	mg/Kg	J (all detects)
SL-118-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.38	1.1	PQL	mg/Kg	J (all detects)
SL-119-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.53	1.1	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE184 **Laboratory: LL**

EDD Filename: DE184_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-093-SA5DN-SB-4.0-5.0	AROCLOR 1260	J	0.55	2.0	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-073-SA5DN-SB-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.8 0.16	4.2 4.2	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-093-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.1 0.11	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-117-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.0 0.10	4.6 4.6	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-118-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	3.0 0.15	4.5 4.5	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-119-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.1 0.10	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-093-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	390	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA5DN-SB-4.0-5.0	CHRYSENE	J	0.39	1.9	PQL	ug/Kg	J (all detects)

LDC #: 26277O4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11
SDG #: DE184 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: MM
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No fuel
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	} DE199
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	SW	See ↓
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	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	SL-093-SA5DN-SB-4.0-5.0	11		21		31	
2	SL-093-SA5DN-SB-9.0-10.0	12		22		32	
3	SL-117-SA5DN-SB-4.0-5.0	13		23		33	
4	SL-118-SA5DN-SB-4.0-5.0	14		24		34	
5	SL-119-SA5DN-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:

SAMPLE DELIVERY GROUP

DE185

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2011	TB-062111	6323488	TB	5030B	8015M	III
21-Jun-2011	TB-062111	6323488	TB	5030B	8260B	III
21-Jun-2011	TB-062111	6323488	TB	5030B	8260B SIM	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3050B	6010B	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3050B	6020	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3060A	7199	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3546	1625C	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3550B	8015B	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3550B	8015M	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3550B	8082	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3550B	8270C	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	3550B	8270C SIM	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	5035	8015M	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	5035	8260B	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	5035	8260B SIM	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	8330	8330A	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	300.0	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	314.0	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	7471A	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	8015B	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	8015M	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	8315A	III
21-Jun-2011	SL-120-SA5DN-SB-4.0-5.0	6323483	N	METHOD	9012B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3050B	6010B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3050B	6020	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3546	1625C	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3550B	8015B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3550B	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3550B	8082	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3550B	8270C	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	3550B	8270C SIM	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	5035	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	5035	8260B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	5035	8260B SIM	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	8330	8330A	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	300.0	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	314.0	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	7471A	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	8015B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	8315A	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0	6323484	N	METHOD	9012B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0DU	P323484D272142B	DUP	METHOD	9012B	III
21-Jun-2011	SL-121-SA5DN-SB-4.0-5.0MS	P323484R272143B	MS	METHOD	9012B	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3050B	6010B	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3050B	6020	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3060A	7199	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3546	1625C	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3550B	8015B	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3550B	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3550B	8270C	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	3550B	8270C SIM	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	5035	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	5035	8260B	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	5035	8260B SIM	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	8330	8330A	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	300.0	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	314.0	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	7471A	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	8015B	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	8015M	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	8315A	III
21-Jun-2011	SL-121-SA5DN-SB-8.0-9.0	6323485	N	METHOD	9012B	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3050B	6010B	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3050B	6020	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3060A	7199	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3546	1625C	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3550B	8015B	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3550B	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3550B	8082	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3550B	8270C	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	3550B	8270C SIM	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	5035	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	5035	8260B	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	5035	8260B SIM	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	8330	8330A	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
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	300.0	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	314.0	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	7471A	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	8015B	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	8315A	III
21-Jun-2011	SL-125-SA5DN-SB-4.0-5.0	6323486	N	METHOD	9012B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3050B	6010B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3050B	6020	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3060A	7199	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3546	1625C	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3550B	8015B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3550B	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3550B	8082	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3550B	8270C	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	3550B	8270C SIM	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	5035	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	5035	8260B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	5035	8260B SIM	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	8330	8330A	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	300.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	314.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	7471A	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	8015B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	8015M	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	8315A	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
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0	6323487	N	METHOD	9012B	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0D	P323487D271304B	DUP	METHOD	314.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0D	P323487D272018A	DUP	3060A	7199	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0D	P323487D272346B	DUP	METHOD	300.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0M	P323487R270001B	MS	METHOD	300.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0M	P323487R270905B	MS	METHOD	314.0	III
21-Jun-2011	SL-125-SA5DN-SB-9.0-10.0M	P323487R271941A	MS	3060A	7199	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3050B	6010B	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3050B	6020	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3060A	7199	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3546	1625C	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3550B	8015B	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3550B	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3550B	8082	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3550B	8270C	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	3550B	8270C SIM	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	5035	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	5035	8260B	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	5035	8260B SIM	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	8330	8330A	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	300.0	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	314.0	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	7471A	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	8015B	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	8315A	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
21-Jun-2011	SL-098-SA5DN-SB-4.0-5.0	6323479	N	METHOD	9012B	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3050B	6010B	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3050B	6020	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3060A	7199	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3546	1625C	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3550B	8015B	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3550B	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3550B	8082	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3550B	8270C	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	3550B	8270C SIM	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	5035	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	5035	8260B	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	5035	8260B SIM	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	8330	8330A	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	300.0	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	314.0	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	7471A	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	8015B	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	8015M	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	8315A	III
21-Jun-2011	SL-098-SA5DN-SB-7.0-8.0	6323480	N	METHOD	9012B	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3050B	6010B	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3050B	6020	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3060A	7199	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3546	1625C	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3550B	8015B	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
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3550B	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3550B	8082	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3550B	8270C	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	3550B	8270C SIM	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	5035	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	5035	8260B	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	5035	8260B SIM	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	8330	8330A	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	300.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	314.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	7471A	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	8015B	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	8315A	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0	6323477	N	METHOD	9012B	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0DU	P323477D270146A	DUP	METHOD	314.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0DU	P323477D272021A	DUP	METHOD	300.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0MS	P323477R262355	MS	3546	1625C	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0MS	P323477R270210A	MS	METHOD	314.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0MS	P323477R272035A	MS	METHOD	300.0	III
21-Jun-2011	SL-097-SA5DN-SB-4.0-5.0MS	P323477R321848A	MS	3550B	8015B	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3050B	6010B	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3050B	6020	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3060A	7199	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3546	1625C	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3550B	8015B	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
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3550B	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3550B	8082	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3550B	8270C	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	3550B	8270C SIM	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	5035	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	5035	8260B	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	5035	8260B SIM	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	8330	8330A	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	300.0	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	314.0	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	7471A	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	8015B	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	8015M	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	8315A	III
21-Jun-2011	SL-097-SA5DN-SB-8.5-9.5	6323478	N	METHOD	9012B	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3050B	6010B	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3050B	6020	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3060A	7199	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3546	1625C	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3550B	8015B	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3550B	8015M	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3550B	8082	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3550B	8270C	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	3550B	8270C SIM	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	5035	8015M	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	5035	8260B	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
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	5035	8260B SIM	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	8330	8330A	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	300.0	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	314.0	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	6850	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	7471A	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	8015B	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	8015M	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	8315A	III
21-Jun-2011	SL-099-SA5DN-SB-4.0-5.0	6323481	N	METHOD	9012B	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3050B	6010B	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3050B	6020	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3060A	7199	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3546	1625C	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3550B	8015B	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3550B	8015M	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3550B	8082	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3550B	8270C	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	3550B	8270C SIM	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	5035	8015M	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	5035	8260B	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	5035	8260B SIM	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	8330	8330A	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	300.0	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	314.0	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	8015B	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	8015M	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	8315A	III
21-Jun-2011	SL-113-SA5DN-SB-4.0-5.0	6323482	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 11:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-097-SA5DN-SB-8.5-9.5 **Collected:** 6/21/2011 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	5.8		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 11:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.3		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-098-SA5DN-SB-7.0-8.0 **Collected:** 6/21/2011 11:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.7		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.6	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 3:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.8		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-120-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 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
FLUORIDE	3.4		0.90	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.4		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.4		0.85	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.1		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 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
FLUORIDE	3.8		0.85	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3540		13.1	MDL	58.0	PQL	mg/Kg	J	Q
TIN	2.89	J	0.371	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.61	J	0.534	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 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
POTASSIUM	2900		12.7	MDL	56.1	PQL	mg/Kg	J	Q
TIN	2.51	J	0.359	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	3.17	J	0.516	MDL	5.61	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-098-SA5DN-SB-4.0-5.0** ***Collected:*** **6/21/2011 11:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4020		12.9	MDL	57.3	PQL	mg/Kg	J	Q
TIN	3.04	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.16	J	0.527	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: **SL-098-SA5DN-SB-7.0-8.0** ***Collected:*** **6/21/2011 11:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3160		13.1	MDL	58.0	PQL	mg/Kg	J	Q
TIN	2.71	J	0.371	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.87	J	0.533	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: **SL-099-SA5DN-SB-4.0-5.0** ***Collected:*** **6/21/2011 2:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3430		12.4	MDL	54.7	PQL	mg/Kg	J	Q
TIN	2.71	J	0.350	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.98	J	0.503	MDL	5.47	PQL	mg/Kg	J	Z

Sample ID: **SL-113-SA5DN-SB-4.0-5.0** ***Collected:*** **6/21/2011 3:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3280		13.1	MDL	57.9	PQL	mg/Kg	J	Q
TIN	2.78	J	0.370	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.50	J	0.532	MDL	5.79	PQL	mg/Kg	J	Z

Sample ID: **SL-120-SA5DN-SB-4.0-5.0** ***Collected:*** **6/21/2011 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
POTASSIUM	3730		12.6	MDL	55.8	PQL	mg/Kg	J	Q
TIN	2.96	J	0.357	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.16	J	0.513	MDL	5.58	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3380		12.3	MDL	54.5	PQL	mg/Kg	J	Q
TIN	2.97	J	0.349	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	4.08	J	0.501	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2490		11.8	MDL	52.1	PQL	mg/Kg	J	Q
TIN	2.85	J	0.333	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	2.63	J	0.479	MDL	5.21	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3060		12.8	MDL	56.7	PQL	mg/Kg	J	Q
TIN	2.67	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.03	J	0.522	MDL	5.67	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 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
POTASSIUM	2450		11.7	MDL	51.8	PQL	mg/Kg	J	Q
TIN	2.67	J	0.331	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	3.00	J	0.476	MDL	5.18	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.213	J	0.0842	MDL	0.228	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 Laboratory: LL

EDD Filename: DE185_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.110	J	0.0660	MDL	0.455	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.597		0.0569	MDL	0.114	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	163		0.121	MDL	0.455	PQL	mg/Kg	J	E, E, A

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	10.4		0.0911	MDL	0.455	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.20		0.0182	MDL	0.114	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.452		0.0501	MDL	0.114	PQL	mg/Kg	J	Q, E
CHROMIUM	40.2		0.137	MDL	0.455	PQL	mg/Kg	J	E, E
COBALT	15.2		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E, E, A
COPPER	21.8		0.0911	MDL	0.455	PQL	mg/Kg	J	Q, Q, E, E
LEAD	13.7		0.0116	MDL	0.228	PQL	mg/Kg	J	E, E, A
NICKEL	36.0		0.114	MDL	0.455	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0680	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.481		0.0341	MDL	0.114	PQL	mg/Kg	J	Q, Q, E
VANADIUM	66.4		0.0250	MDL	0.114	PQL	mg/Kg	J	E, E
ZINC	101		0.637	MDL	3.41	PQL	mg/Kg	J	E, E

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 12:05:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.160	J	0.0806	MDL	0.218	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-8.5-9.5 ***Collected:*** 6/21/2011 12:05:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.523		0.0545	MDL	0.109	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-097-SA5DN-SB-8.5-9.5 ***Collected:*** 6/21/2011 12:05:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	96.5		0.116	MDL	0.436	PQL	mg/Kg	J	E, E, A

Sample ID: SL-097-SA5DN-SB-8.5-9.5 ***Collected:*** 6/21/2011 12:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.54		0.0872	MDL	0.436	PQL	mg/Kg	J	E, E, A
BERYLLIUM	0.665		0.0174	MDL	0.109	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.179		0.0479	MDL	0.109	PQL	mg/Kg	J	Q, E
CHROMIUM	21.4		0.131	MDL	0.436	PQL	mg/Kg	J	E, E
COBALT	6.29		0.0218	MDL	0.109	PQL	mg/Kg	J	Q, E, E, A
COPPER	11.4		0.0872	MDL	0.436	PQL	mg/Kg	J	Q, Q, E, E
LEAD	6.51		0.0111	MDL	0.218	PQL	mg/Kg	J	E, E, A
NICKEL	17.6		0.109	MDL	0.436	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0586	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.313		0.0327	MDL	0.109	PQL	mg/Kg	J	Q, Q, E
VANADIUM	40.9		0.0240	MDL	0.109	PQL	mg/Kg	J	E, E
ZINC	48.2		0.610	MDL	3.27	PQL	mg/Kg	J	E, E

Sample ID: SL-098-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 11:05:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.39		0.0831	MDL	0.225	PQL	mg/Kg	J	Q

Sample ID: SL-098-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 11:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.192	J	0.0652	MDL	0.449	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	5.90		0.0562	MDL	0.112	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	143		0.119	MDL	0.449	PQL	mg/Kg	J	E, E, A

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	15.3		0.0899	MDL	0.449	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.16		0.0180	MDL	0.112	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	1.26		0.0494	MDL	0.112	PQL	mg/Kg	J	Q, E
CHROMIUM	80.0		0.135	MDL	0.449	PQL	mg/Kg	J	E, E
COBALT	17.2		0.0225	MDL	0.112	PQL	mg/Kg	J	Q, E, E, A
COPPER	121		0.0899	MDL	0.449	PQL	mg/Kg	J	Q, Q, E, E
LEAD	47.6		0.0115	MDL	0.225	PQL	mg/Kg	J	E, E, A
NICKEL	60.0		0.112	MDL	0.449	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.139		0.0160	MDL	0.112	PQL	mg/Kg	J	Q, E
THALLIUM	0.469		0.0337	MDL	0.112	PQL	mg/Kg	J	Q, Q, E
VANADIUM	69.0		0.0247	MDL	0.112	PQL	mg/Kg	J	E, E
ZINC	153		0.629	MDL	3.37	PQL	mg/Kg	J	E, E

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.187	J	0.0833	MDL	0.225	PQL	mg/Kg	J	Z, Q

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0704	J	0.0653	MDL	0.450	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-098-SA5DN-SB-7.0-8.0 ***Collected:*** 6/21/2011 11:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.696		0.0563	MDL	0.113	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-098-SA5DN-SB-7.0-8.0 ***Collected:*** 6/21/2011 11:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	154		0.119	MDL	0.450	PQL	mg/Kg	J	E, E, A

Sample ID: SL-098-SA5DN-SB-7.0-8.0 ***Collected:*** 6/21/2011 11:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	11.8		0.0901	MDL	0.450	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.06		0.0180	MDL	0.113	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.477		0.0495	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	36.9		0.135	MDL	0.450	PQL	mg/Kg	J	E, E
COBALT	13.2		0.0225	MDL	0.113	PQL	mg/Kg	J	Q, E, E, A
COPPER	23.3		0.0901	MDL	0.450	PQL	mg/Kg	J	Q, Q, E, E
LEAD	11.0		0.0115	MDL	0.225	PQL	mg/Kg	J	E, E, A
NICKEL	33.9		0.113	MDL	0.450	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.100	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.460		0.0338	MDL	0.113	PQL	mg/Kg	J	Q, Q, E
VANADIUM	66.0		0.0248	MDL	0.113	PQL	mg/Kg	J	E, E
ZINC	87.9		0.631	MDL	3.38	PQL	mg/Kg	J	E, E

Sample ID: SL-099-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 2:25:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.173	J	0.0801	MDL	0.217	PQL	mg/Kg	J	Z, Q

Sample ID: SL-099-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 2:25:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0993	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-099-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 2:25:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.727		0.0541	MDL	0.108	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-099-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 2:25:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	160		0.115	MDL	0.433	PQL	mg/Kg	J	E, E, A

Sample ID: SL-099-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.61		0.0866	MDL	0.433	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.17		0.0173	MDL	0.108	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.350		0.0476	MDL	0.108	PQL	mg/Kg	J	Q, E
CHROMIUM	39.0		0.130	MDL	0.433	PQL	mg/Kg	J	E, E
COBALT	13.6		0.0217	MDL	0.108	PQL	mg/Kg	J	Q, E, E, A
COPPER	22.0		0.0866	MDL	0.433	PQL	mg/Kg	J	Q, Q, E, E
LEAD	13.1		0.0110	MDL	0.217	PQL	mg/Kg	J	E, E, A
NICKEL	32.9		0.108	MDL	0.433	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0887	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.431		0.0325	MDL	0.108	PQL	mg/Kg	J	Q, Q, E
VANADIUM	63.5		0.0238	MDL	0.108	PQL	mg/Kg	J	E, E
ZINC	99.0		0.606	MDL	3.25	PQL	mg/Kg	J	E, E

Sample ID: SL-113-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 3:15:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.218	J	0.0882	MDL	0.238	PQL	mg/Kg	J	Z, Q

Sample ID: SL-113-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 3:15:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.115	J	0.0691	MDL	0.477	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-113-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 3:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.555		0.0596	MDL	0.119	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-113-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 3:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	175		0.126	MDL	0.477	PQL	mg/Kg	J	E, E, A

Sample ID: SL-113-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 3:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	12.3		0.0954	MDL	0.477	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.31		0.0191	MDL	0.119	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.468		0.0524	MDL	0.119	PQL	mg/Kg	J	Q, E
CHROMIUM	46.8		0.143	MDL	0.477	PQL	mg/Kg	J	E, E
COBALT	18.9		0.0238	MDL	0.119	PQL	mg/Kg	J	Q, E, E, A
COPPER	23.9		0.0954	MDL	0.477	PQL	mg/Kg	J	Q, Q, E, E
LEAD	14.5		0.0122	MDL	0.238	PQL	mg/Kg	J	E, E, A
NICKEL	38.9		0.119	MDL	0.477	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0989	J	0.0169	MDL	0.119	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.486		0.0358	MDL	0.119	PQL	mg/Kg	J	Q, Q, E
VANADIUM	81.2		0.0262	MDL	0.119	PQL	mg/Kg	J	E, E
ZINC	105		0.667	MDL	3.58	PQL	mg/Kg	J	E, E

Sample ID: SL-120-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 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
ANTIMONY	0.202	J	0.0834	MDL	0.225	PQL	mg/Kg	J	Z, Q

Sample ID: SL-120-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 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	0.0901	J	0.0654	MDL	0.451	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-120-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 8:50:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.569		0.0564	MDL	0.113	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-120-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 8:50:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	198		0.120	MDL	0.451	PQL	mg/Kg	J	E, E, A

Sample ID: SL-120-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 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
ARSENIC	9.28		0.0902	MDL	0.451	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.22		0.0180	MDL	0.113	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.251		0.0496	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	37.0		0.135	MDL	0.451	PQL	mg/Kg	J	E, E
COBALT	11.1		0.0225	MDL	0.113	PQL	mg/Kg	J	Q, E, E, A
COPPER	19.6		0.0902	MDL	0.451	PQL	mg/Kg	J	Q, Q, E, E
LEAD	11.4		0.0115	MDL	0.225	PQL	mg/Kg	J	E, E, A
NICKEL	28.2		0.113	MDL	0.451	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0798	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.368		0.0338	MDL	0.113	PQL	mg/Kg	J	Q, Q, E
VANADIUM	65.0		0.0248	MDL	0.113	PQL	mg/Kg	J	E, E
ZINC	84.2		0.631	MDL	3.38	PQL	mg/Kg	J	E, E

Sample ID: SL-121-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 9:30:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.302		0.0798	MDL	0.216	PQL	mg/Kg	J	Q

Sample ID: SL-121-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 9:30:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.119	J	0.0626	MDL	0.431	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-121-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 9:30:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.740		0.0539	MDL	0.108	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-121-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 9:30:00 ***Analysis Type:*** REA4 ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	248		0.286	MDL	1.08	PQL	mg/Kg	J	E, E, A

Sample ID: SL-121-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 9:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	11.4		0.0863	MDL	0.431	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.44		0.0173	MDL	0.108	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.390		0.0475	MDL	0.108	PQL	mg/Kg	J	Q, E
CHROMIUM	51.9		0.129	MDL	0.431	PQL	mg/Kg	J	E, E
COBALT	15.6		0.0216	MDL	0.108	PQL	mg/Kg	J	Q, E, E, A
COPPER	24.9		0.0863	MDL	0.431	PQL	mg/Kg	J	Q, Q, E, E
LEAD	15.9		0.0110	MDL	0.216	PQL	mg/Kg	J	E, E, A
NICKEL	43.5		0.108	MDL	0.431	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.101	J	0.0153	MDL	0.108	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.518		0.0324	MDL	0.108	PQL	mg/Kg	J	Q, Q, E
VANADIUM	86.4		0.0237	MDL	0.108	PQL	mg/Kg	J	E, E
ZINC	116		0.604	MDL	3.24	PQL	mg/Kg	J	E, E

Sample ID: SL-121-SA5DN-SB-8.0-9.0 ***Collected:*** 6/21/2011 9:40:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.175	J	0.0786	MDL	0.213	PQL	mg/Kg	J	Z, Q

Sample ID: SL-121-SA5DN-SB-8.0-9.0 ***Collected:*** 6/21/2011 9:40:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0822	J	0.0616	MDL	0.425	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-121-SA5DN-SB-8.0-9.0 ***Collected:*** 6/21/2011 9:40:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.672		0.0531	MDL	0.106	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-121-SA5DN-SB-8.0-9.0 ***Collected:*** 6/21/2011 9:40:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	89.5		0.113	MDL	0.425	PQL	mg/Kg	J	E, E, A

Sample ID: SL-121-SA5DN-SB-8.0-9.0 ***Collected:*** 6/21/2011 9:40:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	10.2		0.0850	MDL	0.425	PQL	mg/Kg	J	E, E, A
BERYLLIUM	0.664		0.0170	MDL	0.106	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.227		0.0468	MDL	0.106	PQL	mg/Kg	J	Q, E
CHROMIUM	26.3		0.128	MDL	0.425	PQL	mg/Kg	J	E, E
COBALT	9.75		0.0213	MDL	0.106	PQL	mg/Kg	J	Q, E, E, A
COPPER	15.4		0.0850	MDL	0.425	PQL	mg/Kg	J	Q, Q, E, E
LEAD	7.09		0.0108	MDL	0.213	PQL	mg/Kg	J	E, E, A
NICKEL	24.2		0.106	MDL	0.425	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0249	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.334		0.0319	MDL	0.106	PQL	mg/Kg	J	Q, Q, E
VANADIUM	41.2		0.0234	MDL	0.106	PQL	mg/Kg	J	E, E
ZINC	74.0		0.595	MDL	3.19	PQL	mg/Kg	J	E, E

Sample ID: SL-125-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 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
ANTIMONY	0.160	J	0.0815	MDL	0.220	PQL	mg/Kg	J	Z, Q

Sample ID: SL-125-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 10:15:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0733	J	0.0639	MDL	0.441	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-125-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 10:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.417		0.0551	MDL	0.110	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-125-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 10:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	177		0.117	MDL	0.441	PQL	mg/Kg	J	E, E, A

Sample ID: SL-125-SA5DN-SB-4.0-5.0 ***Collected:*** 6/21/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	8.82		0.0881	MDL	0.441	PQL	mg/Kg	J	E, E, A
BERYLLIUM	0.997		0.0176	MDL	0.110	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.444		0.0485	MDL	0.110	PQL	mg/Kg	J	Q, E
CHROMIUM	33.7		0.132	MDL	0.441	PQL	mg/Kg	J	E, E
COBALT	12.7		0.0220	MDL	0.110	PQL	mg/Kg	J	Q, E, E, A
COPPER	19.4		0.0881	MDL	0.441	PQL	mg/Kg	J	Q, Q, E, E
LEAD	10.9		0.0112	MDL	0.220	PQL	mg/Kg	J	E, E, A
NICKEL	31.2		0.110	MDL	0.441	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0658	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.418		0.0330	MDL	0.110	PQL	mg/Kg	J	Q, Q, E
VANADIUM	60.6		0.0242	MDL	0.110	PQL	mg/Kg	J	E, E
ZINC	86.5		0.617	MDL	3.30	PQL	mg/Kg	J	E, E

Sample ID: SL-125-SA5DN-SB-9.0-10.0 ***Collected:*** 6/21/2011 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
ANTIMONY	0.146	J	0.0781	MDL	0.211	PQL	mg/Kg	J	Z, Q

Sample ID: SL-125-SA5DN-SB-9.0-10.0 ***Collected:*** 6/21/2011 10:25:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.550		0.0528	MDL	0.106	PQL	mg/Kg	J	Q, E, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 10:25:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	100		0.112	MDL	0.422	PQL	mg/Kg	J	E, E, A

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 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
ARSENIC	7.98		0.0844	MDL	0.422	PQL	mg/Kg	J	E, E, A
BERYLLIUM	0.851		0.0169	MDL	0.106	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.195		0.0464	MDL	0.106	PQL	mg/Kg	J	Q, E
CHROMIUM	23.2		0.127	MDL	0.422	PQL	mg/Kg	J	E, E
COBALT	8.89		0.0211	MDL	0.106	PQL	mg/Kg	J	Q, E, E, A
COPPER	13.2		0.0844	MDL	0.422	PQL	mg/Kg	J	Q, Q, E, E
LEAD	8.40		0.0108	MDL	0.211	PQL	mg/Kg	J	E, E, A
NICKEL	17.4		0.106	MDL	0.422	PQL	mg/Kg	J	E, Q, E, A
SILVER	0.0554	J	0.0150	MDL	0.106	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.335		0.0317	MDL	0.106	PQL	mg/Kg	J	Q, Q, E
VANADIUM	45.2		0.0232	MDL	0.106	PQL	mg/Kg	J	E, E
ZINC	63.5		0.591	MDL	3.17	PQL	mg/Kg	J	E, E

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.35	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 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
HEXAVALENT CHROMIUM	0.35	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.1	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-098-SA5DN-SB-7.0-8.0 **Collected:** 6/21/2011 11:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.40	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 3:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.43	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 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
HEXAVALENT CHROMIUM	0.60	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 9:30:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.45	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-8.0-9.0 **Collected:** 6/21/2011 9:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.31	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-4.0-5.0 **Collected:** 6/21/2011 10:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.46	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-9.0-10.0 **Collected:** 6/21/2011 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
HEXAVALENT CHROMIUM	0.31	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 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
MERCURY	0.0129	J	0.0075	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.108	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0216	J	0.0079	MDL	0.113	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0398	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0146	J	0.0081	MDL	0.115	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 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
MERCURY	0.0096	J	0.0075	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0190	J	0.0073	MDL	0.104	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0211	J	0.0072	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0142	J	0.0077	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 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	0.0082	J	0.0073	MDL	0.104	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	20.9	J	19.4	MDL	38.8	PQL	ng/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 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
N-NITROSODIMETHYLAMINE	18.6	J	18.2	MDL	36.4	PQL	ng/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 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
N-NITROSODIMETHYLAMINE	19.1	J	17.4	MDL	34.8	PQL	ng/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	32.9	J	19.1	MDL	38.2	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.3	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 2:25:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.70	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 3:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.1	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 8:50:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.51	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C30-C40)	0.84	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 9:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.1	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 9:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.3	J	0.85	MDL	2.5	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.71	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 Laboratory: LL

EDD Filename: DE185_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 8082 **Matrix:** SO

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	4.1		1.2	MDL	3.9	PQL	ug/Kg	J	L

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.57	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 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
AROCLOR 1260	0.47	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 12:05:00 *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	21	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *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	49	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	19	MDL	390	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-099-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 2:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 3:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	20	MDL	400	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	29	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	370	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *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	0.79	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-113-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 3:15:00 *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	1.1	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.9	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.9	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.3	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.1	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.7	U	1.7	MDL	4.1	PQL	mg/Kg	UJ	Q

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-097-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:55:00 *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.0	J	6.9	MDL	8.3	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.2	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.09	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-097-SA5DN-SB-8.5-9.5 *Collected:* 6/21/2011 12:05:00 *Analysis Type:* RES *Dilution:* 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.2		6.8	MDL	8.1	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.9	J	0.24	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.08	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-098-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 11:05:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		7.0	MDL	8.3	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.5	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-098-SA5DN-SB-7.0-8.0 *Collected:* 6/21/2011 11:15:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.5		6.7	MDL	8.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.8	J	0.24	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-099-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 2:25:00 *Analysis Type:* RES *Dilution:* 0.9

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.2	J	0.24	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory:** LL

EDD Filename: DE185_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-113-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 3:15:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.9		6.9	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.5	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.09	J	0.08	MDL	4.1	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 8:50:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.3	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-121-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 9:30:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.5		6.8	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.9	J	0.24	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-121-SA5DN-SB-8.0-9.0 *Collected:* 6/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4		6.8	MDL	8.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.1	J	0.25	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-125-SA5DN-SB-4.0-5.0 *Collected:* 6/21/2011 10:15:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.8	J	0.25	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-125-SA5DN-SB-9.0-10.0 *Collected:* 6/21/2011 10:25:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.2		6.6	MDL	7.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.2	J	0.24	MDL	3.9	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE185

Method Blank Outlier Report

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17908AB221624	6/30/2011 4:24:00 PM	MAGNESIUM MANGANESE PHOSPHORUS TIN	1.16 mg/Kg 0.135 mg/Kg 1.38 mg/Kg 1.57 mg/Kg	SL-097-SA5DN-SB-4.0-5.0 SL-097-SA5DN-SB-8.5-9.5 SL-098-SA5DN-SB-4.0-5.0 SL-098-SA5DN-SB-7.0-8.0 SL-099-SA5DN-SB-4.0-5.0 SL-113-SA5DN-SB-4.0-5.0 SL-120-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-8.0-9.0 SL-125-SA5DN-SB-4.0-5.0 SL-125-SA5DN-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-097-SA5DN-SB-4.0-5.0(RES)	TIN	2.89 mg/Kg	2.89U mg/Kg
SL-097-SA5DN-SB-8.5-9.5(RES)	TIN	2.51 mg/Kg	2.51U mg/Kg
SL-098-SA5DN-SB-4.0-5.0(RES)	TIN	3.04 mg/Kg	3.04U mg/Kg
SL-098-SA5DN-SB-7.0-8.0(RES)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-099-SA5DN-SB-4.0-5.0(RES)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-113-SA5DN-SB-4.0-5.0(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-120-SA5DN-SB-4.0-5.0(RES)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-121-SA5DN-SB-4.0-5.0(RES)	TIN	2.97 mg/Kg	2.97U mg/Kg
SL-121-SA5DN-SB-8.0-9.0(RES)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-125-SA5DN-SB-4.0-5.0(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg
SL-125-SA5DN-SB-9.0-10.0(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17426AB220722A	6/24/2011 7:22:00 AM	COPPER	0.308 mg/Kg	SL-097-SA5DN-SB-4.0-5.0 SL-097-SA5DN-SB-8.5-9.5 SL-098-SA5DN-SB-4.0-5.0 SL-098-SA5DN-SB-7.0-8.0 SL-099-SA5DN-SB-4.0-5.0 SL-113-SA5DN-SB-4.0-5.0 SL-120-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-8.0-9.0 SL-125-SA5DN-SB-4.0-5.0 SL-125-SA5DN-SB-9.0-10.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB96B211423A	6/23/2011 2:23:00 PM	ACETONE METHYLENE CHLORIDE	11 ug/Kg 2.0 ug/Kg	SL-097-SA5DN-SB-4.0-5.0 SL-097-SA5DN-SB-8.5-9.5 SL-098-SA5DN-SB-4.0-5.0 SL-098-SA5DN-SB-7.0-8.0 SL-099-SA5DN-SB-4.0-5.0 SL-113-SA5DN-SB-4.0-5.0 SL-120-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-8.0-9.0 SL-125-SA5DN-SB-4.0-5.0 SL-125-SA5DN-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-097-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.0 ug/Kg	8.3U ug/Kg
SL-097-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.2 ug/Kg	4.1U ug/Kg
SL-097-SA5DN-SB-8.5-9.5(RES)	ACETONE	8.2 ug/Kg	8.2U ug/Kg
SL-097-SA5DN-SB-8.5-9.5(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	4.1U ug/Kg
SL-098-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-098-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.5 ug/Kg	4.2U ug/Kg
SL-098-SA5DN-SB-7.0-8.0(RES)	ACETONE	8.5 ug/Kg	8.5U ug/Kg
SL-098-SA5DN-SB-7.0-8.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.0U ug/Kg
SL-099-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.2 ug/Kg	4.0U ug/Kg
SL-113-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.9 ug/Kg	8.9U ug/Kg
SL-113-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.5 ug/Kg	4.1U ug/Kg
SL-120-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.3 ug/Kg	4.2U ug/Kg
SL-121-SA5DN-SB-4.0-5.0(RES)	ACETONE	8.5 ug/Kg	8.5U ug/Kg
SL-121-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	4.1U ug/Kg
SL-121-SA5DN-SB-8.0-9.0(RES)	ACETONE	8.4 ug/Kg	8.4U ug/Kg
SL-121-SA5DN-SB-8.0-9.0(RES)	METHYLENE CHLORIDE	2.1 ug/Kg	4.1U ug/Kg
SL-125-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.1U ug/Kg
SL-125-SA5DN-SB-9.0-10.0(RES)	ACETONE	8.2 ug/Kg	8.2U ug/Kg
SL-125-SA5DN-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	2.2 ug/Kg	3.9U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-097-SA5DN-SB-4.0-5.0MSD (SL-097-SA5DN-SB-4.0-5.0)	m-Terphenyl	-	71	75.00-125.00	-	m-Terphenyl	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-097-SA5DN-SB-4.0-5.0MS (SL-097-SA5DN-SB-4.0-5.0 SL-097-SA5DN-SB-8.5-9.5 SL-098-SA5DN-SB-4.0-5.0 SL-098-SA5DN-SB-7.0-8.0 SL-099-SA5DN-SB-4.0-5.0 SL-113-SA5DN-SB-4.0-5.0 SL-120-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-4.0-5.0 SL-121-SA5DN-SB-8.0-9.0 SL-125-SA5DN-SB-4.0-5.0)	FLUORIDE	56	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-125-SA5DN-SB-9.0-10.0MS (SL-125-SA5DN-SB-9.0-10.0)	FLUORIDE	62	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-097-SA5DN-SB-4.0-5.0DUP	FLUORIDE	71	20.00	
(SL-097-SA5DN-SB-4.0-5.0	Nitrate-NO3	33	20.00	
SL -097-SA5DN-SB-8.5-9.5				
SL -098-SA5DN-SB-4.0-5.0				
SL -098-SA5DN-SB-7.0-8.0				No Qual,
SL -099-SA5DN-SB-4.0-5.0				OK by Difference
SL -113-SA5DN-SB-4.0-5.0				
SL -120-SA5DN-SB-4.0-5.0				
SL -121-SA5DN-SB-4.0-5.0				
SL -121-SA5DN-SB-8.0-9.0				
SL -125-SA5DN-SB-4.0-5.0)				

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-125-SA5DN-SB-9.0-10.0DUP	HEXAVALENT CHROMIUM	55	20.00	
(SL-097-SA5DN-SB-4.0-5.0				
SL -097-SA5DN-SB-8.5-9.5				
SL -098-SA5DN-SB-4.0-5.0				
SL -098-SA5DN-SB-7.0-8.0				
SL -099-SA5DN-SB-4.0-5.0				No Qual,
SL -113-SA5DN-SB-4.0-5.0				OK by Difference
SL -120-SA5DN-SB-4.0-5.0				
SL -121-SA5DN-SB-4.0-5.0				
SL -121-SA5DN-SB-8.0-9.0				
SL -125-SA5DN-SB-4.0-5.0				
SL -125-SA5DN-SB-9.0-10.0)				

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8082**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P11743AQ241637A P11743AY241619A (SL-097-SA5DN -SB-4.0-5.0 SL -097-SA5DN -SB-8.5-9.5 SL -098-SA5DN -SB-4.0-5.0 SL -098-SA5DN -SB-7.0-8.0 SL -099-SA5DN -SB-4.0-5.0 SL -113-SA5DN -SB-4.0-5.0 SL -120-SA5DN -SB-4.0-5.0 SL -121-SA5DN -SB-8.0-9.0 SL -125-SA5DN -SB-4.0-5.0 SL -125-SA5DN -SB-9.0-10.0)	Aroclor 5442	119	111	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	20.9	38.8	PQL	ng/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	18.6	36.4	PQL	ng/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	N-NITROSODIMETHYLAMINE	J	19.1	34.8	PQL	ng/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	32.9	38.2	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-8.5-9.5	Nitrate-NO3	J	1.1	1.7	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	Nitrate-NO3	J	1.2	1.8	PQL	mg/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	Nitrate-NO3	J	1.6	1.7	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-9.0-10.0	Nitrate-NO3	J	1.1	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.89 3.61	11.6 5.80	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-097-SA5DN-SB-8.5-9.5	TIN Zirconium	J J	2.51 3.17	11.2 5.61	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-098-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	3.04 4.16	11.5 5.73	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	TIN Zirconium	J J	2.71 3.87	11.6 5.80	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.71 2.98	10.9 5.47	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.78 3.50	11.6 5.79	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.96 2.16	11.2 5.58	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.97 4.08	10.9 5.45	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	TIN Zirconium	J J	2.85 2.63	10.4 5.21	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	TIN Zirconium	J J	2.67 2.03	11.3 5.67	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-125-SA5DN-SB-9.0-10.0	TIN Zirconium	J J	2.67 3.00	10.4 5.18	PQL PQL	mg/Kg mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.213	0.228	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.110	0.455	PQL	mg/Kg	
	SILVER	J	0.0680	0.114	PQL	mg/Kg	
SL-097-SA5DN-SB-8.5-9.5	ANTIMONY	J	0.160	0.218	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0586	0.109	PQL	mg/Kg	
SL-098-SA5DN-SB-4.0-5.0	SELENIUM	J	0.192	0.449	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	ANTIMONY	J	0.187	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0704	0.450	PQL	mg/Kg	
	SILVER	J	0.100	0.113	PQL	mg/Kg	
SL-099-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.173	0.217	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0993	0.433	PQL	mg/Kg	
	SILVER	J	0.0887	0.108	PQL	mg/Kg	
SL-113-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.218	0.238	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.115	0.477	PQL	mg/Kg	
	SILVER	J	0.0989	0.119	PQL	mg/Kg	
SL-120-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.202	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0901	0.451	PQL	mg/Kg	
	SILVER	J	0.0798	0.113	PQL	mg/Kg	
SL-121-SA5DN-SB-4.0-5.0	SELENIUM	J	0.119	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.101	0.108	PQL	mg/Kg	
SL-121-SA5DN-SB-8.0-9.0	ANTIMONY	J	0.175	0.213	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0822	0.425	PQL	mg/Kg	
	SILVER	J	0.0249	0.106	PQL	mg/Kg	
SL-125-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.160	0.220	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0733	0.441	PQL	mg/Kg	
	SILVER	J	0.0658	0.110	PQL	mg/Kg	
SL-125-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.146	0.211	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0554	0.106	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.35	1.2	PQL	mg/Kg	J (all detects)
SL-097-SA5DN-SB-8.5-9.5	HEXAVALENT CHROMIUM	J	0.35	1.1	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	1.1	1.2	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	HEXAVALENT CHROMIUM	J	0.40	1.2	PQL	mg/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.37	1.1	PQL	mg/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.60	1.1	PQL	mg/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.45	1.1	PQL	mg/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	HEXAVALENT CHROMIUM	J	0.31	1.1	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.46	1.1	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.31	1.1	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-8.5-9.5	MERCURY	J	0.0129	0.106	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-4.0-5.0	MERCURY	J	0.108	0.111	PQL	mg/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	MERCURY	J	0.0216	0.113	PQL	mg/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	MERCURY	J	0.0398	0.111	PQL	mg/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	MERCURY	J	0.0146	0.115	PQL	mg/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	MERCURY	J	0.0096	0.107	PQL	mg/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	MERCURY	J	0.0190	0.104	PQL	mg/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	MERCURY	J	0.0211	0.102	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	MERCURY	J	0.0142	0.109	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-9.0-10.0	MERCURY	J	0.0082	0.104	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA5DN-SB-7.0-8.0	EFH (C30-C40)	J	1.3	1.4	PQL	mg/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.70	1.4	PQL	mg/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	1.1	1.4	PQL	mg/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	EFH (C21-C30) EFH (C30-C40)	J J	0.51 0.84	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	1.1	1.3	PQL	mg/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	EFH (C15-C20)	J	1.3	2.5	PQL	mg/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.71	1.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA5DN-SB-7.0-8.0	AROCLOR 1254	J	0.57	2.0	PQL	ug/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	AROCLOR 1260	J	0.47	1.8	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	ACETONE METHYLENE CHLORIDE TOLUENE	J J J	8.0 2.2 0.09	8.3 4.1 4.1	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE185 **Laboratory: LL**

EDD Filename: DE185_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-8.5-9.5	METHYLENE CHLORIDE TOLUENE	J J	1.9 0.08	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-098-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.5	4.2	PQL	ug/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	METHYLENE CHLORIDE	J	1.8	4.0	PQL	ug/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	2.2	4.0	PQL	ug/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.5 0.09	4.1 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	2.3	4.2	PQL	ug/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.9	4.1	PQL	ug/Kg	J (all detects)
SL-121-SA5DN-SB-8.0-9.0	METHYLENE CHLORIDE	J	2.1	4.1	PQL	ug/Kg	J (all detects)
SL-125-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.8	4.1	PQL	ug/Kg	J (all detects)
SL-125-SA5DN-SB-9.0-10.0	METHYLENE CHLORIDE	J	2.2	3.9	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	390	PQL	ug/Kg	J (all detects)
SL-097-SA5DN-SB-8.5-9.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	370	PQL	ug/Kg	J (all detects)
SL-098-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	49	390	PQL	ug/Kg	J (all detects)
SL-098-SA5DN-SB-7.0-8.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	390	PQL	ug/Kg	J (all detects)
SL-099-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	380	PQL	ug/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	400	PQL	ug/Kg	J (all detects)
SL-120-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	29	370	PQL	ug/Kg	J (all detects)
SL-121-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA5DN-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.79	1.9	PQL	ug/Kg	J (all detects)
SL-113-SA5DN-SB-4.0-5.0	ANTHRACENE BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE INDENO(1,2,3-CD)PYRENE	J J J J J J	1.1 1.9 1.9 1.3 1.1 1.1	2.0 2.0 2.0 2.0 2.0 2.0	PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)

LDC #: 26277P4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/30/11
SDG #: DE185 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: W
2nd Reviewer: A

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	✓
IV.	Blanks	~~SW~~	~~NC~~
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	DE186
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	~~NA~~	SKM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	As, Ba, Co, Pb, Ni
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-097-SA5DN-SB-4.0-5.0	11	SL-125-SA5DN-SB-9.0-10.0	21		31	
2	SL-097-SA5DN-SB-8.5-9.5	12		22		32	
3	SL-098-SA5DN-SB-4.0-5.0	13		23		33	
4	SL-098-SA5DN-SB-7.0-8.0	14		24		34	
5	SL-099-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-113-SA5DN-SB-4.0-5.0	16		26		36	
7	SL-120-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-121-SA5DN-SB-4.0-5.0	18		28		38	
9	SL-121-SA5DN-SB-8.0-9.0	19		29		39	
10	SL-125-SA5DN-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 26277P4

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: 166.7X
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 1 (ND)

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit										
Hg			0.12	0.1										

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.

SAMPLE DELIVERY GROUP

DE186

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Jun-2011	TB-062211	6325688	TB	5030B	8015M	III
22-Jun-2011	TB-062211	6325688	TB	5030B	8260B	III
22-Jun-2011	TB-062211	6325688	TB	5030B	8260B SIM	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3050B	6010B	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3050B	6020	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3060A	7199	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3550B	8082	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3550B	8270C	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	3550B	8270C SIM	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	5035	8260B	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	5035	8260B SIM	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	METHOD	300.0	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	METHOD	314.0	III
22-Jun-2011	SL-094-SA5DN-SB-4.0-5.0	6325676	N	METHOD	7471A	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3050B	6010B	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3050B	6020	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3060A	7199	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3550B	8082	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3550B	8270C	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	3550B	8270C SIM	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	METHOD	300.0	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	METHOD	314.0	III
22-Jun-2011	SL-094-SA5DN-SB-9.0-10.0	6325677	N	METHOD	7471A	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3050B	6010B	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3050B	6020	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3550B	8082	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3550B	8270C	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	3550B	8270C SIM	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	5035	8260B	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	5035	8260B SIM	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	METHOD	300.0	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	METHOD	314.0	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	METHOD	6850	III
22-Jun-2011	SL-095-SA5DN-SB-4.0-5.0	6325678	N	METHOD	7471A	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3050B	6010B	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3050B	6020	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3060A	7199	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3550B	8082	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3550B	8270C	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	3550B	8270C SIM	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	METHOD	300.0	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	METHOD	314.0	III
22-Jun-2011	SL-095-SA5DN-SB-9.0-10.0	6325679	N	METHOD	7471A	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3050B	6010B	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3050B	6020	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3060A	7199	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3546	1625C	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3550B	8082	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3550B	8270C	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	3550B	8270C SIM	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	5035	8260B	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
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	5035	8260B SIM	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	METHOD	300.0	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	METHOD	314.0	III
22-Jun-2011	SL-115-SA5DN-SB-4.0-5.0	6325686	N	METHOD	7471A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3050B	6010B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3050B	6020	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3060A	7199	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3546	1625C	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3550B	8015B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3550B	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3550B	8082	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3550B	8270C	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	3550B	8270C SIM	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	5035	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	5035	8260B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	5035	8260B SIM	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	8330	8330A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	300.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	314.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	7471A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	8015B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	8315A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0	6325681	N	METHOD	9012B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3050B	6010B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3050B	6020	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
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3060A	7199	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3546	1625C	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3550B	8015B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3550B	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3550B	8082	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3550B	8270C	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	3550B	8270C SIM	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	5035	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	5035	8260B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	5035	8260B SIM	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	8330	8330A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	300.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	314.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	7471A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	8015B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	8015M	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	8315A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325682	MS	METHOD	9012B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0MS	6325683	MS	5035	8260B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	3050B	6010B	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	3050B	6020	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	3060A	7199	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	METHOD	300.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	METHOD	314.0	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	METHOD	7471A	III
22-Jun-2011	SL-112-SA5DN-SB-4.0-5.0DU	6325684	DUP	METHOD	9012B	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
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3050B	6010B	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3050B	6020	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3060A	7199	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3546	1625C	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3550B	8015B	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3550B	8015M	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3550B	8082	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3550B	8270C	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	3550B	8270C SIM	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	5035	8015M	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	5035	8260B	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	5035	8260B SIM	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	8330	8330A	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	300.0	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	314.0	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	7471A	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	8015B	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	8015M	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	8315A	III
22-Jun-2011	DUP16-SA5DN-QC-062211	6325687	FD	METHOD	9012B	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3005A	6010B	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3020A	6020	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3510C	8015B	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3510C	8015M	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3510C	8082	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3510C	8270C	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
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3510C	8270C SIM	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	3520C	1625C	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	5030B	8015M	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	5030B	8260B	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	5030B	8260B SIM	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	8330	8330A	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	Gen Prep	300.0	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	Gen Prep	314.0	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	Gen Prep	7199	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	Gen Prep	8015B	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	Gen Prep	8015M	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	METHOD	7470A	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	METHOD	8315A	III
22-Jun-2011	EB19-SA5DN-SB-062211	6325689	EB	METHOD	9012B	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3050B	6010B	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3050B	6020	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3060A	7199	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3546	1625C	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3550B	8082	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3550B	8270C	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	3550B	8270C SIM	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	5035	8260B	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	5035	8260B SIM	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	METHOD	300.0	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	METHOD	314.0	III
22-Jun-2011	SL-114-SA5DN-SB-4.0-5.0	6325685	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3050B	6010B	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3050B	6020	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3060A	7199	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3546	1625C	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3550B	8015B	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3550B	8015M	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3550B	8082	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3550B	8270C	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	3550B	8270C SIM	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	5035	8015M	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	5035	8260B	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	5035	8260B SIM	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	8330	8330A	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	300.0	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	314.0	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	7471A	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	8015B	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	8015M	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	8315A	III
22-Jun-2011	SL-111-SA5DN-SB-4.0-5.0	6325680	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.3		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.2		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-094-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 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	3.7		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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	2.3		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-095-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.1		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.7		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.0		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-114-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.90	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.7		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** AQ

Sample ID: EB19-SA5DN-SB-062211 *Collected:* 6/22/2011 1:45:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	0.186	J	0.0874	MDL	0.500	PQL	mg/L	U	B
STRONTIUM	0.00039	J	0.00022	MDL	0.0050	PQL	mg/L	U	B
Zirconium	0.0078	J	0.0042	MDL	0.0500	PQL	mg/L	J	Z

Sample ID: EB19-SA5DN-SB-062211 *Collected:* 6/22/2011 1:45:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0145	J	0.0022	MDL	0.0500	PQL	mg/L	U	B

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3780		12.6	MDL	55.7	PQL	mg/Kg	J	Q
TIN	2.70	J	0.356	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3650		12.9	MDL	57.3	PQL	mg/Kg	J	Q
SODIUM	99.8	J	6.82	MDL	115	PQL	mg/Kg	J	Z
TIN	2.78	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	5.03	J	0.527	MDL	5.73	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-094-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 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
POTASSIUM	3200		12.8	MDL	56.7	PQL	mg/Kg	J	Q
TIN	2.89	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	3.78	J	0.522	MDL	5.67	PQL	mg/Kg	U	F

Sample ID: SL-095-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 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
POTASSIUM	4190		12.6	MDL	55.9	PQL	mg/Kg	J	Q
SODIUM	106	J	6.65	MDL	112	PQL	mg/Kg	J	Z
TIN	2.55	J	0.358	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.35	J	0.514	MDL	5.59	PQL	mg/Kg	U	F

Sample ID: SL-095-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2440		12.5	MDL	55.3	PQL	mg/Kg	J	Q
SODIUM	100	J	6.57	MDL	111	PQL	mg/Kg	J	Z
TIN	2.17	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	2.32	J	0.508	MDL	5.53	PQL	mg/Kg	U	F

Sample ID: SL-111-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 3:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3530		12.5	MDL	55.3	PQL	mg/Kg	J	Q
TIN	2.59	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.28	J	0.509	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3900		13.0	MDL	57.3	PQL	mg/Kg	J	Q
TIN	3.35	J	0.367	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.33	J	0.527	MDL	5.73	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3870		12.6	MDL	55.7	PQL	mg/Kg	J	Q
TIN	2.58	J	0.357	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.86	J	0.513	MDL	5.57	PQL	mg/Kg	J	Z

Sample ID: SL-115-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 10:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3300		12.4	MDL	55.1	PQL	mg/Kg	J	Q
TIN	2.69	J	0.352	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	4.81	J	0.507	MDL	5.51	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 ***Collected:*** 6/22/2011 11:55:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.230		0.0832	MDL	0.225	PQL	mg/Kg	J	Q

Sample ID: DUP16-SA5DN-QC-062211 ***Collected:*** 6/22/2011 11:55:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.104	J	0.0652	MDL	0.450	PQL	mg/Kg	J	Z

Sample ID: DUP16-SA5DN-QC-062211 ***Collected:*** 6/22/2011 11:55:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.601		0.0562	MDL	0.112	PQL	mg/Kg	J	Q, E, E

Sample ID: DUP16-SA5DN-QC-062211 ***Collected:*** 6/22/2011 11:55:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	187		0.119	MDL	0.450	PQL	mg/Kg	J	E, E, A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 ***Collected:*** 6/22/2011 11:55:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.90		0.0899	MDL	0.450	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.01		0.0180	MDL	0.112	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.339		0.0495	MDL	0.112	PQL	mg/Kg	J	Q, E
CHROMIUM	33.7		0.135	MDL	0.450	PQL	mg/Kg	J	E, E
COBALT	11.6		0.0225	MDL	0.112	PQL	mg/Kg	J	Q, E, E, A
COPPER	16.9		0.0899	MDL	0.450	PQL	mg/Kg	J	Q, Q, E, E
LEAD	11.2		0.0115	MDL	0.225	PQL	mg/Kg	J	E, E, A
NICKEL	27.0		0.112	MDL	0.450	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0683	J	0.0160	MDL	0.112	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.355		0.0337	MDL	0.112	PQL	mg/Kg	J	Q, Q, E
VANADIUM	54.7		0.0247	MDL	0.112	PQL	mg/Kg	J	E, E
ZINC	79.3		0.630	MDL	3.37	PQL	mg/Kg	J	E, E

Sample ID: SL-094-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 9:30:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.175	J	0.0848	MDL	0.229	PQL	mg/Kg	J	Z, Q

Sample ID: SL-094-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 9:30:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.174	J	0.0665	MDL	0.458	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 9:30:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.711		0.0573	MDL	0.115	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-094-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 9:30:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	205		0.121	MDL	0.458	PQL	mg/Kg	J	E, E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-094-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 9:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	13.4		0.0917	MDL	0.458	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.21		0.0183	MDL	0.115	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.380		0.0504	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	41.7		0.138	MDL	0.458	PQL	mg/Kg	J	E, E
COBALT	14.3		0.0229	MDL	0.115	PQL	mg/Kg	J	Q, E, E, A
COPPER	23.2		0.0917	MDL	0.458	PQL	mg/Kg	J	Q, Q, E, E
LEAD	13.8		0.0117	MDL	0.229	PQL	mg/Kg	J	E, E, A
NICKEL	34.6		0.115	MDL	0.458	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0603	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.483		0.0344	MDL	0.115	PQL	mg/Kg	J	Q, Q, E
VANADIUM	71.6		0.0252	MDL	0.115	PQL	mg/Kg	J	E, E
ZINC	104		0.642	MDL	3.44	PQL	mg/Kg	J	E, E

Sample ID: SL-094-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 9:35:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.190	J	0.0840	MDL	0.227	PQL	mg/Kg	J	Z, Q

Sample ID: SL-094-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 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
MOLYBDENUM	0.524		0.0567	MDL	0.113	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-094-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 9:35:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	178		0.120	MDL	0.454	PQL	mg/Kg	J	E, E, A

Sample ID: SL-094-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 9:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.68		0.0908	MDL	0.454	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.22		0.0182	MDL	0.113	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.245		0.0499	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	38.4		0.136	MDL	0.454	PQL	mg/Kg	J	E, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-094-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 9:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	8.72		0.0227	MDL	0.113	PQL	mg/Kg	J	Q, E, E, A
COPPER	18.5		0.0908	MDL	0.454	PQL	mg/Kg	J	Q, Q, E, E
LEAD	11.3		0.0116	MDL	0.227	PQL	mg/Kg	J	E, E, A
NICKEL	26.6		0.113	MDL	0.454	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0969	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.443		0.0340	MDL	0.113	PQL	mg/Kg	J	Q, Q, E
VANADIUM	64.5		0.0250	MDL	0.113	PQL	mg/Kg	J	E, E
ZINC	77.8		0.635	MDL	3.40	PQL	mg/Kg	J	E, E

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:10:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.186	J	0.0819	MDL	0.221	PQL	mg/Kg	J	Z, Q

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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	0.196	J	0.0642	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:10:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.997		0.0553	MDL	0.111	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	157		0.117	MDL	0.443	PQL	mg/Kg	J	E, E, A

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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
ARSENIC	12.7		0.0885	MDL	0.443	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.42		0.0177	MDL	0.111	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.546		0.0487	MDL	0.111	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-095-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 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
CHROMIUM	49.9		0.133	MDL	0.443	PQL	mg/Kg	J	E, E
COBALT	19.9		0.0221	MDL	0.111	PQL	mg/Kg	J	Q, E, E, A
COPPER	29.1		0.0885	MDL	0.443	PQL	mg/Kg	J	Q, Q, E, E
LEAD	17.4		0.0113	MDL	0.221	PQL	mg/Kg	J	E, E, A
NICKEL	43.4		0.111	MDL	0.443	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0958	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.605		0.0332	MDL	0.111	PQL	mg/Kg	J	Q, Q, E
VANADIUM	81.1		0.0243	MDL	0.111	PQL	mg/Kg	J	E, E
ZINC	134		0.620	MDL	3.32	PQL	mg/Kg	J	E, E

Sample ID: SL-095-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 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
ANTIMONY	0.164	J	0.0810	MDL	0.219	PQL	mg/Kg	J	Z, Q

Sample ID: SL-095-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 10:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.524		0.0547	MDL	0.109	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-095-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 10:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	135		0.116	MDL	0.438	PQL	mg/Kg	J	E, E, A

Sample ID: SL-095-SA5DN-SB-9.0-10.0 ***Collected:*** 6/22/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	8.11		0.0875	MDL	0.438	PQL	mg/Kg	J	E, E, A
BERYLLIUM	0.867		0.0175	MDL	0.109	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.342		0.0481	MDL	0.109	PQL	mg/Kg	J	Q, E
CHROMIUM	28.0		0.131	MDL	0.438	PQL	mg/Kg	J	E, E
COBALT	10.3		0.0219	MDL	0.109	PQL	mg/Kg	J	Q, E, E, A
COPPER	14.0		0.0875	MDL	0.438	PQL	mg/Kg	J	Q, Q, E, E
LEAD	9.68		0.0112	MDL	0.219	PQL	mg/Kg	J	E, E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 Laboratory: LL

EDD Filename: DE186_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-095-SA5DN-SB-9.0-10.0 **Collected:** 6/22/2011 10:15:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	24.9		0.109	MDL	0.438	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0536	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.388		0.0328	MDL	0.109	PQL	mg/Kg	J	Q, Q, E
VANADIUM	52.9		0.0241	MDL	0.109	PQL	mg/Kg	J	E, E
ZINC	66.4		0.613	MDL	3.28	PQL	mg/Kg	J	E, E

Sample ID: SL-111-SA5DN-SB-4.0-5.0 **Collected:** 6/22/2011 3:20:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.159	J	0.0834	MDL	0.226	PQL	mg/Kg	J	Z, Q

Sample ID: SL-111-SA5DN-SB-4.0-5.0 **Collected:** 6/22/2011 3:20:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0749	J	0.0654	MDL	0.451	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA5DN-SB-4.0-5.0 **Collected:** 6/22/2011 3:20:00 **Analysis Type:** REA3 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.582		0.0564	MDL	0.113	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-111-SA5DN-SB-4.0-5.0 **Collected:** 6/22/2011 3:20:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	181		0.120	MDL	0.451	PQL	mg/Kg	J	E, E, A

Sample ID: SL-111-SA5DN-SB-4.0-5.0 **Collected:** 6/22/2011 3:20:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.67		0.0902	MDL	0.451	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.05		0.0180	MDL	0.113	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.270		0.0496	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	36.2		0.135	MDL	0.451	PQL	mg/Kg	J	E, E
COBALT	12.3		0.0226	MDL	0.113	PQL	mg/Kg	J	Q, E, E, A
COPPER	18.1		0.0902	MDL	0.451	PQL	mg/Kg	J	Q, Q, E, E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	11.7		0.0115	MDL	0.226	PQL	mg/Kg	J	E, E, A
NICKEL	27.3		0.113	MDL	0.451	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0763	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.394		0.0338	MDL	0.113	PQL	mg/Kg	J	Q, Q, E
VANADIUM	62.6		0.0248	MDL	0.113	PQL	mg/Kg	J	E, E
ZINC	77.9		0.631	MDL	3.38	PQL	mg/Kg	J	E, E

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.229		0.0849	MDL	0.229	PQL	mg/Kg	J	Q

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0665	MDL	0.459	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.831		0.0573	MDL	0.115	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA4 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	229		0.304	MDL	1.15	PQL	mg/Kg	J	E, E, A

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	12.3		0.0917	MDL	0.459	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.28		0.0183	MDL	0.115	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.506		0.0505	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	47.0		0.138	MDL	0.459	PQL	mg/Kg	J	E, E
COBALT	18.5		0.0229	MDL	0.115	PQL	mg/Kg	J	Q, E, E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-112-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 11:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	23.2		0.0917	MDL	0.459	PQL	mg/Kg	J	Q, Q, E, E
LEAD	15.9		0.0117	MDL	0.229	PQL	mg/Kg	J	E, E, A
NICKEL	42.5		0.115	MDL	0.459	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0865	J	0.0163	MDL	0.115	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.549		0.0344	MDL	0.115	PQL	mg/Kg	J	Q, Q, E
VANADIUM	80.6		0.0252	MDL	0.115	PQL	mg/Kg	J	E, E
ZINC	109		0.642	MDL	3.44	PQL	mg/Kg	J	E, E

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.169	J	0.0801	MDL	0.217	PQL	mg/Kg	J	Z, Q

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.122	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.816		0.0541	MDL	0.108	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	142		0.115	MDL	0.433	PQL	mg/Kg	J	E, E, A

Sample ID: SL-114-SA5DN-SB-4.0-5.0 ***Collected:*** 6/22/2011 2:25:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.87		0.0866	MDL	0.433	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.17		0.0173	MDL	0.108	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.418		0.0476	MDL	0.108	PQL	mg/Kg	J	Q, E
CHROMIUM	38.9		0.130	MDL	0.433	PQL	mg/Kg	J	E, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 Laboratory: LL

EDD Filename: DE186_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-114-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 2:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	15.0		0.0217	MDL	0.108	PQL	mg/Kg	J	Q, E, E, A
COPPER	21.9		0.0866	MDL	0.433	PQL	mg/Kg	J	Q, Q, E, E
LEAD	13.3		0.0110	MDL	0.217	PQL	mg/Kg	J	E, E, A
NICKEL	33.0		0.108	MDL	0.433	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0681	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.479		0.0325	MDL	0.108	PQL	mg/Kg	J	Q, Q, E
VANADIUM	62.5		0.0238	MDL	0.108	PQL	mg/Kg	J	E, E
ZINC	97.5		0.606	MDL	3.25	PQL	mg/Kg	J	E, E

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.156	J	0.0831	MDL	0.225	PQL	mg/Kg	J	Z, Q

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0811	J	0.0651	MDL	0.449	PQL	mg/Kg	J	Z

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.406		0.0562	MDL	0.112	PQL	mg/Kg	J	Q, E, E

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	165		0.119	MDL	0.449	PQL	mg/Kg	J	E, E, A

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	9.56		0.0898	MDL	0.449	PQL	mg/Kg	J	E, E, A
BERYLLIUM	1.04		0.0180	MDL	0.112	PQL	mg/Kg	J	Q, Q, E, E
CADMIUM	0.343		0.0494	MDL	0.112	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 Laboratory: LL

EDD Filename: DE186_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	37.3		0.135	MDL	0.449	PQL	mg/Kg	J	E, E
COBALT	14.8		0.0225	MDL	0.112	PQL	mg/Kg	J	Q, E, E, A
COPPER	18.0		0.0898	MDL	0.449	PQL	mg/Kg	J	Q, Q, E, E
LEAD	12.7		0.0115	MDL	0.225	PQL	mg/Kg	J	E, E, A
NICKEL	33.6		0.112	MDL	0.449	PQL	mg/Kg	J	E, E, Q, A
SILVER	0.0682	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z, Q, E
THALLIUM	0.404		0.0337	MDL	0.112	PQL	mg/Kg	J	Q, Q, E
VANADIUM	60.5		0.0247	MDL	0.112	PQL	mg/Kg	J	E, E
ZINC	83.1		0.629	MDL	3.37	PQL	mg/Kg	J	E, E

Method Category: METALS **Method:** 7199 **Matrix:** AQ

Sample ID: EB19-SA5DN-SB-062211 *Collected:* 6/22/2011 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
HEXAVALENT CHROMIUM	5.0	U	5.0	MDL	10.0	PQL	ug/L	R	H

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.70	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.57	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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
HEXAVALENT CHROMIUM	0.86	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.49	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.74	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-114-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.70	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.010	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0217	J	0.0078	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 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
MERCURY	0.0359	J	0.0080	MDL	0.114	PQL	mg/Kg	U	B

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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	0.0164	J	0.0075	MDL	0.107	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 Laboratory: LL

EDD Filename: DE186_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7471A Matrix: SO

Sample ID: SL-095-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0170	J	0.0076	MDL	0.108	PQL	mg/Kg	U	B

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0518	J	0.0076	MDL	0.108	PQL	mg/Kg	U	B

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0104	J	0.0078	MDL	0.112	PQL	mg/Kg	U	B

Sample ID: SL-115-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:55:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0102	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8015M Matrix: SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	2.6		0.46	MDL	1.4	PQL	mg/Kg	J	FD
EFH (C30-C40)	15		0.46	MDL	1.4	PQL	mg/Kg	J	FD

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.96	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHYLENE GLYCOL	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.4	J	0.47	MDL	1.4	PQL	mg/Kg	J	FD
EFH (C30-C40)	4.2		0.47	MDL	1.4	PQL	mg/Kg	J	Q, FD

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.7	J	1.1	MDL	3.8	PQL	ug/Kg	J	Z, FD, L

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.2	U	1.2	MDL	3.9	PQL	ug/Kg	UJ	FD

Method Category: SVOA

Method: 8270C **Matrix:** AQ

Sample ID: EB19-SA5DN-SB-062211 *Collected:* 6/22/2011 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
3,3'-DICHLOROBENZIDINE	2	U	2	MDL	5	PQL	ug/L	UJ	L, E
4-CHLOROANILINE	1	U	1	MDL	5	PQL	ug/L	UJ	L, E
ANILINE	1	U	1	MDL	5	PQL	ug/L	UJ	E
BENZIDINE	20	U	20	MDL	59	PQL	ug/L	UJ	E
BENZOIC ACID	6	U	6	MDL	15	PQL	ug/L	UJ	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1400	U	1400	MDL	3900	PQL	ug/Kg	UJ	Q

Method Category: SVOA **Method:** 8270C SIM **Matrix:** AQ

Sample ID: EB19-SA5DN-SB-062211 *Collected:* 6/22/2011 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-METHYLNAPHTHALENE	0.012	J	0.0097	MDL	0.048	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.012	J	0.0097	MDL	0.048	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.11	J	0.048	MDL	0.97	PQL	ug/L	U	B
Di-n-butylphthalate	0.17	J	0.048	MDL	0.97	PQL	ug/L	U	B

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	6.8	U	6.8	MDL	20	PQL	ug/Kg	UJ	FD

Sample ID: SL-095-SA5DN-SB-9.0-10.0 *Collected:* 6/22/2011 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.75	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory:** LL

EDD Filename: DE186_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-111-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 3:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	11	J	6.8	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	11	J	6.9	MDL	21	PQL	ug/Kg	J	Z, FD

Method Category: VOA **Method:** 8015B **Matrix:** SO

Sample ID: SL-112-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 11:45:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.8	U	1.8	MDL	4.1	PQL	mg/Kg	UJ	Q

Method Category: VOA **Method:** 8260B **Matrix:** SO

Sample ID: DUP16-SA5DN-QC-062211 *Collected:* 6/22/2011 11:55:00 *Analysis Type:* RES *Dilution:* 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.5	J	6.4	MDL	7.6	PQL	ug/Kg	J	Z, FD
METHYLENE CHLORIDE	1.6	J	0.23	MDL	3.8	PQL	ug/Kg	U	B, F
TOLUENE	0.08	J	0.08	MDL	3.8	PQL	ug/Kg	UJ	B, FD

Sample ID: SL-094-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 9:30:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.8	J	0.24	MDL	4.0	PQL	ug/Kg	U	B, F
TOLUENE	0.09	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-095-SA5DN-SB-4.0-5.0 *Collected:* 6/22/2011 10:10:00 *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.9	J	0.24	MDL	4.0	PQL	ug/Kg	U	B, F

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-095-SA5DN-SB-4.0-5.0** ***Collected:*** **6/22/2011 10:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.88**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.10	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: **SL-111-SA5DN-SB-4.0-5.0** ***Collected:*** **6/22/2011 3:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.81**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.6	J	0.22	MDL	3.7	PQL	ug/Kg	U	B, F

Sample ID: **SL-112-SA5DN-SB-4.0-5.0** ***Collected:*** **6/22/2011 11:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.91**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.1	U	7.1	MDL	8.5	PQL	ug/Kg	UJ	FD
METHYLENE CHLORIDE	1.6	J	0.25	MDL	4.2	PQL	ug/Kg	U	B, F
TOLUENE	0.08	U	0.08	MDL	4.2	PQL	ug/Kg	UJ	FD

Sample ID: **SL-114-SA5DN-SB-4.0-5.0** ***Collected:*** **6/22/2011 2:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.87**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	2.0	J	0.23	MDL	3.9	PQL	ug/Kg	U	B, F
TOLUENE	0.1	J	0.08	MDL	3.9	PQL	ug/Kg	U	B

Sample ID: **SL-115-SA5DN-SB-4.0-5.0** ***Collected:*** **6/22/2011 10:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.93**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	1.7	J	0.26	MDL	4.3	PQL	ug/Kg	U	B, F
TOLUENE	0.10	J	0.09	MDL	4.3	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE186

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE186 **Laboratory: LL**
EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199 **Preparation Method: Gen Prep**
Matrix: AQ

Sample ID	*Type*	*Actual*	*Criteria*	*Units*	*Flag*
EB19-SA5DN-SB-062211 (RES)	Sampling To Analysis	72.00	24.00	HOURS	J (all detects) R (all non-detects)

Project Name and Number: 1203-004-008-AL -

Method Blank Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P18048AB220913	6/30/2011 9:13:00 AM	ALUMINUM CALCIUM POTASSIUM STRONTIUM	0.115 mg/L 0.0787 mg/L 0.155 mg/L 0.00041 mg/L	EB19-SA5DN-SB-062211
P18048AB221138	7/6/2011 11:38:00 AM	BORON	0.0150 mg/L	EB19-SA5DN-SB-062211

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
EB19-SA5DN-SB-062211(REA2)	POTASSIUM	0.186 mg/L	0.186U mg/L
EB19-SA5DN-SB-062211(REA2)	STRONTIUM	0.00039 mg/L	0.00039U mg/L
EB19-SA5DN-SB-062211(REA3)	BORON	0.0145 mg/L	0.0145U mg/L

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17908AB221624	6/30/2011 4:24:00 PM	MAGNESIUM MANGANESE PHOSPHORUS TIN	1.16 mg/Kg 0.135 mg/Kg 1.38 mg/Kg 1.57 mg/Kg	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-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
DUP16-SA5DN-QC-062211(RES)	TIN	2.70 mg/Kg	2.70U mg/Kg
SL-094-SA5DN-SB-4.0-5.0(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-094-SA5DN-SB-9.0-10.0(RES)	TIN	2.89 mg/Kg	2.89U mg/Kg
SL-095-SA5DN-SB-4.0-5.0(RES)	TIN	2.55 mg/Kg	2.55U mg/Kg
SL-095-SA5DN-SB-9.0-10.0(RES)	TIN	2.17 mg/Kg	2.17U mg/Kg
SL-111-SA5DN-SB-4.0-5.0(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-112-SA5DN-SB-4.0-5.0(RES)	TIN	3.35 mg/Kg	3.35U mg/Kg
SL-114-SA5DN-SB-4.0-5.0(RES)	TIN	2.58 mg/Kg	2.58U mg/Kg
SL-115-SA5DN-SB-4.0-5.0(RES)	TIN	2.69 mg/Kg	2.69U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P17426AB220722A	6/24/2011 7:22:00 AM	COPPER	0.308 mg/Kg	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB01B211216A	6/28/2011 12:16:00 PM	METHYLENE CHLORIDE TOLUENE	1.4 ug/Kg 0.08 ug/Kg	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-4.0-5.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-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
DUP16-SA5DN-QC-062211(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.8U ug/Kg
DUP16-SA5DN-QC-062211(RES)	TOLUENE	0.08 ug/Kg	3.8U ug/Kg
SL-094-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.0U ug/Kg
SL-094-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.09 ug/Kg	4.0U ug/Kg
SL-095-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	4.0U ug/Kg
SL-095-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.10 ug/Kg	4.0U ug/Kg
SL-111-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.7U ug/Kg
SL-112-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.2U ug/Kg
SL-114-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.0 ug/Kg	3.9U ug/Kg
SL-114-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.1 ug/Kg	3.9U ug/Kg
SL-115-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.3U ug/Kg
SL-115-SA5DN-SB-4.0-5.0(RES)	TOLUENE	0.10 ug/Kg	4.3U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWD17B262052	7/3/2011 8:52:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	0.071 ug/L 0.084 ug/L	EB19-SA5DN-SB-062211

Method Blank Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **AQ**

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
EB19-SA5DN-SB-062211(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.11 ug/L	0.97U ug/L
EB19-SA5DN-SB-062211(RES)	Di-n-butylphthalate	0.17 ug/L	0.97U ug/L

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB19-SA5DN-SB-062211 (REA2)	6/22/2011 1:45:00 PM	POTASSIUM STRONTIUM Zirconium	0.186 mg/L 0.00039 mg/L 0.0078 mg/L	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0
EB19-SA5DN-SB-062211 (REA3)	6/22/2011 1:45:00 PM	BORON	0.0145 mg/L	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-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-094-SA5DN-SB-9.0-10.0(RES)	Zirconium	3.78 mg/Kg	3.78U mg/Kg
SL-095-SA5DN-SB-4.0-5.0(RES)	Zirconium	2.35 mg/Kg	2.35U mg/Kg
SL-095-SA5DN-SB-9.0-10.0(RES)	Zirconium	2.32 mg/Kg	2.32U mg/Kg

Method: **8260B**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB19-SA5DN-SB-062211 (RES)	6/22/2011 1:45:00 PM	METHYLENE CHLORIDE	7 ug/L	DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-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
DUP16-SA5DN-QC-062211(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.8U ug/Kg
SL-094-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.8 ug/Kg	4.0U ug/Kg
SL-095-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	4.0U ug/Kg
SL-111-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	3.7U ug/Kg
SL-112-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.2U ug/Kg
SL-114-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.0 ug/Kg	3.9U ug/Kg
SL-115-SA5DN-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.7 ug/Kg	4.3U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE186 Laboratory: LL

EDD Filename: DE186_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN -SB-4.0-5.0MS SL-112-SA5DN -SB-4.0-5.0MSD (SL-112-SA5DN -SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL	37 61	36 -	59.00-109.00 63.00-107.00	- -	DIETHYLENE GLYCOL ETHYLENE GLYCOL	J (all detects) UJ (all non-detects)

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN -SB-4.0-5.0MS SL-112-SA5DN -SB-4.0-5.0MSD (SL-112-SA5DN -SB-4.0-5.0)	m-Terphenyl	66	68	75.00-125.00	-	m-Terphenyl	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-112-SA5DN -SB-4.0-5.0MS SL-112-SA5DN -SB-4.0-5.0MSD (SL-112-SA5DN -SB-4.0-5.0)	EFH (C30-C40)	-29	-50	49.00-123.00	-	EFH (C30-C40)	J(all detects) R(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN -SB-4.0-5.0MS SL-112-SA5DN -SB-4.0-5.0MSD (DUP16 -SA5DN -QC-062211 SL -094-SA5DN -SB-4.0-5.0 SL -094-SA5DN -SB-9.0-10.0 SL -095-SA5DN -SB-4.0-5.0 SL -095-SA5DN -SB-9.0-10.0 SL -111-SA5DN -SB-4.0-5.0 SL -112-SA5DN -SB-4.0-5.0 SL -114-SA5DN -SB-4.0-5.0 SL -115-SA5DN -SB-4.0-5.0)	ARSENIC CHROMIUM LEAD NICKEL VANADIUM ZINC	-76 -25 -58 -25 -105 -184	172 157 188 158 172 278	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	43 (20.00) 38 (20.00) 47 (20.00) 42 (20.00) 38 (20.00) 46 (20.00)	ARSENIC CHROMIUM LEAD NICKEL VANADIUM ZINC	J(all detects) UJ(all non-detects) As, Cr, Pb, V, Zn, No Qual, %R, >4x Ni, J(all detects) R (all non-detects) Ni post spike = 65%

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN-SB-4.0-5.0MS SL-112-SA5DN-SB-4.0-5.0MSD (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	ANTIMONY BERYLLIUM CADMIUM COBALT COPPER SILVER THALLIUM	51 47 - - 35 - 62	46 129 128 129 161 130 138	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	- 36 (20.00) 30 (20.00) 31 (20.00) 42 (20.00) 24 (20.00) 34 (20.00)	ANTIMONY BERYLLIUM CADMIUM COBALT COPPER SILVER THALLIUM	J(all detects) UJ(all non-detects)
SL-112-SA5DN-SB-4.0-5.0MSD (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	MOLYBDENUM	-	130	75.00-125.00	28 (20.00)	MOLYBDENUM	J(all detects) UJ(all non-detects)
SL-112-SA5DN-SB-4.0-5.0MS SL-112-SA5DN-SB-4.0-5.0MSD (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	BARIUM	-454	238	75.00-125.00	37 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual, %R, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN-SB-4.0-5.0MSD (SL-112-SA5DN-SB-4.0-5.0)	BENZIDINE	-	33	35.00-141.00	-	BENZIDINE	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN-SB-4.0-5.0MS (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	FLUORIDE	52	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-112-SA5DN-SB-4.0-5.0MS	ALUMINUM	2698	3301	75.00-125.00	-	ALUMINUM	
SL-112-SA5DN-SB-4.0-5.0MSD	CALCIUM	-	133	75.00-125.00	-	CALCIUM	
(DUP16-SA5DN-QC-062211	IRON	621	1094	75.00-125.00	-	IRON	J(all detects)
SL-094-SA5DN-SB-4.0-5.0	MAGNESIUM	266	310	75.00-125.00	-	MAGNESIUM	
SL-094-SA5DN-SB-9.0-10.0	MANGANESE	158	207	75.00-125.00	-	MANGANESE	
SL-095-SA5DN-SB-4.0-5.0	POTASSIUM	147	147	75.00-125.00	-	POTASSIUM	
SL-095-SA5DN-SB-9.0-10.0							Al, Ca, Fe, Mg, Mn, No Qual, >4x
SL-111-SA5DN-SB-4.0-5.0							
SL-112-SA5DN-SB-4.0-5.0							
SL-114-SA5DN-SB-4.0-5.0							
SL-115-SA5DN-SB-4.0-5.0)							
SL-112-SA5DN-SB-4.0-5.0MS	TITANIUM	177	281	75.00-125.00	-	TITANIUM	
SL-112-SA5DN-SB-4.0-5.0MSD							
(DUP16-SA5DN-QC-062211							
SL-094-SA5DN-SB-4.0-5.0							
SL-094-SA5DN-SB-9.0-10.0							
SL-095-SA5DN-SB-4.0-5.0							No Qual, >4x
SL-095-SA5DN-SB-9.0-10.0							
SL-111-SA5DN-SB-4.0-5.0							
SL-112-SA5DN-SB-4.0-5.0							
SL-114-SA5DN-SB-4.0-5.0							
SL-115-SA5DN-SB-4.0-5.0)							

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-112-SA5DN-SB-4.0-5.0DUP (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	TIN	23	20.00	No Qual, OK by Difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-112-SA5DN-SB-4.0-5.0DUP (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	ANTIMONY	25	20.00	
	ARSENIC	49	20.00	
	BARIUM	29	20.00	
	BERYLLIUM	30	20.00	
	CADMIUM	50	20.00	J(all detects) UJ(all non-detects)
	CHROMIUM	41	20.00	
	COBALT	50	20.00	
	COPPER	36	20.00	
	LEAD	39	20.00	
	MOLYBDENUM	62	20.00	
	NICKEL	40	20.00	Sb, Cd, Se, Tl, No Qual, OK by Difference
	SELENIUM	49	20.00	
	THALLIUM	36	20.00	
	VANADIUM	49	20.00	
	ZINC	36	20.00	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11794AQ241047A P11794AY241129A (EB19-SA5DN-SB-062211)	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE	110 110	110 110	76.00-109.00 69.00-107.00	- -	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE	J(all detects)

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P8WBLCSQ260155 P8WBLCSY260220 (EB19-SA5DN-SB-062211)	3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE ANILINE BENZIDINE BENZOIC ACID	26 41 - - -	45 - - - -	49.00-111.00 42.00-124.00 49.00-101.00 20.00-109.00 10.00-69.00	53 (30.00) 53 (30.00) 34 (30.00) 36 (30.00) 47 (30.00)	3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE ANILINE BENZIDINE BENZOIC ACID	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P8WDLCSQ262124 P8WDLCSY262155 (EB19-SA5DN-SB-062211)	BENZO(B)FLUORANTHENE INDENO(1,2,3-CD)PYRENE	137 135	130 128	69.00-123.00 69.00-124.00	- -	BENZO(B)FLUORANTHENE INDENO(1,2,3-CD)PYRENE	J(all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11769AY241944A (DUP16-SA5DN-QC-062211 SL-094-SA5DN-SB-4.0-5.0 SL-094-SA5DN-SB-9.0-10.0 SL-095-SA5DN-SB-4.0-5.0 SL-095-SA5DN-SB-9.0-10.0 SL-111-SA5DN-SB-4.0-5.0 SL-112-SA5DN-SB-4.0-5.0 SL-114-SA5DN-SB-4.0-5.0 SL-115-SA5DN-SB-4.0-5.0)	Aroclor 5442	-	111	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: PrepDE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
MOISTURE	14.5	12.8	12		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
FLUORIDE	3.0	3.3	10	50.00	No Qualifiers Applied
Nitrate-NO3	2.1	1.7	21	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
ALUMINUM	36500	37900	4	50.00	No Qualifiers Applied
BORON	17.8	16.6	7	50.00	
CALCIUM	6820	6970	2	50.00	
IRON	38400	38800	1	50.00	
LITHIUM	31.3	30.9	1	50.00	
MAGNESIUM	8050	8360	4	50.00	
MANGANESE	443	453	2	50.00	
PHOSPHORUS	325	337	4	50.00	
POTASSIUM	3900	3780	3	50.00	
SODIUM	186	190	2	50.00	
STRONTIUM	36.3	37.7	4	50.00	
TIN	3.35	2.70	21	50.00	
TITANIUM	1270	1050	19	50.00	
Zirconium	4.33	5.91	31	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
ANTIMONY	0.229	0.230	0	50.00	No Qualifiers Applied
ARSENIC	12.3	7.90	44	50.00	
BARIUM	229	187	20	50.00	
BERYLLIUM	1.28	1.01	24	50.00	
CADMIUM	0.506	0.339	40	50.00	
CHROMIUM	47.0	33.7	33	50.00	
COBALT	18.5	11.6	46	50.00	
COPPER	23.2	16.9	31	50.00	
LEAD	15.9	11.2	35	50.00	
MOLYBDENUM	0.831	0.601	32	50.00	
NICKEL	42.5	27.0	45	50.00	
SELENIUM	0.144	0.104	32	50.00	
SILVER	0.0865	0.0683	24	50.00	
THALLIUM	0.549	0.355	43	50.00	
VANADIUM	80.6	54.7	38	50.00	
ZINC	109	79.3	32	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: PrepDE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
HEXAVALENT CHROMIUM	0.74	0.70	6	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
MERCURY	0.0104	0.010	4	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
EFH (C21-C30)	1.4	2.6	60	50.00	J(all detects)
EFH (C30-C40)	4.2	15	113	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
Aroclor 5460	3.9 U	1.7	200	50.00	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
METHYLENE CHLORIDE	1.6	1.6	0	50.00	No Qualifiers Applied
ACETONE	8.5 U	7.5	200	50.00	J(all detects)
TOLUENE	4.2 U	0.08	200	50.00	UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
Di-n-butylphthalate	11	20 U	200	50.00	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: PrepDE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 9045M
Matrix: SO

Analyte	*Concentration (pH unit)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-112-SA5DN-SB-4.0-5.0	DUP16-SA5DN-QC-062211			
PH	7.38	7.39	0	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB19-SA5DN-SB-062211	BORON	J	0.0145	0.0500	PQL	mg/L	J (all detects)
	POTASSIUM	J	0.186	0.500	PQL	mg/L	
	STRONTIUM	J	0.00039	0.0050	PQL	mg/L	
	Zirconium	J	0.0078	0.0500	PQL	mg/L	

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB19-SA5DN-SB-062211	1-METHYLNAPHTHALENE	J	0.012	0.048	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.012	0.048	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.11	0.97	PQL	ug/L	
	Di-n-butylphthalate	J	0.17	0.97	PQL	ug/L	

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	TIN	J	2.70	11.1	PQL	mg/Kg	J (all detects)
SL-094-SA5DN-SB-4.0-5.0	SODIUM	J	99.8	115	PQL	mg/Kg	J (all detects)
	TIN	J	2.78	11.5	PQL	mg/Kg	
	Zirconium	J	5.03	5.73	PQL	mg/Kg	
SL-094-SA5DN-SB-9.0-10.0	TIN	J	2.89	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.78	5.67	PQL	mg/Kg	
SL-095-SA5DN-SB-4.0-5.0	SODIUM	J	106	112	PQL	mg/Kg	J (all detects)
	TIN	J	2.55	11.2	PQL	mg/Kg	
	Zirconium	J	2.35	5.59	PQL	mg/Kg	
SL-095-SA5DN-SB-9.0-10.0	SODIUM	J	100	111	PQL	mg/Kg	J (all detects)
	TIN	J	2.17	11.1	PQL	mg/Kg	
	Zirconium	J	2.32	5.53	PQL	mg/Kg	
SL-111-SA5DN-SB-4.0-5.0	TIN	J	2.59	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.28	5.53	PQL	mg/Kg	
SL-112-SA5DN-SB-4.0-5.0	TIN	J	3.35	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.33	5.73	PQL	mg/Kg	
SL-114-SA5DN-SB-4.0-5.0	TIN	J	2.58	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.86	5.57	PQL	mg/Kg	
SL-115-SA5DN-SB-4.0-5.0	TIN	J	2.69	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.81	5.51	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	SELENIUM	J	0.104	0.450	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0683	0.112	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.175	0.229	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.174	0.458	PQL	mg/Kg	
	SILVER	J	0.0603	0.115	PQL	mg/Kg	
SL-094-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.190	0.227	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0969	0.113	PQL	mg/Kg	
SL-095-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.186	0.221	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.196	0.443	PQL	mg/Kg	
	SILVER	J	0.0958	0.111	PQL	mg/Kg	
SL-095-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.164	0.219	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0536	0.109	PQL	mg/Kg	
SL-111-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.159	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0749	0.451	PQL	mg/Kg	
	SILVER	J	0.0763	0.113	PQL	mg/Kg	
SL-112-SA5DN-SB-4.0-5.0	SELENIUM	J	0.144	0.459	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0865	0.115	PQL	mg/Kg	
SL-114-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.169	0.217	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.122	0.433	PQL	mg/Kg	
	SILVER	J	0.0681	0.108	PQL	mg/Kg	
SL-115-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.156	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0811	0.449	PQL	mg/Kg	
	SILVER	J	0.0682	0.112	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	HEXAVALENT CHROMIUM	J	0.70	1.1	PQL	mg/Kg	J (all detects)
SL-094-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.57	1.2	PQL	mg/Kg	J (all detects)
SL-095-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.86	1.1	PQL	mg/Kg	J (all detects)
SL-111-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.49	1.1	PQL	mg/Kg	J (all detects)
SL-112-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.74	1.2	PQL	mg/Kg	J (all detects)
SL-114-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.70	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	MERCURY	J	0.010	0.111	PQL	mg/Kg	J (all detects)
SL-094-SA5DN-SB-4.0-5.0	MERCURY	J	0.0217	0.110	PQL	mg/Kg	J (all detects)
SL-094-SA5DN-SB-9.0-10.0	MERCURY	J	0.0359	0.114	PQL	mg/Kg	J (all detects)
SL-095-SA5DN-SB-4.0-5.0	MERCURY	J	0.0164	0.107	PQL	mg/Kg	J (all detects)
SL-095-SA5DN-SB-9.0-10.0	MERCURY	J	0.0170	0.108	PQL	mg/Kg	J (all detects)
SL-111-SA5DN-SB-4.0-5.0	MERCURY	J	0.0518	0.108	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-112-SA5DN-SB-4.0-5.0	MERCURY	J	0.0104	0.112	PQL	mg/Kg	J (all detects)
SL-115-SA5DN-SB-4.0-5.0	MERCURY	J	0.0102	0.111	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-111-SA5DN-SB-4.0-5.0	EFH (C30-C40)	J	0.96	1.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	Aroclor 5460	J	1.7	3.8	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5DN-QC-062211	ACETONE METHYLENE CHLORIDE TOLUENE	J J J	7.5 1.6 0.08	7.6 3.8 3.8	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-094-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.8 0.09	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-095-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.9 0.10	4.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-111-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.6	3.7	PQL	ug/Kg	J (all detects)
SL-112-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.6	4.2	PQL	ug/Kg	J (all detects)
SL-114-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	2.0 0.1	3.9 3.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-115-SA5DN-SB-4.0-5.0	METHYLENE CHLORIDE TOLUENE	J J	1.7 0.10	4.3 4.3	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	390	PQL	ug/Kg	J (all detects)
SL-095-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	380	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE186 **Laboratory: LL**

EDD Filename: DE186_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-095-SA5DN-SB-9.0-10.0	CHRYSENE	J	0.75	1.9	PQL	ug/Kg	J (all detects)
SL-111-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	11	20	PQL	ug/Kg	J (all detects)
SL-112-SA5DN-SB-4.0-5.0	Di-n-butylphthalate	J	11	21	PQL	ug/Kg	J (all detects)

LDC #: 26277Q4

SDG #: DE186

Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 9/30/11

Page: 1 of 1

Reviewer: MH

2nd Reviewer: A

METHOD: Metals (EPA SW 846 Method 6010B/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	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW ~~A~~	~~No qual~~.
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, As, Ba, Ca, Cr, Fe, Pb, Mg, Mn, Ti, V, Zn, X4X, RPb RPb RPb RPb
VII.	Duplicate Sample Analysis	SW*	Sb, Cd, Se, Tl, Sn, <5X, No qual in %R.
VIII.	Laboratory Control Samples (LCS)	~~N~~ A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	As, Ba, Co, Pb, Ni.
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB = 1D

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-094-SA5DN-SB-4.0-5.0	11	SL-112-SA5DN-SB-4.0-5.0MS	21		31	
2	SL-094-SA5DN-SB-9.0-10.0	12	SL-112-SA5DN-SB-4.0-5.0MSD	22		32	
3	SL-095-SA5DN-SB-4.0-5.0	13	SL-112-SA5DN-SB-4.0-5.0DUP	23		33	
4	SL-095-SA5DN-SB-9.0-10.0	14		24		34	
5	SL-111-SA5DN-SB-4.0-5.0	15		25		35	
6	SL-112-SA5DN-SB-4.0-5.0	16		26		36	
7	SL-114-SA5DN-SB-4.0-5.0	17		27		37	
8	SL-115-SA5DN-SB-4.0-5.0	18		28		38	
9	DUP16-SA5DN-QC-062211	19		29		39	
10	EB19-SA5DN-SB-062211	20		30		40	

Notes: Mo difference 0.3919 (≤ 0.230)

LDC #: 26277Q4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: V
2nd Reviewer: C

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 166.7X
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 2-6

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	2	3	4	5	6					
Hg			0.10	0.083	0.036	0.016	0.017	0.052	0.010					

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 #: 26277Q4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010B/7000)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target analytes detected in the field blanks?

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 6/22/11 Soil factor applied 100X

Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	10	Action Level	2	3	4								
B	0.0145	7.25											
K	0.186	93											
Sr	0.00039	0.195											
Zr	0.0078	3.9	3.8	2.4	2.3								

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".

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE186
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6325681BKG Matrix Spike Lab Sample ID: 6325682MS Matrix Spike Duplicate Lab Sample ID: 6325683MSD
% Solids for Sample: 85.5
Batch Id(s): P17908A, P17426A, P17411B, P18608B

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		36470.9288		42657.6929		43968.5619		229.3315	227.1050	MG/KG	2698		3301		3			20	P
Antimony	121	0.2293		0.9258		0.8630		1.3760	1.3760	MG/KG	51	N	46	N	7		75 - 125	20	MS
Arsenic	75	12.2669		10.5148		16.2137		2.2933	2.2933	MG/KG	-76		172		43	*		20	MS
Barium	137	229.2742		177.0898		256.5073		11.4666	11.4666	MG/KG	-455		237		37	*		20	MS
Beryllium	9	1.2843		1.7120		2.4676		0.9173	0.9173	MG/KG	47	N	129	N	36	*	75 - 125	20	MS
Boron		17.8489		252.9263		251.2474		229.3315	227.1050	MG/KG	103		103		1		84 - 115	20	P
Cadmium	111	0.5059		1.4528		1.9725		1.1467	1.1467	MG/KG	83		128	N	30	*	75 - 125	20	MS
Calcium		6820.6513		7291.2510		7423.9403		458.6630	454.2100	MG/KG	103		133		2			20	P
Chromium	52	46.9900		44.1692		64.9696		11.4666	11.4666	MG/KG	-25		157		38	*		20	MS
Cobalt	59	18.4749		67.2859		92.3977		57.3329	57.3329	MG/KG	85		129	N	31	*	75 - 125	20	MS
Copper	63	23.2083		27.1758		41.6925		11.4666	11.4666	MG/KG	35	N	161	N	42	*	75 - 125	20	MS
Iron		38414.9295		39126.8031		39657.1680		114.6657	113.5525	MG/KG	621		1094		1			20	P
Lead	208	15.8583		13.8654		22.3323		3.4400	3.4400	MG/KG	-58		188		47	*		20	MS
Lithium		31.3370		152.4630		149.8132		114.6657	113.5525	MG/KG	106		104		2		82 - 114	20	P
Magnesium		8053.2462		8662.7325		8756.7672		229.3315	227.1050	MG/KG	266		310		1			20	P
Manganese		442.8426		533.6498		560.1056		57.3329	56.7762	MG/KG	158		207		5			20	P
Mercury		0.0104	B	0.1823		0.1811		0.1901	0.1908	MG/KG	90		89		1		80 - 120	20	CV
Molybdenum	98	0.8309		11.9207		15.7620		11.4666	11.4666	MG/KG	97		130	N	28	*	75 - 125	20	MS
Nickel	60	42.4722		39.6285		60.6352		11.4666	11.4666	MG/KG	-25	N	158	N	42	*	75 - 125	20	MS
Phosphorus		324.9455		455.7126		437.2588		114.6657	113.5525	MG/KG	114		99		4		75 - 125	20	P
Potassium		3900.8451		5581.6615		5566.7950		1146.6575	1135.5249	MG/KG	147	N	147	N	0		75 - 125	20	P
Selenium	78	0.1438	B	2.2504		2.7061		2.2933	2.2933	MG/KG	92		112		18		75 - 125	20	MS
Silver	107	0.0865	B	11.7303		14.9409		11.4666	11.4666	MG/KG	102		130	N	24	*	75 - 125	20	MS
Sodium		185.8422		1307.0611		1284.5557		1146.6575	1135.5249	MG/KG	98		97		2		75 - 125	20	P
Strontium		36.3089		155.3847		156.1926		114.6657	113.5525	MG/KG	104		106		1		75 - 115	20	P
Thallium	203	0.5486		0.8348		1.1811		0.4587	0.4587	MG/KG	62	N	138	N	34	*	75 - 125	20	MS
Tin		3.3459	B	430.1032		421.6851		458.6630	454.2100	MG/KG	93		92		2		80 - 110	20	P
Titanium		1270.0022		1471.3359		1588.8287		113.5525	113.5525	MG/KG	177		281		8			20	P
Vanadium	51	80.5642		68.5701		100.2408		11.4666	11.4666	MG/KG	-105		172		38	*		20	MS
Zinc	66	108.7261		87.6505		140.5573		11.4666	11.4666	MG/KG	-184		278		46	*		20	MS
Zirconium		4.3298	B	119.7305		118.7203		114.6657	113.5525	MG/KG	101		101		1		75 - 125	20	P

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:
N = Matrix Spike OOS, * = Duplicate OOS

hi post spike 65% U/R.

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE186
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6325681BKG
% Solids for Duplicate: 86.4
Batch ID(s): P17908A, P17426A, P17411B, P18608B
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6325684DUP
% Solids for Sample: 85.5

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			36470.9288		35238.9599		3		P
Antimony	121	0.2	0.2293		0.1783	B	25		MS
Arsenic	75		12.2669		7.4218		49	*	MS
Barium	137		229.2742		170.9873		29	*	MS
Beryllium	9		1.2843		0.9493		30	*	MS
Boron		5.7	17.8489		16.4583		8		P
Cadmium	111	0.1	0.5059		0.3043		50	*	MS
Calcium			6820.6513		6534.2963		4		P
Chromium	52		46.9900		31.0907		41	*	MS
Cobalt	59		18.4749		11.0759		50	*	MS
Copper	63		23.2083		16.1631		36	*	MS
Iron			38414.9295		36064.2253		6		P
Lead	208		15.8583		10.6830		39	*	MS
Lithium			31.3370		30.0687		4		P
Magnesium			8053.2462		7830.8079		3		P
Manganese			442.8426		506.3442		13		P
Mercury			0.0104	B	0.0096	B	8		CV
Molybdenum	98	0.1	0.8309		0.4390		~~52~~	*	MS
Nickel	60		42.4722		28.2291		40	*	MS
Phosphorus			324.9455		320.3418		1		P
Potassium			3900.8451		3954.5336		1		P
Selenium	78		0.1438	B	0.0876	B	49		MS
Silver	107		0.0865	B	0.0735	B	16		MS
Sodium		114.7	185.8422		178.1639		4		P
Strontium			36.3089		35.4125		2		P
Thallium	203	0.1	0.5486		0.3795		36	*	MS
Tin			3.3459	B	2.6503	B	23		P
Titanium			1270.0022		1085.4257		16		P
Vanadium	51		80.5642		48.9865		49	*	MS
Zinc	66		108.7261		75.6714		36	*	MS
Zirconium			4.3298	B	4.8782	B	12		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.

Mo difference 0.3919 (≤ 0.730)

DE186, 4492

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

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE186
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6325681BKG Serial Dilution Lab Sample ID: 6325681L
Batch ID(s): P17908A, P17426A, P18608B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		318062.9700		308605.5500		3		P
Antimony	121	1.0000		1.8500	U	100		MS
Arsenic	75	53.4900		46.7800		13	E	MS
Barium	137	399.9000		344.2500		14	E	MS
Beryllium	9	5.6000		5.3850		4		MS
Boron		155.6600		204.8000	B	32		P
Cadmium	111	2.2060		1.9505	B	12		MS
Calcium		59482.9000		60972.8500		3		P
Chromium	52	204.9000		209.3500		2		MS
Cobalt	59	80.5600		71.8000		11	E	MS
Copper	63	101.2000		92.3000		9		MS
Iron		67003.3200		66134.6000		1		P
Lead	208	69.1500		59.4500		14	E	MS
Lithium		273.2900		286.9500		5		P
Magnesium		70232.3600		71619.2500		2		P
Manganese		3862.0300		4117.8500		7		P
Molybdenum	98	3.6230		3.6775		2		MS
Nickel	60	185.2000		160.1000		14	E	MS
Phosphorus		2833.8500		2850.2500		1		P
Potassium		34019.2700		34633.2000		2		P
Selenium	78	0.6271	B	1.4500	U	100		MS
Silver	107	0.3770	B	0.5125	B	36		MS
Sodium		1620.7300		1456.1000	B	10		P
Strontium		316.6500		330.1000		4		P
Thallium	203	2.3920		1.7835	B	25		MS
Tin		29.1800	B	28.0000	B	4		P
Titanium		11292.8600		11575.2000		3		P
Vanadium	51	351.3000		354.4000		1		MS
Zinc	66	474.1000		429.5000		9		MS
Zirconium		37.7600	B	23.0000	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.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: DE186, 2495
U= Below MDL
B= Below LOQ

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE187

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Jun-2011	TB-062311	6327213	TB	5030B	8015M	III
23-Jun-2011	TB-062311	6327213	TB	5030B	8260B	III
23-Jun-2011	TB-062311	6327213	TB	5030B	8260B SIM	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3050B	6010B	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3050B	6020	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3060A	7199	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3546	1625C	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3550B	8082	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3550B	8270C	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	3550B	8270C SIM	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	5035	8260B	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	5035	8260B SIM	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	METHOD	300.0	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	METHOD	314.0	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	METHOD	6850	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0	6327203	N	METHOD	7471A	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0DU	P327203D270004A	DUP	METHOD	314.0	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0DU	P327203D270541A	DUP	METHOD	300.0	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0MS	P327203R270027A	MS	METHOD	314.0	III
23-Jun-2011	SL-100-SA5DN-SB-3.0-4.0MS	P327203R270556A	MS	METHOD	300.0	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3050B	6010B	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3050B	6020	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3060A	7199	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3550B	8082	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3550B	8270C	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	5035	8260B	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	5035	8260B SIM	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	METHOD	300.0	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	METHOD	314.0	III
23-Jun-2011	SL-101-SA5DN-SB-2.5-3.5	6327204	N	METHOD	7471A	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3050B	6010B	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3050B	6020	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3060A	7199	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3546	1625C	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3550B	8015B	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3550B	8015M	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3550B	8082	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3550B	8270C	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	3550B	8270C SIM	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	5035	8015M	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	5035	8260B	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	5035	8260B SIM	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	8330	8330A	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	300.0	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	314.0	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	7471A	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	8015B	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	8015M	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	8315A	III
23-Jun-2011	SL-110-SA5DN-SB-4.0-5.0	6327212	N	METHOD	9012B	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3050B	6020	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3060A	7199	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3546	1625C	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3550B	8015B	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3550B	8015M	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3550B	8082	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3550B	8270C	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	3550B	8270C SIM	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	5035	8015M	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	5035	8260B	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	5035	8260B SIM	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	8330	8330A	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	300.0	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	314.0	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	7471A	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	8015B	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	8015M	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	8315A	III
23-Jun-2011	SL-109-SA5DN-SB-3.5-4.5	6327211	N	METHOD	9012B	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3050B	6010B	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3050B	6020	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3060A	7199	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3546	1625C	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3550B	8015B	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3550B	8015M	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3550B	8270C	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	3550B	8270C SIM	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	5035	8015M	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	5035	8260B	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	5035	8260B SIM	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	8330	8330A	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	300.0	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	314.0	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	7471A	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	8015B	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	8015M	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	8315A	III
23-Jun-2011	SL-107-SA5DN-SB-3.5-4.5	6327210	N	METHOD	9012B	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3050B	6010B	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3050B	6020	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3060A	7199	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3546	1625C	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3550B	8015B	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3550B	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3550B	8082	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3550B	8270C	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	3550B	8270C SIM	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	5035	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	5035	8260B	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	5035	8260B SIM	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	8330	8330A	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
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	300.0	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	314.0	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	7471A	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	8015B	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	8315A	III
23-Jun-2011	SL-106-SA5DN-SB-4.0-5.0	6327208	N	METHOD	9012B	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3050B	6010B	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3050B	6020	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3060A	7199	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3546	1625C	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3550B	8015B	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3550B	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3550B	8082	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3550B	8270C	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	3550B	8270C SIM	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	5035	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	5035	8260B	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	5035	8260B SIM	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	8330	8330A	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	300.0	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	314.0	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	7471A	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	8015B	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	8015M	III
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	8315A	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
23-Jun-2011	SL-106-SA5DN-SB-9.0-10.0	6327209	N	METHOD	9012B	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3050B	6010B	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3050B	6020	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3060A	7199	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3546	1625C	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3550B	8015B	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3550B	8015M	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3550B	8082	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3550B	8270C	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	3550B	8270C SIM	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	5035	8015M	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	5035	8260B	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	5035	8260B SIM	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	8330	8330A	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	300.0	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	314.0	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	7471A	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	8015B	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	8015M	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	8315A	III
23-Jun-2011	SL-104-SA5DN-SB-4.0-5.0	6327206	N	METHOD	9012B	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3050B	6010B	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3050B	6020	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3060A	7199	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3546	1625C	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3550B	8015B	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
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3550B	8015M	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3550B	8082	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3550B	8270C	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	3550B	8270C SIM	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	5035	8015M	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	5035	8260B	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	5035	8260B SIM	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	8330	8330A	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	300.0	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	314.0	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	7471A	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	8015B	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	8015M	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	8315A	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0	6327205	N	METHOD	9012B	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0MS	P327205R240050A	MS	METHOD	8315A	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0MS	P327205R240219A	MS	8330	8330A	III
23-Jun-2011	SL-102-SA5DN-SB-4.0-5.0MS	P327205R320222A	MS	3550B	8015M	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3050B	6010B	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3050B	6020	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3060A	7199	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3546	1625C	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3550B	8015B	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3550B	8015M	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3550B	8082	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3550B	8270C	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
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	3550B	8270C SIM	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	5035	8015M	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	5035	8260B	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	5035	8260B SIM	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	8330	8330A	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	300.0	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	314.0	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	7471A	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	8015B	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	8015M	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	8315A	III
23-Jun-2011	SL-105-SA5DN-SB-4.0-5.0	6327207	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE187 **Laboratory:** LL

EDD Filename: DE187_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-100-SA5DN-SB-3.0-4.0 **Collected:** 6/23/2011 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
FLUORIDE	3.8		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-101-SA5DN-SB-2.5-3.5 **Collected:** 6/23/2011 9:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.84	U	0.84	MDL	1.0	PQL	mg/Kg	UJ	Q

Sample ID: SL-102-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 2:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.85	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 2:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-105-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 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
FLUORIDE	4.5		0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-106-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 11:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.0		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-106-SA5DN-SB-9.0-10.0 **Collected:** 6/23/2011 11:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.4		0.89	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.89	MDL	1.7	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE187 **Laboratory:** LL

EDD Filename: DE187_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-107-SA5DN-SB-3.5-4.5 *Collected:* 6/23/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.2		0.88	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.88	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-109-SA5DN-SB-3.5-4.5 *Collected:* 6/23/2011 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	2.4		0.84	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.84	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-110-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.9		0.87	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.87	MDL	1.6	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-100-SA5DN-SB-3.0-4.0 *Collected:* 6/23/2011 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
TIN	2.71	J	0.359	MDL	11.2	PQL	mg/Kg	U	B

Sample ID: SL-100-SA5DN-SB-3.0-4.0 *Collected:* 6/23/2011 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
Zirconium	3.88	J	0.516	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA5DN-SB-2.5-3.5 *Collected:* 6/23/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	96.9	J	6.09	MDL	102	PQL	mg/Kg	J	Z
TIN	3.11	J	0.327	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	4.48	J	0.471	MDL	5.12	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE187 **Laboratory:** LL

EDD Filename: DE187_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-102-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.42	J	0.334	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	5.04	J	0.481	MDL	5.23	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.67	J	0.345	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: SL-105-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 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
TIN	3.48	J	0.349	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	4.51	J	0.502	MDL	5.46	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.48	J	0.345	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: SL-106-SA5DN-SB-9.0-10.0 *Collected:* 6/23/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.59	J	0.348	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	3.78	J	0.500	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: SL-107-SA5DN-SB-3.5-4.5 *Collected:* 6/23/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.54	J	0.344	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: SL-109-SA5DN-SB-3.5-4.5 *Collected:* 6/23/2011 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
TIN	3.60	J	0.326	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	4.52	J	0.469	MDL	5.10	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE187 **Laboratory:** LL

EDD Filename: DE187_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-110-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.82	J	0.336	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	4.45	J	0.483	MDL	5.25	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-100-SA5DN-SB-3.0-4.0 *Collected:* 6/23/2011 8:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.123	J	0.0632	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: SL-100-SA5DN-SB-3.0-4.0 *Collected:* 6/23/2011 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
ANTIMONY	0.329		0.0807	MDL	0.218	PQL	mg/Kg	U	B
SILVER	0.0955	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA5DN-SB-2.5-3.5 *Collected:* 6/23/2011 9:05:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.119	J	0.0594	MDL	0.409	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA5DN-SB-2.5-3.5 *Collected:* 6/23/2011 9:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.208		0.0757	MDL	0.205	PQL	mg/Kg	U	B
SILVER	0.0426	J	0.0145	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: SL-102-SA5DN-SB-4.0-5.0 *Collected:* 6/23/2011 2:55:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0595	MDL	0.410	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE187 Laboratory: LL

EDD Filename: DE187_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-102-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 2:55:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.230		0.0759	MDL	0.205	PQL	mg/Kg	U	B
SILVER	0.0333	J	0.0146	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 2:25:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0805	J	0.0638	MDL	0.440	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 2:25:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.294		0.0814	MDL	0.220	PQL	mg/Kg	U	B
SILVER	0.0954	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-105-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 3:30:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.146	J	0.0615	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: SL-105-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 3:30:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.333		0.0784	MDL	0.212	PQL	mg/Kg	U	B
SILVER	0.0519	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 11:50:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0789	J	0.0632	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: SL-106-SA5DN-SB-4.0-5.0 **Collected:** 6/23/2011 11:50:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.254		0.0806	MDL	0.218	PQL	mg/Kg	U	B
SILVER	0.0608	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling