Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-254-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 1:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.203	J	0.0584	MDL	0.403	PQL	mg/Kg	J	Z, Q

Sample ID: SL-254-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 1:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.580		0.0504	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-254-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 1:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.130	J	0.0746	MDL	0.202	PQL	mg/Kg	J	Z, Q, Q
ARSENIC	7.39		0.0806	MDL	0.403	PQL	mg/Kg	J	Q
BERYLLIUM	0.630		0.0161	MDL	0.101	PQL	mg/Kg	J	Q
CADMIUM	0.393		0.0443	MDL	0.101	PQL	mg/Kg	J	Q, E
CHROMIUM	18.2		0.121	MDL	0.403	PQL	mg/Kg	J	Q
COBALT	5.69		0.0202	MDL	0.101	PQL	mg/Kg	J	E
COPPER	8.63		0.0806	MDL	0.403	PQL	mg/Kg	J	Q
LEAD	10.2		0.0103	MDL	0.202	PQL	mg/Kg	J	Q
NICKEL	14.1		0.101	MDL	0.403	PQL	mg/Kg	J	Q
SILVER	0.0607	J	0.0143	MDL	0.101	PQL	mg/Kg	J	Z, Q
THALLIUM	0.300		0.0302	MDL	0.101	PQL	mg/Kg	J	Q
VANADIUM	33.7		0.0222	MDL	0.101	PQL	mg/Kg	J	Q, A

Sample ID: SL-255-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 9:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.207	J	0.0564	MDL	0.389	PQL	mg/Kg	J	Z, Q

Sample ID: SL-255-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 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	0.716		0.0486	MDL	0.0972	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-255-SA6-SS-0.0-0.5 **Collected: 7/25/2011 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	0.0753	J	0.0719	MDL	0.194	PQL	mg/Kg	J	Z, Q, Q
ARSENIC	5.23		0.0778	MDL	0.389	PQL	mg/Kg	J	Q
BERYLLIUM	0.673		0.0156	MDL	0.0972	PQL	mg/Kg	J	Q
CADMIUM	0.205		0.0428	MDL	0.0972	PQL	mg/Kg	J	Q, E
CHROMIUM	14.7		0.117	MDL	0.389	PQL	mg/Kg	J	Q
COBALT	5.23		0.0194	MDL	0.0972	PQL	mg/Kg	J	E
COPPER	10.2		0.0778	MDL	0.389	PQL	mg/Kg	J	Q
LEAD	7.03		0.0099	MDL	0.194	PQL	mg/Kg	J	Q
NICKEL	9.26		0.0972	MDL	0.389	PQL	mg/Kg	J	Q
SILVER	0.0441	J	0.0138	MDL	0.0972	PQL	mg/Kg	J	Z, Q
THALLIUM	0.293		0.0292	MDL	0.0972	PQL	mg/Kg	J	Q
VANADIUM	28.3		0.0214	MDL	0.0972	PQL	mg/Kg	J	Q, A

Sample ID: SL-256-SA6-SS-0.0-0.5 **Collected: 7/25/2011 10:20:00** **Analysis Type: REA2** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.218	J	0.0581	MDL	0.400	PQL	mg/Kg	J	Z, Q

Sample ID: SL-256-SA6-SS-0.0-0.5 **Collected: 7/25/2011 10:20:00** **Analysis Type: REA3** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.703		0.0501	MDL	0.100	PQL	mg/Kg	J	Q

Sample ID: SL-256-SA6-SS-0.0-0.5 **Collected: 7/25/2011 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
ANTIMONY	0.107	J	0.0741	MDL	0.200	PQL	mg/Kg	J	Z, Q, Q
ARSENIC	6.02		0.0801	MDL	0.400	PQL	mg/Kg	J	Q
BERYLLIUM	0.690		0.0160	MDL	0.100	PQL	mg/Kg	J	Q
CADMIUM	0.233		0.0440	MDL	0.100	PQL	mg/Kg	J	Q, E
CHROMIUM	17.9		0.120	MDL	0.400	PQL	mg/Kg	J	Q
COBALT	5.87		0.0200	MDL	0.100	PQL	mg/Kg	J	E
COPPER	9.04		0.0801	MDL	0.400	PQL	mg/Kg	J	Q
LEAD	8.60		0.0102	MDL	0.200	PQL	mg/Kg	J	Q
NICKEL	11.7		0.100	MDL	0.400	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-256-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
SILVER	0.0441	J	0.0142	MDL	0.100	PQL	mg/Kg	J	Z, Q
THALLIUM	0.358		0.0300	MDL	0.100	PQL	mg/Kg	J	Q
VANADIUM	33.8		0.0220	MDL	0.100	PQL	mg/Kg	J	Q, A

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***Analysis Type:*** REA ***Dilution:*** 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	3080		0.499	MDL	9.79	PQL	mg/Kg	J	Q

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.626		0.0568	MDL	0.392	PQL	mg/Kg	J	Q

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.955		0.0490	MDL	0.0979	PQL	mg/Kg	J	Q

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.534		0.0725	MDL	0.196	PQL	mg/Kg	J	Q, Q
ARSENIC	6.76		0.0784	MDL	0.392	PQL	mg/Kg	J	Q
BERYLLIUM	0.536		0.0157	MDL	0.0979	PQL	mg/Kg	J	Q
CADMIUM	1.07		0.0431	MDL	0.0979	PQL	mg/Kg	J	Q, E
CHROMIUM	15.7		0.118	MDL	0.392	PQL	mg/Kg	J	Q
COBALT	5.21		0.0196	MDL	0.0979	PQL	mg/Kg	J	E
COPPER	21.1		0.0784	MDL	0.392	PQL	mg/Kg	J	Q
NICKEL	12.1		0.0979	MDL	0.392	PQL	mg/Kg	J	Q
SILVER	3.39		0.0139	MDL	0.0979	PQL	mg/Kg	J	Q
THALLIUM	0.240		0.0294	MDL	0.0979	PQL	mg/Kg	J	Q
VANADIUM	26.9		0.0215	MDL	0.0979	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-289-SA6-SB-3.5-4.5 **Collected:** 7/25/2011 8:30:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.132	J	0.0588	MDL	0.405	PQL	mg/Kg	J	Z, Q

Sample ID: SL-289-SA6-SB-3.5-4.5 **Collected:** 7/25/2011 8:30:00 **Analysis Type:** REA3 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.638		0.0507	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-289-SA6-SB-3.5-4.5 **Collected:** 7/25/2011 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	0.131	J	0.0750	MDL	0.203	PQL	mg/Kg	J	Z, Q, Q
ARSENIC	5.02		0.0811	MDL	0.405	PQL	mg/Kg	J	Q
BERYLLIUM	0.618		0.0162	MDL	0.101	PQL	mg/Kg	J	Q
CADMIUM	0.225		0.0446	MDL	0.101	PQL	mg/Kg	J	Q, E
CHROMIUM	23.9		0.122	MDL	0.405	PQL	mg/Kg	J	Q
COBALT	7.55		0.0203	MDL	0.101	PQL	mg/Kg	J	E
COPPER	11.5		0.0811	MDL	0.405	PQL	mg/Kg	J	Q
LEAD	7.20		0.0103	MDL	0.203	PQL	mg/Kg	J	Q
NICKEL	15.0		0.101	MDL	0.405	PQL	mg/Kg	J	Q
SILVER	0.0402	J	0.0144	MDL	0.101	PQL	mg/Kg	J	Z, Q
THALLIUM	0.277		0.0304	MDL	0.101	PQL	mg/Kg	J	Q
VANADIUM	44.4		0.0223	MDL	0.101	PQL	mg/Kg	J	Q, A

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: DUP07-SA6-QC-072511 **Collected:** 7/25/2011 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	0.21	U	0.21	MDL	1.1	PQL	mg/Kg	UJ	FD

Sample ID: SL-098-SA6-SB-2.0-3.0 **Collected:** 7/25/2011 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	0.97	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: **SL-193-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 10:56:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-235-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 8:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-236-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 7:52:00** ***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	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-245-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 11:39:00** ***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	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-253-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 2:21:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.42	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-254-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 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	0.56	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-256-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 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	0.40	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-268-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 2:53:00** ***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	0.20	MDL	1.0	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP07-SA6-QC-072511 ***Collected:*** 7/25/2011 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
MERCURY	0.0074	U	0.0074	MDL	0.106	PQL	mg/Kg	UJ	FD

Sample ID: SL-098-SA6-SB-2.0-3.0 ***Collected:*** 7/25/2011 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	0.0257	J	0.0070	MDL	0.0990	PQL	mg/Kg	J	Z, FD

Sample ID: SL-190-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:51:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0582	J	0.0068	MDL	0.0970	PQL	mg/Kg	J	Z

Sample ID: SL-192-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:23:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0193	J	0.0070	MDL	0.0990	PQL	mg/Kg	J	Z

Sample ID: SL-193-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 10:56:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0131	J	0.0067	MDL	0.0955	PQL	mg/Kg	J	Z

Sample ID: SL-235-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 8:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0085	J	0.0067	MDL	0.0950	PQL	mg/Kg	J	Z

Sample ID: SL-245-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 11:39:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0202	J	0.0069	MDL	0.0988	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-253-SA6-SS-0.0-0.5 **Collected:** 7/25/2011 2:21:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0182	J	0.0068	MDL	0.0967	PQL	mg/Kg	J	Z

Sample ID: SL-254-SA6-SS-0.0-0.5 **Collected:** 7/25/2011 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
MERCURY	0.0115	J	0.0069	MDL	0.0982	PQL	mg/Kg	J	Z

Sample ID: SL-256-SA6-SS-0.0-0.5 **Collected:** 7/25/2011 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	0.0071	J	0.0070	MDL	0.0993	PQL	mg/Kg	J	Z

Sample ID: SL-289-SA6-SB-3.5-4.5 **Collected:** 7/25/2011 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
MERCURY	0.0242	J	0.0073	MDL	0.104	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-193-SA6-SS-0.0-0.5 **Collected:** 7/25/2011 10:56:00 **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	17.0	J	16.7	MDL	33.3	PQL	ng/Kg	U	B

Sample ID: SL-253-SA6-SS-0.0-0.5 **Collected:** 7/25/2011 2:21:00 **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	17.2	J	16.7	MDL	33.4	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: DUP07-SA6-QC-072511 ***Collected:*** 7/25/2011 10:00:00 ***Analysis Type:*** REA2 ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.5		0.43	MDL	1.3	PQL	mg/Kg	J	FD
EFH (C30-C40)	3.1		0.43	MDL	1.3	PQL	mg/Kg	J	FD

Sample ID: SL-098-SA6-SB-2.0-3.0 ***Collected:*** 7/25/2011 9:50:00 ***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)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	FD
EFH (C30-C40)	0.65	J	0.42	MDL	1.3	PQL	mg/Kg	J	Z, Q, Q, FD

Sample ID: SL-098-SA6-SB-2.0-3.0 ***Collected:*** 7/25/2011 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
DIETHYLENE GLYCOL	5.3	U	5.3	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-190-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:51:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.59	J	0.41	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-193-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 10:56:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.85	J	0.41	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-245-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 11:39:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.65	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-253-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:21:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.42	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-255-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 9:35:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.67	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z
EFH (C8-C11)	0.43	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-256-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 10:20:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.99	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z
EFH (C8-C11)	0.44	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-268-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 2:53:00 *Analysis Type:* REA *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	10	J	4.0	MDL	12	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-190-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 3:51:00 *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'-DDT	13		0.67	MDL	3.4	PQL	ug/Kg	J	C
ENDOSULFAN II	3.9	U	3.9	MDL	3.9	PQL	ug/Kg	UJ	C, C

Sample ID: SL-190-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 3:51:00 *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	2.1		0.067	MDL	0.34	PQL	ug/Kg	J	*#
ENDRIN KETONE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C
gamma-BHC (Lindane)	0.11	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z
METHOXYCHLOR	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	C
MIREX	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-192-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:23:00 ***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'-DDT	0.83		0.067	MDL	0.34	PQL	ug/Kg	J	C
ENDOSULFAN II	0.35	U	0.35	MDL	0.35	PQL	ug/Kg	UJ	C, C
ENDRIN KETONE	0.55	U	0.55	MDL	0.55	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	C
MIREX	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-193-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 10:56:00 ***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'-DDT	0.30	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-235-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 8:15:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.13	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
4,4'-DDT	0.21	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-236-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 7:52:00 ***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	0.14	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
4,4'-DDT	0.22	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-245-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 11:39:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.13	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z, *XIII
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-253-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:21:00 ***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	0.23	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z, *XIII
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-254-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
4,4'-DDT	1.0		0.067	MDL	0.34	PQL	ug/Kg	J	C
ALPHA-BHC	0.14	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C, C
ENDRIN KETONE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	C
MIREX	0.18	U	0.18	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-255-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 9:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.20	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-256-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
4,4'-DDT	0.49	U	0.49	MDL	0.49	PQL	ug/Kg	UJ	C
Chlordane	5.4		0.81	MDL	3.4	PQL	ug/Kg	J	*XIII
ENDOSULFAN II	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C, C
ENDRIN KETONE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C
METHOXYCHLOR	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	C
MIREX	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	C

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***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	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S
4,4'-DDE	0.40	U	0.40	MDL	0.40	PQL	ug/Kg	UJ	S
4,4'-DDT	2.4		0.067	MDL	0.34	PQL	ug/Kg	J	S, S, C, *XIII

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***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	0.067	U	0.067	MDL	0.17	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.071	U	0.071	MDL	0.17	PQL	ug/Kg	UJ	S
BETA-BHC	0.061	U	0.061	MDL	0.17	PQL	ug/Kg	UJ	S
Chlordane	10		0.81	MDL	3.4	PQL	ug/Kg	J	S, S
DELTA-BHC	0.036	U	0.036	MDL	0.17	PQL	ug/Kg	UJ	S
DIELDRIN	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.044	U	0.044	MDL	0.17	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.79	U	0.79	MDL	0.79	PQL	ug/Kg	UJ	S, C, C
ENDOSULFAN SULFATE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S
ENDRIN	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	S, C
gamma-BHC (Lindane)	0.080	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z, S, S
HEPTACHLOR	0.061	U	0.061	MDL	0.17	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.49	U	0.49	MDL	0.49	PQL	ug/Kg	UJ	S
METHOXYCHLOR	0.69	U	0.69	MDL	1.7	PQL	ug/Kg	UJ	S, C
MIREX	0.51	U	0.51	MDL	0.51	PQL	ug/Kg	UJ	S, C
TOXAPHENE	44	U	44	MDL	44	PQL	ug/Kg	UJ	S

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP07-SA6-QC-072511 ***Collected:*** 7/25/2011 10:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	FD
Aroclor 5460	1.1	U	1.1	MDL	3.5	PQL	ug/Kg	UJ	FD

Sample ID: SL-098-SA6-SB-2.0-3.0 ***Collected:*** 7/25/2011 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
AROCLOR 1254	1.7	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z, FD
Aroclor 5460	3.4	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: **SL-190-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 3:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **10**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	10	U	10	MDL	33	PQL	ug/Kg	UJ	C
Aroclor 5442	10	U	10	MDL	33	PQL	ug/Kg	UJ	C
Aroclor 5460	10	U	10	MDL	33	PQL	ug/Kg	UJ	C

Sample ID: **SL-192-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 3:23:00** ***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	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1221	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1232	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1242	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1248	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1254	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
AROCLOR 1260	2.3		0.39	MDL	1.7	PQL	ug/Kg	J	S
Aroclor 1262	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
Aroclor 1268	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	S
Aroclor 5432	1.0	U	1.0	MDL	3.3	PQL	ug/Kg	UJ	S
Aroclor 5442	1.0	U	1.0	MDL	3.3	PQL	ug/Kg	UJ	S
Aroclor 5460	3.0	J	1.0	MDL	3.3	PQL	ug/Kg	J	Z, S

Sample ID: **SL-235-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 8:15:00** ***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	0.82	J	0.40	MDL	1.7	PQL	ug/Kg	J	Z
Aroclor 5460	2.3	J	1.0	MDL	3.3	PQL	ug/Kg	J	Z

Sample ID: **SL-236-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 7:52:00** ***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	0.39	MDL	1.7	PQL	ug/Kg	J	Z
Aroclor 5460	1.9	J	1.0	MDL	3.3	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-190-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:51:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	2.1		0.63	MDL	1.7	PQL	ug/Kg	J	*IX
MCPA	77	U	77	MDL	250	PQL	ug/Kg	UJ	C
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-192-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:23:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	2.8		0.62	MDL	1.7	PQL	ug/Kg	J	*IX
DICHLOROPROP	0.85	J	0.80	MDL	1.7	PQL	ug/Kg	J	Z, *IX
MCPA	540	U	540	MDL	540	PQL	ug/Kg	UJ	C
MCPP	75	U	75	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-193-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 10:56:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.11	J	0.076	MDL	0.17	PQL	ug/Kg	J	Z
MCPA	77	U	77	MDL	250	PQL	ug/Kg	UJ	C
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-235-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 8:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	77	U	77	MDL	250	PQL	ug/Kg	UJ	C
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-236-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 7:52:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	3.0		0.62	MDL	1.7	PQL	ug/Kg	J	*IX
MCPA	76	U	76	MDL	250	PQL	ug/Kg	UJ	C
MCPP	75	U	75	MDL	250	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: SL-245-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 11:39:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	170	U	170	MDL	250	PQL	ug/Kg	UJ	C
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-253-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:21:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	1.1	J	0.62	MDL	1.7	PQL	ug/Kg	J	Z, *IX
MCPA	170	U	170	MDL	250	PQL	ug/Kg	UJ	C
MCPP	75	U	75	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-254-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
MCPP	75	U	75	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-255-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-256-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
MCPP	76	U	76	MDL	250	PQL	ug/Kg	UJ	C

Sample ID: SL-268-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:53:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPP	75	U	75	MDL	250	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-098-SA6-SB-2.0-3.0 *Collected:* 7/25/2011 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
4-CHLOROPHENYL-PHENYLETHER	35	U	35	MDL	180	PQL	ug/Kg	UJ	Q
BENZIDINE	1200	U	1200	MDL	3500	PQL	ug/Kg	UJ	Q

Sample ID: SL-235-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 8:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	22	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-255-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 9:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	29	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: SL-268-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 2:53:00 *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	190	J	170	MDL	1700	PQL	ug/Kg	J	Z
CHRYSENE	350	J	170	MDL	1700	PQL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: DUP07-SA6-QC-072511 *Collected:* 7/25/2011 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	L
BENZO(A)PYRENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(B)FLUORANTHENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(G,H,I)PERYLENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(K)FLUORANTHENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD
Butylbenzylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	R	L
CHRYSENE	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	FD
Di-n-butylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	L
Di-n-octylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	FD
FLUORANTHENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	L, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: DUP07-SA6-QC-072511 *Collected:* 7/25/2011 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD

Sample ID: SL-098-SA6-SB-2.0-3.0 *Collected:* 7/25/2011 9:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.8	U	1.8	MDL	8.8	PQL	ug/Kg	UJ	L
BENZO(A)PYRENE	5.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
BENZO(B)FLUORANTHENE	6.7	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
BENZO(G,H,I)PERYLENE	4.9	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
BENZO(K)FLUORANTHENE	5.6	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
CHRYSENE	5.7	J	1.8	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
Di-n-octylphthalate	60	J	32	MDL	95	PQL	ug/Kg	J	Z, L, FD
FLUORANTHENE	4.1	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L, FD
PYRENE	4.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, FD

Sample ID: SL-190-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 3:51:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.6	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	0.70	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, L
BENZO(A)PYRENE	1.9		0.68	MDL	1.7	PQL	ug/Kg	J	L
BENZO(B)FLUORANTHENE	5.3		0.68	MDL	1.7	PQL	ug/Kg	J	L
BENZO(G,H,I)PERYLENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, L
BENZO(K)FLUORANTHENE	2.3		0.68	MDL	1.7	PQL	ug/Kg	J	L
BIS(2-ETHYLHEXYL)PHTHALATE	17	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	7.8		0.34	MDL	1.7	PQL	ug/Kg	J	L
Di-n-butylphthalate	6.3	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
Di-n-octylphthalate	13	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
FLUORANTHENE	5.4		0.68	MDL	1.7	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	0.91	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, L
PHENANTHRENE	4.0		0.68	MDL	1.7	PQL	ug/Kg	J	L

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: SL-192-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 3:23:00 ***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	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	28		6.1	MDL	18	PQL	ug/Kg	J	L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	0.38	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	UJ	L
Di-n-octylphthalate	11	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
FLUORANTHENE	0.67	U	0.67	MDL	1.7	PQL	ug/Kg	UJ	L

Sample ID: SL-193-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 10:56:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.7	U	1.7	MDL	8.4	PQL	ug/Kg	UJ	L
CHRYSENE	3.8	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z, L
Di-n-octylphthalate	79	J	30	MDL	91	PQL	ug/Kg	J	Z, L
FLUORANTHENE	3.4	U	3.4	MDL	8.4	PQL	ug/Kg	UJ	L

Sample ID: SL-235-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 8:15:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	L
BENZO(B)FLUORANTHENE	1.0	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	0.85	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	UJ	L
FLUORANTHENE	0.92	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z, L
PYRENE	0.87	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-236-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 7:52:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.41	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, L
BENZO(A)ANTHRACENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
BENZO(B)FLUORANTHENE	2.2		0.67	MDL	1.7	PQL	ug/Kg	J	L
BENZO(K)FLUORANTHENE	1.0	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: SL-236-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 7:52:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	14	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	1.8		0.34	MDL	1.7	PQL	ug/Kg	J	L
Di-n-butylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	UJ	L
Di-n-octylphthalate	11	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
FLUORANTHENE	2.2		0.67	MDL	1.7	PQL	ug/Kg	J	L
PHENANTHRENE	1.2	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L

Sample ID: SL-245-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 11:39:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.7	U	1.7	MDL	8.4	PQL	ug/Kg	UJ	L
CHRYSENE	2.3	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z, L
FLUORANTHENE	3.4	U	3.4	MDL	8.4	PQL	ug/Kg	UJ	L

Sample ID: SL-253-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:21:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.84	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
ACENAPHTHENE	1.1	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
ACENAPHTHYLENE	1.2	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	3.7		0.34	MDL	1.7	PQL	ug/Kg	J	L
BENZO(A)PYRENE	2.0		0.67	MDL	1.7	PQL	ug/Kg	J	L
BENZO(B)FLUORANTHENE	2.1		0.67	MDL	1.7	PQL	ug/Kg	J	L
BENZO(G,H,I)PERYLENE	2.4		0.67	MDL	1.7	PQL	ug/Kg	J	L
BENZO(K)FLUORANTHENE	1.9		0.67	MDL	1.7	PQL	ug/Kg	J	L
BIS(2-ETHYLHEXYL)PHTHALATE	15	J	6.0	MDL	18	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.0	U	6.0	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	2.7		0.34	MDL	1.7	PQL	ug/Kg	J	L
DIBENZO(A,H)ANTHRACENE	1.8		0.67	MDL	1.7	PQL	ug/Kg	J	L
Di-n-butylphthalate	6.8	J	6.0	MDL	18	PQL	ug/Kg	J	Z, L
Di-n-octylphthalate	20		6.0	MDL	18	PQL	ug/Kg	J	L
FLUORANTHENE	3.7		0.67	MDL	1.7	PQL	ug/Kg	J	L
FLUORENE	2.8		0.67	MDL	1.7	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	2.0		0.67	MDL	1.7	PQL	ug/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-253-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 2:21:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	3.7		0.67	MDL	1.7	PQL	ug/Kg	J	L

Sample ID: SL-254-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 1:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.7	U	1.7	MDL	8.4	PQL	ug/Kg	UJ	L
CHRYSENE	3.6	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z, L
Diethylphthalate	46	J	30	MDL	91	PQL	ug/Kg	J	Z
FLUORANTHENE	3.4	U	3.4	MDL	8.4	PQL	ug/Kg	UJ	L

Sample ID: SL-255-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 9:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.91	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	L
BENZO(B)FLUORANTHENE	0.88	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	1.3	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	UJ	L
FLUORANTHENE	2.6		0.67	MDL	1.7	PQL	ug/Kg	J	L
PHENANTHRENE	2.7		0.67	MDL	1.7	PQL	ug/Kg	J	L
PYRENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-256-SA6-SS-0.0-0.5 ***Collected:*** 7/25/2011 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
ANTHRACENE	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	L
BENZO(A)ANTHRACENE	0.99	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.92	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
BENZO(B)FLUORANTHENE	1.8		0.67	MDL	1.7	PQL	ug/Kg	J	L
BENZO(G,H,I)PERYLENE	1.0	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
BIS(2-ETHYLHEXYL)PHTHALATE	8.3	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
Butylbenzylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	R	L
CHRYSENE	1.7		0.34	MDL	1.7	PQL	ug/Kg	J	L
Di-n-butylphthalate	6.1	U	6.1	MDL	18	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: **SL-256-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 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
Di-n-octylphthalate	11	J	6.1	MDL	18	PQL	ug/Kg	J	Z, L
FLUORANTHENE	2.4		0.67	MDL	1.7	PQL	ug/Kg	J	L
NAPHTHALENE	0.68	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z, L
PYRENE	1.6	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: **SL-268-SA6-SS-0.0-0.5** ***Collected:*** **7/25/2011 2:53:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	22		1.7	MDL	8.4	PQL	ug/Kg	J	L
BENZO(A)PYRENE	210		3.4	MDL	8.4	PQL	ug/Kg	J	L
BENZO(B)FLUORANTHENE	360		3.4	MDL	8.4	PQL	ug/Kg	J	L
BENZO(K)FLUORANTHENE	130		3.4	MDL	8.4	PQL	ug/Kg	J	L
Butylbenzylphthalate	30	U	30	MDL	91	PQL	ug/Kg	R	L
DIBENZO(A,H)ANTHRACENE	21		3.4	MDL	8.4	PQL	ug/Kg	J	L
Di-n-butylphthalate	30	U	30	MDL	91	PQL	ug/Kg	UJ	L
FLUORANTHENE	530		3.4	MDL	8.4	PQL	ug/Kg	J	L
INDENO(1,2,3-CD)PYRENE	60		3.4	MDL	8.4	PQL	ug/Kg	J	L
PHENANTHRENE	45		3.4	MDL	8.4	PQL	ug/Kg	J	L

Sample ID: **SL-289-SA6-SB-3.5-4.5** ***Collected:*** **7/25/2011 8:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.8	U	1.8	MDL	8.8	PQL	ug/Kg	UJ	L
BENZO(A)ANTHRACENE	3.9	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	7.2	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L
BENZO(B)FLUORANTHENE	12		3.5	MDL	8.8	PQL	ug/Kg	J	L
BENZO(G,H,I)PERYLENE	4.6	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L
BENZO(K)FLUORANTHENE	4.6	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z, L
CHRYSENE	14		1.8	MDL	8.8	PQL	ug/Kg	J	L
Di-n-octylphthalate	64	J	32	MDL	95	PQL	ug/Kg	J	Z, L
FLUORANTHENE	3.5	U	3.5	MDL	8.8	PQL	ug/Kg	UJ	L
PYRENE	4.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory:** LL

EDD Filename: PrepDE208_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8315A **Matrix:** SO

Sample ID: SL-253-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 2:21:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	680	J	600	MDL	1500	PQL	ug/Kg	J	Z

Method Category: VOA **Method:** 8015B **Matrix:** SO

Sample ID: SL-193-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 10:56:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHANOL	210	J	100	MDL	510	PQL	ug/Kg	J	Z

Sample ID: SL-268-SA6-SS-0.0-0.5 *Collected:* 7/25/2011 2:53:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.5	U	1.5	MDL	3.5	PQL	mg/Kg	R	S
O-TERPHENYL	1.5	U	1.5	MDL	3.5	PQL	mg/Kg	R	S
p-Terphenyl	1.5	U	1.5	MDL	3.5	PQL	mg/Kg	R	S

Method Category: VOA **Method:** 8260B **Matrix:** AQ

Sample ID: TB-072511 *Collected:* 7/25/2011 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Chloro-1,1,1-trifluoroethane	2	U	2	MDL	5	PQL	ug/L	UJ	L

Method Category: VOA **Method:** 8260B **Matrix:** SO

Sample ID: DUP07-SA6-QC-072511 *Collected:* 7/25/2011 10:00:00 *Analysis Type:* RES *Dilution:* 0.95

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Chloro-1,1,1-trifluoroethane	0.51	U	0.51	MDL	5.1	PQL	ug/Kg	UJ	C
METHYLENE CHLORIDE	2.7	J	0.24	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.14	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

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

Sample ID: SL-098-SA6-SB-2.0-3.0 ***Collected:*** 7/25/2011 9:50:00 ***Analysis Type:*** RES ***Dilution:*** 0.97

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
2-Chloro-1,1,1-trifluoroethane	0.51	U	0.51	MDL	5.2	PQL	ug/Kg	UJ	C
METHYLENE CHLORIDE	3.1	J	0.25	MDL	4.1	PQL	ug/Kg	U	B
TOLUENE	0.12	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: PrepDE208_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE208

Method Blank Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLA21B261345	8/10/2011 1:45:00 PM	N-NITROSODIMETHYLAMINE	40.2 ng/Kg	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-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-193-SA6-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	17.0 ng/Kg	33.3U ng/Kg
SL-253-SA6-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	17.2 ng/Kg	33.4U ng/Kg

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21008DB220613	8/3/2011 6:13:00 AM	ALUMINUM BORON CALCIUM IRON MANGANESE PHOSPHORUS STRONTIUM TIN Zirconium	6.17 mg/Kg 0.807 mg/Kg 13.3 mg/Kg 5.73 mg/Kg 0.0420 mg/Kg 1.25 mg/Kg 0.0750 mg/Kg 1.67 mg/Kg 0.557 mg/Kg	DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5

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
DUP07-SA6-QC-072511(RES)	TIN	2.35 mg/Kg	2.35U mg/Kg
DUP07-SA6-QC-072511(RES)	Zirconium	2.01 mg/Kg	2.01U mg/Kg
SL-098-SA6-SB-2.0-3.0(RES)	TIN	0.489 mg/Kg	0.489U mg/Kg
SL-098-SA6-SB-2.0-3.0(RES)	Zirconium	2.16 mg/Kg	2.16U mg/Kg
SL-190-SA6-SS-0.0-0.5(RES)	BORON	2.85 mg/Kg	2.85U mg/Kg
SL-190-SA6-SS-0.0-0.5(RES)	TIN	2.57 mg/Kg	2.57U mg/Kg
SL-190-SA6-SS-0.0-0.5(RES)	Zirconium	1.83 mg/Kg	1.83U mg/Kg
SL-192-SA6-SS-0.0-0.5(RES)	BORON	1.81 mg/Kg	1.81U mg/Kg
SL-192-SA6-SS-0.0-0.5(RES)	TIN	2.24 mg/Kg	2.24U mg/Kg
SL-192-SA6-SS-0.0-0.5(RES)	Zirconium	1.54 mg/Kg	1.54U mg/Kg
SL-193-SA6-SS-0.0-0.5(RES)	BORON	1.32 mg/Kg	1.32U mg/Kg
SL-193-SA6-SS-0.0-0.5(RES)	TIN	2.24 mg/Kg	2.24U mg/Kg
SL-193-SA6-SS-0.0-0.5(RES)	Zirconium	2.39 mg/Kg	2.39U mg/Kg
SL-235-SA6-SS-0.0-0.5(RES)	BORON	1.20 mg/Kg	1.20U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_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-235-SA6-SS-0.0-0.5(RES)	TIN	2.22 mg/Kg	2.22U mg/Kg
SL-235-SA6-SS-0.0-0.5(RES)	Zirconium	2.03 mg/Kg	2.03U mg/Kg
SL-236-SA6-SS-0.0-0.5(RES)	BORON	0.974 mg/Kg	0.974U mg/Kg
SL-236-SA6-SS-0.0-0.5(RES)	TIN	2.36 mg/Kg	2.36U mg/Kg
SL-236-SA6-SS-0.0-0.5(RES)	Zirconium	2.59 mg/Kg	2.59U mg/Kg
SL-245-SA6-SS-0.0-0.5(RES)	BORON	0.981 mg/Kg	0.981U mg/Kg
SL-245-SA6-SS-0.0-0.5(RES)	TIN	2.21 mg/Kg	2.21U mg/Kg
SL-245-SA6-SS-0.0-0.5(RES)	Zirconium	2.51 mg/Kg	2.51U mg/Kg
SL-253-SA6-SS-0.0-0.5(RES)	BORON	1.16 mg/Kg	1.16U mg/Kg
SL-253-SA6-SS-0.0-0.5(RES)	TIN	2.47 mg/Kg	2.47U mg/Kg
SL-253-SA6-SS-0.0-0.5(RES)	Zirconium	2.32 mg/Kg	2.32U mg/Kg
SL-254-SA6-SS-0.0-0.5(RES)	BORON	0.856 mg/Kg	0.856U mg/Kg
SL-254-SA6-SS-0.0-0.5(RES)	TIN	3.31 mg/Kg	3.31U mg/Kg
SL-254-SA6-SS-0.0-0.5(RES)	Zirconium	2.45 mg/Kg	2.45U mg/Kg
SL-255-SA6-SS-0.0-0.5(RES)	BORON	0.931 mg/Kg	0.931U mg/Kg
SL-255-SA6-SS-0.0-0.5(RES)	TIN	2.24 mg/Kg	2.24U mg/Kg
SL-255-SA6-SS-0.0-0.5(RES)	Zirconium	1.76 mg/Kg	1.76U mg/Kg
SL-256-SA6-SS-0.0-0.5(RES)	BORON	1.87 mg/Kg	1.87U mg/Kg
SL-256-SA6-SS-0.0-0.5(RES)	TIN	2.40 mg/Kg	2.40U mg/Kg
SL-256-SA6-SS-0.0-0.5(RES)	Zirconium	2.49 mg/Kg	2.49U mg/Kg
SL-268-SA6-SS-0.0-0.5(RES)	BORON	0.762 mg/Kg	0.762U mg/Kg
SL-268-SA6-SS-0.0-0.5(RES)	TIN	1.13 mg/Kg	1.13U mg/Kg
SL-268-SA6-SS-0.0-0.5(RES)	Zirconium	1.54 mg/Kg	1.54U mg/Kg
SL-289-SA6-SB-3.5-4.5(RES)	BORON	1.45 mg/Kg	1.45U mg/Kg
SL-289-SA6-SB-3.5-4.5(RES)	TIN	2.19 mg/Kg	2.19U mg/Kg
SL-289-SA6-SB-3.5-4.5(RES)	Zirconium	2.30 mg/Kg	2.30U mg/Kg

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB27B212200A	7/27/2011 10:00:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	7.5 ug/Kg 1.6 ug/Kg 0.09 ug/Kg	DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0

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
DUP07-SA6-QC-072511(RES)	METHYLENE CHLORIDE	2.7 ug/Kg	4.1U ug/Kg
DUP07-SA6-QC-072511(RES)	TOLUENE	0.14 ug/Kg	4.1U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_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-098-SA6-SB-2.0-3.0(RES)	METHYLENE CHLORIDE	3.1 ug/Kg	4.1U ug/Kg
SL-098-SA6-SB-2.0-3.0(RES)	TOLUENE	0.12 ug/Kg	4.1U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **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-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (SL-098-SA6-SB-2.0-3.0)	DIETHYLENE GLYCOL	27	26	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-098-SA6-SB-2.0-3.0MSD (SL-098-SA6-SB-2.0-3.0)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40) EFH (C8-C11)	- - - -	134 488 1213 -	49.00-123.00 49.00-123.00 49.00-123.00 49.00-123.00	29 (20.00) 132 (20.00) 176 (20.00) 21 (20.00)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40) EFH (C8-C11)	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-098-SA6-SB-2.0-3.0MS (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	ARSENIC BERYLLIUM CHROMIUM COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	147 127 126 136 156 140 129 133 141 192	- - - - - - - - - -	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 CHROMIUM COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	J(all detects) Zn, No Qual, >4x
SL-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	ANTIMONY	39	29	75.00-125.00	-	ANTIMONY	J(all detects) R(all non-detects) post spike = 70%
SL-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	CADMIUM COBALT	134 -	- -	75.00-125.00 75.00-125.00	22 (20.00) 21 (20.00)	CADMIUM COBALT	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_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-098-SA6-SB-2.0-3.0MS (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	SELENIUM	126	-	75.00-125.00	-	SELENIUM	J(all detects)
SL-098-SA6-SB-2.0-3.0MS (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	MOLYBDENUM	130	-	75.00-125.00	-	MOLYBDENUM	J(all detects)
SL-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	BARIUM	219	58	75.00-125.00	-	BARIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_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-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	ALUMINUM CALCIUM IRON TITANIUM	1108 189 304 394	1247 204 638 333	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM CALCIUM IRON TITANIUM	No Qual, >4x
SL-098-SA6-SB-2.0-3.0MSD (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	MAGNESIUM	-	22	75.00-125.00	-	MAGNESIUM	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-190-SA6-SS-0.0-0.5MS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5)	FLUORIDE	60	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-098-SA6-SB-2.0-3.0MSD (SL-098-SA6-SB-2.0-3.0)	ACENAPHTHYLENE BENZO(A)ANTHRACENE	- -	- -	67.00-114.00 59.00-128.00	31 (30.00) 33 (30.00)	ACENAPHTHYLENE BENZO(A)ANTHRACENE	No Qual, Diluted Out

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **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-098-SA6-SB-2.0-3.0MSD (SL-098-SA6-SB-2.0-3.0)	BIS(2-ETHYLHEXYL)PHTHALAT	-	0	39.00-167.00	200 (30.00)	BIS(2-ETHYLHEXYL)PHTHALA	No Qual, Diluted Out
	Butylbenzylphthalate	-	0	57.00-173.00	200 (30.00)	Butylbenzylphthalate	
	Diethylphthalate	-	0	70.00-136.00	200 (30.00)	Diethylphthalate	
	Dimethylphthalate	-	0	74.00-118.00	200 (30.00)	Dimethylphthalate	
	Di-n-butylphthalate	-	0	65.00-148.00	200 (30.00)	Di-n-butylphthalate	
SL-098-SA6-SB-2.0-3.0MSD (SL-098-SA6-SB-2.0-3.0)	1-METHYLNAPHTHALENE	-	68	72.00-123.00	-	1-METHYLNAPHTHALENE	No Qual, Diluted Out
	ANTHRACENE	-	59	73.00-115.00	41 (30.00)	ANTHRACENE	
	BENZO(A)PYRENE	-	39	45.00-138.00	40 (30.00)	BENZO(A)PYRENE	
	BENZO(G,H,I)PERYLENE	-	25	33.00-141.00	-	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	-	49	57.00-153.00	-	BENZO(K)FLUORANTHENE	
	Di-n-octylphthalate	-	34	40.00-192.00	-	Di-n-octylphthalate	

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-098-SA6-SB-2.0-3.0MSD (SL-098-SA6-SB-2.0-3.0)	4-CHLOROANILINE	-	-	13.00-107.00	50 (30.00)	4-CHLOROANILINE	J(all detects)
SL-098-SA6-SB-2.0-3.0MS **SL-098-SA6-SB-2.0-3.0MSD** (SL-098-SA6-SB-2.0-3.0)	4-CHLOROPHENYL-PHENYLET	79	77	80.00-109.00	-	4-CHLOROPHENYL-PHENYLE	J(all detects) UJ(all non-detects)
	BENZIDINE	26	18	35.00-141.00	36 (30.00)	BENZIDINE	

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-098-SA6-SB-2.0-3.0DUP (DUP07-SA6-QC-072511 SL-098-SA6-SB-2.0-3.0 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5)	Nitrate-NO3	200	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-098-SA6-SB-2.0-3.0DUP	BORON	200	20.00	
(DUP07-SA6-QC-072511	CALCIUM	21	20.00	
SL-098-SA6-SB-2.0-3.0	TIN	132	20.00	
SL-190-SA6-SS-0.0-0.5	Zirconium	37	20.00	J(all detects) UJ(all non-detects)
SL-192-SA6-SS-0.0-0.5				
SL-193-SA6-SS-0.0-0.5				
SL-235-SA6-SS-0.0-0.5				
SL-236-SA6-SS-0.0-0.5				
SL-245-SA6-SS-0.0-0.5				B, Sn, Zr, No Qual, OK by Difference
SL-253-SA6-SS-0.0-0.5				
SL-254-SA6-SS-0.0-0.5				
SL-255-SA6-SS-0.0-0.5				
SL-256-SA6-SS-0.0-0.5				
SL-268-SA6-SS-0.0-0.5				
SL-289-SA6-SB-3.5-4.5)				

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-098-SA6-SB-2.0-3.0DUP	ANTIMONY	41	20.00	
(DUP07-SA6-QC-072511				
SL-098-SA6-SB-2.0-3.0				
SL-190-SA6-SS-0.0-0.5				
SL-192-SA6-SS-0.0-0.5				
SL-193-SA6-SS-0.0-0.5				
SL-235-SA6-SS-0.0-0.5				
SL-236-SA6-SS-0.0-0.5				No Qual, OK by Difference
SL-245-SA6-SS-0.0-0.5				
SL-253-SA6-SS-0.0-0.5				
SL-254-SA6-SS-0.0-0.5				
SL-255-SA6-SS-0.0-0.5				
SL-256-SA6-SS-0.0-0.5				
SL-268-SA6-SS-0.0-0.5				
SL-289-SA6-SB-3.5-4.5)				

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-098-SA6-SB-2.0-3.0DUP (DUP07 -SA6-QC-072511 SL -098-SA6-SB-2.0-3.0 SL -190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5 SL -289-SA6-SB-3.5-4.5)	HEXAVALENT CHROMIUM	200	20.00	No Qual, OK by Difference

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-098-SA6-SB-2.0-3.0DUP (DUP07 -SA6-QC-072511 SL -098-SA6-SB-2.0-3.0 SL -190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5 SL -289-SA6-SB-3.5-4.5)	MERCURY	47	20.00	No Qual, OK by Difference

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-190-SA6-SS-0.0-0.5DUP (SL-190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5)	Nitrate-NO3	73	20.00	No Qual, OK by Difference

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 9012B
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-190-SA6-SS-0.0-0.5DUP (SL-190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5)	CYANIDE	200	20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y49Y211348A (TB-072511)	2-Chloro-1,1,1-trifluoroethane	-	75	77.00-120.00	-	2-Chloro-1,1,1-trifluoroethane	J(all detects) UJ(all non-detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12084AQ321444A	DIETHYLENE GLYCOL	143	-	75.00-125.00	-	DIETHYLENE GLYCOL	
(DUP07 -SA6-QC-072511	ETHYLENE GLYCOL	139	-	65.00-122.00	-	ETHYLENE GLYCOL	
SL -098-SA6-SB-2.0-3.0	Propylene glycol	130	-	75.00-125.00	-	Propylene glycol	
SL -190-SA6-SS-0.0-0.5							
SL -192-SA6-SS-0.0-0.5							
SL -193-SA6-SS-0.0-0.5							
SL -245-SA6-SS-0.0-0.5							J (all detects)
SL -253-SA6-SS-0.0-0.5							
SL -254-SA6-SS-0.0-0.5							
SL -255-SA6-SS-0.0-0.5							
SL -256-SA6-SS-0.0-0.5							
SL -268-SA6-SS-0.0-0.5							
SL -289-SA6-SB-3.5-4.5)							

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P21008DQ220617	ALUMINUM	140	-	80.00-120.00	-	ALUMINUM	
(DUP07 -SA6-QC-072511	IRON	126	-	80.00-120.00	-	IRON	
SL -098-SA6-SB-2.0-3.0	TITANIUM	185	-	80.00-120.00	-	TITANIUM	
SL -190-SA6-SS-0.0-0.5							
SL -192-SA6-SS-0.0-0.5							
SL -193-SA6-SS-0.0-0.5							
SL -235-SA6-SS-0.0-0.5							
SL -236-SA6-SS-0.0-0.5							No Qual, SRM within QC Limits
SL -245-SA6-SS-0.0-0.5							
SL -253-SA6-SS-0.0-0.5							
SL -254-SA6-SS-0.0-0.5							
SL -255-SA6-SS-0.0-0.5							
SL -256-SA6-SS-0.0-0.5							
SL -268-SA6-SS-0.0-0.5							
SL -289-SA6-SB-3.5-4.5)							

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_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
P5LDLCSQ260018 (DUP07 -SA6-QC-072511 SL -098-SA6-SB-2.0-3.0 SL -190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5 SL -289-SA6-SB-3.5-4.5)	ACENAPHTHENE	132	-	63.00-120.00	-	ACENAPHTHENE	J(all detects)
	BENZO(A)PYRENE	261	-	58.00-129.00	-	BENZO(A)PYRENE	
	BENZO(B)FLUORANTHENE	1881	-	63.00-143.00	-	BENZO(B)FLUORANTHENE	
	BENZO(G,H,I)PERYLENE	356	-	66.00-150.00	-	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	917	-	54.00-142.00	-	BENZO(K)FLUORANTHENE	
	BIS(2-ETHYLHEXYL)PHTHALAT	195	-	67.00-143.00	-	BIS(2-ETHYLHEXYL)PHTHALA	
	CHRYSENE	207	-	73.00-114.00	-	CHRYSENE	
	DIBENZO(A,H)ANTHRACENE	635	-	53.00-138.00	-	DIBENZO(A,H)ANTHRACENE	
	Di-n-octylphthalate	1884	-	68.00-162.00	-	Di-n-octylphthalate	
	FLUORENE	221	-	71.00-120.00	-	FLUORENE	
	INDENO(1,2,3-CD)PYRENE	258	-	56.00-134.00	-	INDENO(1,2,3-CD)PYRENE	
	PHENANTHRENE	139	-	75.00-120.00	-	PHENANTHRENE	
P5LDLCSQ260018 (DUP07 -SA6-QC-072511 SL -098-SA6-SB-2.0-3.0 SL -190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5 SL -289-SA6-SB-3.5-4.5)	Butylbenzylphthalate	0	-	65.00-131.00	-	Butylbenzylphthalate	J(all detects) R(all non-detects)
P5LDLCSQ260018 (DUP07 -SA6-QC-072511 SL -098-SA6-SB-2.0-3.0 SL -190-SA6-SS-0.0-0.5 SL -192-SA6-SS-0.0-0.5 SL -193-SA6-SS-0.0-0.5 SL -235-SA6-SS-0.0-0.5 SL -236-SA6-SS-0.0-0.5 SL -245-SA6-SS-0.0-0.5 SL -253-SA6-SS-0.0-0.5 SL -254-SA6-SS-0.0-0.5 SL -255-SA6-SS-0.0-0.5 SL -256-SA6-SS-0.0-0.5 SL -268-SA6-SS-0.0-0.5 SL -289-SA6-SB-3.5-4.5)	ANTHRACENE	43	-	73.00-113.00	-	ANTHRACENE	J(all detects) UJ(all non-detects)
	Di-n-butylphthalate	44	-	75.00-113.00	-	Di-n-butylphthalate	
	FLUORANTHENE	53	-	64.00-120.00	-	FLUORANTHENE	

Surrogate Outlier Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-268-SA6-SS-0.0 -0.5	n-Triacontane-d62	6	50.00-150.00	All Target Analytes	J(all detects) R(all non-detects)

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-268-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	173	20.00-120.00	All Target Analytes	J(all detects)
SL-268-SA6-SS-0.0 -0.5	TETRACHLORO-M-XYLENE	43	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-192-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	44	45.00-120.00	All Target Analytes	J (all detects) UJ (all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
MOISTURE	5.4	6.1	12		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
FLUORIDE	3.1	4.0	25	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
ALUMINUM	12600	12400	2	50.00	
CALCIUM	7920	5040	44	50.00	
IRON	19800	24000	19	50.00	
LITHIUM	25.0	28.6	13	50.00	
MAGNESIUM	5690	6090	7	50.00	
MANGANESE	272	280	3	50.00	
PHOSPHORUS	401	408	2	50.00	No Qualifiers Applied
POTASSIUM	2810	2840	1	50.00	
SODIUM	238	148	47	50.00	
STRONTIUM	24.6	14.9	49	50.00	
TITANIUM	991	1210	20	50.00	
Zirconium	2.16	2.01	7	50.00	
TIN	0.489	2.35	131	50.00	J(all detects)

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
ANTIMONY	0.170	0.174	2	50.00	
ARSENIC	5.12	6.88	29	50.00	
BARIUM	93.4	123	27	50.00	
BERYLLIUM	0.533	0.784	38	50.00	
CADMIUM	0.196	0.141	33	50.00	
CHROMIUM	20.4	29.8	37	50.00	
COBALT	6.76	9.68	36	50.00	
COPPER	11.1	12.7	13	50.00	No Qualifiers Applied
LEAD	6.83	6.36	7	50.00	
NICKEL	14.0	19.1	31	50.00	
SELENIUM	0.158	0.107	38	50.00	
SILVER	0.0373	0.0319	16	50.00	
THALLIUM	0.295	0.388	27	50.00	
VANADIUM	37.9	52.3	32	50.00	
ZINC	74.3	89.7	19	50.00	
MOLYBDENUM	0.684	1.35	65	50.00	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (mg/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	0.97	1.1 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (mg/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0257	0.106 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (mg/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	1.3 U	1.5	200	50.00	J(all detects)
EFH (C30-C40)	0.65	3.1	131	50.00	UJ(all non-detects)

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (ug/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
AROCLOR 1254	1.7	1.8 U	200	50.00	J(all detects)
Aroclor 5460	3.4	3.5 U	200	50.00	UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (ug/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
METHYLENE CHLORIDE	3.1	2.7	14	50.00	
TOLUENE	0.12	0.14	15	50.00	No Qualifiers Applied

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg) SL-098-SA6-SB-2.0-3.0	Concentration (ug/Kg) DUP07-SA6-QC-072511	Sample RPD	eQAPP RPD	Flag
BENZO(A)PYRENE	5.4	1.8 U	200	50.00	
BENZO(B)FLUORANTHENE	6.7	1.8 U	200	50.00	
BENZO(G,H,I)PERYLENE	4.9	1.8 U	200	50.00	
BENZO(K)FLUORANTHENE	5.6	1.8 U	200	50.00	J(all detects)
CHRYSENE	5.7	1.8 U	200	50.00	UJ(all non-detects)
Di-n-octylphthalate	60	19 U	200	50.00	
FLUORANTHENE	4.1	1.8 U	200	50.00	
PYRENE	4.4	1.8 U	200	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
PH	8.06	8.23	2	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-193-SA6-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	17.0	33.3	PQL	ng/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	17.2	33.4	PQL	ng/Kg	J (all detects)

Method: 300.0
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-190-SA6-SS-0.0-0.5	Nitrate-NO3	J	1.4	1.5	PQL	mg/Kg	J (all detects)
SL-192-SA6-SS-0.0-0.5	Nitrate-NO3	J	1.2	1.5	PQL	mg/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	Nitrate-NO3	J	0.88	1.5	PQL	mg/Kg	J (all detects)
SL-245-SA6-SS-0.0-0.5	Nitrate-NO3	J	1.2	1.5	PQL	mg/Kg	J (all detects)
SL-254-SA6-SS-0.0-0.5	Nitrate-NO3	J	1.1	1.5	PQL	mg/Kg	J (all detects)

Method: 6010B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA6-QC-072511	TIN	J	2.35	10.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.01	5.17	PQL	mg/Kg	
SL-098-SA6-SB-2.0-3.0	TIN	J	0.489	10.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.16	5.23	PQL	mg/Kg	
SL-190-SA6-SS-0.0-0.5	BORON	J	2.85	4.97	PQL	mg/Kg	J (all detects)
	SODIUM	J	67.9	99.4	PQL	mg/Kg	
	TIN	J	2.57	9.94	PQL	mg/Kg	
	Zirconium	J	1.83	4.97	PQL	mg/Kg	
SL-192-SA6-SS-0.0-0.5	BORON	J	1.81	4.91	PQL	mg/Kg	J (all detects)
	SODIUM	J	61.8	98.2	PQL	mg/Kg	
	TIN	J	2.24	9.82	PQL	mg/Kg	
	Zirconium	J	1.54	4.91	PQL	mg/Kg	
SL-193-SA6-SS-0.0-0.5	BORON	J	1.32	5.07	PQL	mg/Kg	J (all detects)
	SODIUM	J	68.7	101	PQL	mg/Kg	
	TIN	J	2.24	10.1	PQL	mg/Kg	
	Zirconium	J	2.39	5.07	PQL	mg/Kg	
SL-235-SA6-SS-0.0-0.5	BORON	J	1.20	4.88	PQL	mg/Kg	J (all detects)
	SODIUM	J	72.1	97.5	PQL	mg/Kg	
	TIN	J	2.22	9.75	PQL	mg/Kg	
	Zirconium	J	2.03	4.88	PQL	mg/Kg	
SL-236-SA6-SS-0.0-0.5	BORON	J	0.974	4.90	PQL	mg/Kg	J (all detects)
	SODIUM	J	72.7	98.1	PQL	mg/Kg	
	TIN	J	2.36	9.81	PQL	mg/Kg	
	Zirconium	J	2.59	4.90	PQL	mg/Kg	
SL-245-SA6-SS-0.0-0.5	BORON	J	0.981	4.86	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.5	97.1	PQL	mg/Kg	
	TIN	J	2.21	9.71	PQL	mg/Kg	
	Zirconium	J	2.51	4.86	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-253-SA6-SS-0.0-0.5	BORON	J	1.16	4.85	PQL	mg/Kg	J (all detects)
	SODIUM	J	86.7	96.9	PQL	mg/Kg	
	TIN	J	2.47	9.69	PQL	mg/Kg	
	Zirconium	J	2.32	4.85	PQL	mg/Kg	
SL-254-SA6-SS-0.0-0.5	BORON	J	0.856	4.94	PQL	mg/Kg	J (all detects)
	SODIUM	J	69.5	98.8	PQL	mg/Kg	
	TIN	J	3.31	9.88	PQL	mg/Kg	
	Zirconium	J	2.45	4.94	PQL	mg/Kg	
SL-255-SA6-SS-0.0-0.5	BORON	J	0.931	4.86	PQL	mg/Kg	J (all detects)
	TIN	J	2.24	9.72	PQL	mg/Kg	
	Zirconium	J	1.76	4.86	PQL	mg/Kg	
SL-256-SA6-SS-0.0-0.5	BORON	J	1.87	5.01	PQL	mg/Kg	J (all detects)
	SODIUM	J	79.0	100	PQL	mg/Kg	
	TIN	J	2.40	10.0	PQL	mg/Kg	
	Zirconium	J	2.49	5.01	PQL	mg/Kg	
SL-268-SA6-SS-0.0-0.5	BORON	J	0.762	4.85	PQL	mg/Kg	J (all detects)
	SODIUM	J	61.1	97.0	PQL	mg/Kg	
	TIN	J	1.13	9.70	PQL	mg/Kg	
	Zirconium	J	1.54	4.85	PQL	mg/Kg	
SL-289-SA6-SB-3.5-4.5	BORON	J	1.45	5.27	PQL	mg/Kg	J (all detects)
	TIN	J	2.19	10.5	PQL	mg/Kg	
	Zirconium	J	2.30	5.27	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA6-QC-072511	ANTIMONY	J	0.174	0.207	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.107	0.414	PQL	mg/Kg	
	SILVER	J	0.0319	0.103	PQL	mg/Kg	
SL-098-SA6-SB-2.0-3.0	ANTIMONY	J	0.170	0.203	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.158	0.407	PQL	mg/Kg	
	SILVER	J	0.0373	0.102	PQL	mg/Kg	
SL-190-SA6-SS-0.0-0.5	SELENIUM	J	0.246	0.406	PQL	mg/Kg	J (all detects)
SL-192-SA6-SS-0.0-0.5	ANTIMONY	J	0.130	0.198	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.256	0.397	PQL	mg/Kg	
	SILVER	J	0.0478	0.0991	PQL	mg/Kg	
SL-193-SA6-SS-0.0-0.5	ANTIMONY	J	0.193	0.199	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.221	0.397	PQL	mg/Kg	
	SILVER	J	0.0605	0.0993	PQL	mg/Kg	
SL-235-SA6-SS-0.0-0.5	ANTIMONY	J	0.0993	0.203	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.127	0.406	PQL	mg/Kg	
	SILVER	J	0.0905	0.101	PQL	mg/Kg	
SL-236-SA6-SS-0.0-0.5	ANTIMONY	J	0.160	0.196	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.155	0.392	PQL	mg/Kg	
	SILVER	J	0.0925	0.0981	PQL	mg/Kg	
SL-245-SA6-SS-0.0-0.5	ANTIMONY	J	0.137	0.194	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0697	0.0971	PQL	mg/Kg	
SL-253-SA6-SS-0.0-0.5	ANTIMONY	J	0.125	0.198	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.159	0.395	PQL	mg/Kg	
	SILVER	J	0.0559	0.0988	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-254-SA6-SS-0.0-0.5	ANTIMONY	J	0.130	0.202	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.203	0.403	PQL	mg/Kg	
	SILVER	J	0.0607	0.101	PQL	mg/Kg	
SL-255-SA6-SS-0.0-0.5	ANTIMONY	J	0.0753	0.194	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.207	0.389	PQL	mg/Kg	
	SILVER	J	0.0441	0.0972	PQL	mg/Kg	
SL-256-SA6-SS-0.0-0.5	ANTIMONY	J	0.107	0.200	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.218	0.400	PQL	mg/Kg	
	SILVER	J	0.0441	0.100	PQL	mg/Kg	
SL-289-SA6-SB-3.5-4.5	ANTIMONY	J	0.131	0.203	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.132	0.405	PQL	mg/Kg	
	SILVER	J	0.0402	0.101	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA6-SB-2.0-3.0	HEXAVALENT CHROMIUM	J	0.97	1.1	PQL	mg/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.0	PQL	mg/Kg	J (all detects)
SL-235-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.0	PQL	mg/Kg	J (all detects)
SL-236-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.52	1.0	PQL	mg/Kg	J (all detects)
SL-245-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.56	1.0	PQL	mg/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.42	1.0	PQL	mg/Kg	J (all detects)
SL-254-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.56	1.0	PQL	mg/Kg	J (all detects)
SL-256-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.40	1.0	PQL	mg/Kg	J (all detects)
SL-268-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.54	1.0	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA6-SB-2.0-3.0	MERCURY	J	0.0257	0.0990	PQL	mg/Kg	J (all detects)
SL-190-SA6-SS-0.0-0.5	MERCURY	J	0.0582	0.0970	PQL	mg/Kg	J (all detects)
SL-192-SA6-SS-0.0-0.5	MERCURY	J	0.0193	0.0990	PQL	mg/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	MERCURY	J	0.0131	0.0955	PQL	mg/Kg	J (all detects)
SL-235-SA6-SS-0.0-0.5	MERCURY	J	0.0085	0.0950	PQL	mg/Kg	J (all detects)
SL-245-SA6-SS-0.0-0.5	MERCURY	J	0.0202	0.0988	PQL	mg/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	MERCURY	J	0.0182	0.0967	PQL	mg/Kg	J (all detects)
SL-254-SA6-SS-0.0-0.5	MERCURY	J	0.0115	0.0982	PQL	mg/Kg	J (all detects)
SL-256-SA6-SS-0.0-0.5	MERCURY	J	0.0071	0.0993	PQL	mg/Kg	J (all detects)
SL-289-SA6-SB-3.5-4.5	MERCURY	J	0.0242	0.104	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-193-SA6-SS-0.0-0.5	METHANOL	J	210	510	PQL	ug/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA6-SB-2.0-3.0	EFH (C30-C40)	J	0.65	1.3	PQL	mg/Kg	J (all detects)
SL-190-SA6-SS-0.0-0.5	EFH (C8-C11)	J	0.59	1.2	PQL	mg/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.85	1.2	PQL	mg/Kg	J (all detects)
SL-245-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.65	1.2	PQL	mg/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	EFH (C8-C11)	J	0.42	1.2	PQL	mg/Kg	J (all detects)
SL-255-SA6-SS-0.0-0.5	EFH (C15-C20) EFH (C8-C11)	J J	0.67 0.43	1.2 1.2	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-256-SA6-SS-0.0-0.5	EFH (C15-C20) EFH (C8-C11)	J J	0.99 0.44	1.2 1.2	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-268-SA6-SS-0.0-0.5	EFH (C15-C20)	J	10	12	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-190-SA6-SS-0.0-0.5	gamma-BHC (Lindane)	J	0.11	0.17	PQL	ug/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	4,4'-DDT	J	0.30	0.34	PQL	ug/Kg	J (all detects)
SL-235-SA6-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J J	0.13 0.21	0.34 0.34	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-236-SA6-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J J	0.14 0.22	0.34 0.34	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-245-SA6-SS-0.0-0.5	4,4'-DDE	J	0.13	0.34	PQL	ug/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	4,4'-DDE	J	0.23	0.34	PQL	ug/Kg	J (all detects)
SL-254-SA6-SS-0.0-0.5	ALPHA-BHC	J	0.14	0.17	PQL	ug/Kg	J (all detects)
SL-255-SA6-SS-0.0-0.5	4,4'-DDT	J	0.20	0.34	PQL	ug/Kg	J (all detects)
SL-268-SA6-SS-0.0-0.5	gamma-BHC (Lindane)	J	0.080	0.17	PQL	ug/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA6-SB-2.0-3.0	AROCLOR 1254 Aroclor 5460	J J	1.7 3.4	1.8 3.5	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-192-SA6-SS-0.0-0.5	Aroclor 5460	J	3.0	3.3	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-235-SA6-SS-0.0-0.5	AROCLOR 1260	J	0.82	1.7	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	2.3	3.3	PQL	ug/Kg	
SL-236-SA6-SS-0.0-0.5	AROCLOR 1260	J	0.83	1.7	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	1.9	3.3	PQL	ug/Kg	

Method: 8151A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-192-SA6-SS-0.0-0.5	DICHLOROPROP	J	0.85	1.7	PQL	ug/Kg	J (all detects)
SL-193-SA6-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.11	0.17	PQL	ug/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	2,4-DB	J	1.1	1.7	PQL	ug/Kg	J (all detects)

Method: 8260B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA6-QC-072511	METHYLENE CHLORIDE	J	2.7	4.1	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.14	4.1	PQL	ug/Kg	
SL-098-SA6-SB-2.0-3.0	METHYLENE CHLORIDE	J	3.1	4.1	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.12	4.1	PQL	ug/Kg	

Method: 8270C
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-235-SA6-SS-0.0-0.5	Di-n-octylphthalate	J	22	170	PQL	ug/Kg	J (all detects)
SL-255-SA6-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	29	340	PQL	ug/Kg	J (all detects)
SL-268-SA6-SS-0.0-0.5	BENZO(G,H,I)PERYLENE	J	190	1700	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	350	1700	PQL	ug/Kg	

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA6-SB-2.0-3.0	BENZO(A)PYRENE	J	5.4	8.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	6.7	8.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	4.9	8.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	5.6	8.8	PQL	ug/Kg	
	CHRYSENE	J	5.7	8.8	PQL	ug/Kg	
	Di-n-octylphthalate	J	60	95	PQL	ug/Kg	
	FLUORANTHENE	J	4.1	8.8	PQL	ug/Kg	
	PYRENE	J	4.4	8.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-190-SA6-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	1.6	1.7	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	0.70	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	17	18	PQL	ug/Kg	
	Di-n-butylphthalate	J	6.3	18	PQL	ug/Kg	
	Di-n-octylphthalate	J	13	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.91	1.7	PQL	ug/Kg	
SL-192-SA6-SS-0.0-0.5	CHRYSENE	J	0.38	1.7	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	
SL-193-SA6-SS-0.0-0.5	CHRYSENE	J	3.8	8.4	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	79	91	PQL	ug/Kg	
SL-235-SA6-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.0	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.85	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	0.92	1.7	PQL	ug/Kg	
	PYRENE	J	0.87	1.7	PQL	ug/Kg	
SL-236-SA6-SS-0.0-0.5	ANTHRACENE	J	0.41	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.0	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	14	18	PQL	ug/Kg	
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.7	PQL	ug/Kg	
SL-245-SA6-SS-0.0-0.5	CHRYSENE	J	2.3	8.4	PQL	ug/Kg	J (all detects)
SL-253-SA6-SS-0.0-0.5	2-METHYLNAPHTHALENE	J	0.84	1.7	PQL	ug/Kg	J (all detects)
	ACENAPHTHENE	J	1.1	1.7	PQL	ug/Kg	
	ACENAPHTHYLENE	J	1.2	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	15	18	PQL	ug/Kg	
	Di-n-butylphthalate	J	6.8	18	PQL	ug/Kg	
SL-254-SA6-SS-0.0-0.5	CHRYSENE	J	3.6	8.4	PQL	ug/Kg	J (all detects)
	Diethylphthalate	J	46	91	PQL	ug/Kg	
SL-255-SA6-SS-0.0-0.5	2-METHYLNAPHTHALENE	J	0.91	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	0.88	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.3	1.7	PQL	ug/Kg	
	PYRENE	J	1.6	1.7	PQL	ug/Kg	
SL-256-SA6-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.99	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.92	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.0	1.7	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.3	18	PQL	ug/Kg	
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	
	NAPHTHALENE	J	0.68	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.7	PQL	ug/Kg	
	PYRENE	J	1.6	1.7	PQL	ug/Kg	
SL-289-SA6-SB-3.5-4.5	BENZO(A)ANTHRACENE	J	3.9	8.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	7.2	8.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	4.6	8.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	4.6	8.8	PQL	ug/Kg	
	Di-n-octylphthalate	J	64	95	PQL	ug/Kg	
	PYRENE	J	4.4	8.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE208 **Laboratory: LL**

EDD Filename: DE208_v2 **eQAPP Name: CDM_SSFL_110509**

Method: **8315A**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-253-SA6-SS-0.0-0.5	FORMALDEHYDE	J	680	1500	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:	July 25, 2011
LDC Report Date:	November 14, 2011
Matrix:	Soil/Water
Parameters:	Volatiles
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE208

Sample Identification

SL-098-SA6-SB-2.0-3.0
DUP07-SA6-QC-072511
TB-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 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
7/27/11	Freon 113	26	All soil samples in SDG DE208	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
VBLKB27	7/27/11	Acetone Methylene chloride Toluene	7.5 ug/Kg 1.6 ug/Kg 0.09 ug/Kg	All soil samples in SDG DE208

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-098-SA6-SB-2.0-3.0	Methylene chloride Toluene	3.1 ug/Kg 0.12 ug/Kg	4.1U ug/Kg 4.1U ug/Kg
DUP07-SA6-QC-072511	Methylene chloride Toluene	2.7 ug/Kg 0.14 ug/Kg	4.1U ug/Kg 4.1U ug/Kg

Sample TB-072511 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

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/D1Y49 (All water samples in SDG DE208)	Freon 133a	-	75 (77-120)	-	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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 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-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Methylene chloride	3.1	2.7	14 (≤50)	-	-
Toluene	0.12	0.14	15 (≤50)	-	-

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Freon 113	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE208	TB-072511	Freon 113a	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511 TB-072511	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 DE208

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE208	SL-098-SA6-SB-2.0-3.0	Methylene chloride Toluene	4.1U ug/Kg 4.1U ug/Kg	A	B
DE208	DUP07-SA6-QC-072511	Methylene chloride Toluene	4.1U ug/Kg 4.1U ug/Kg	A	B

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

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: 7/25/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 25
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 = 1,2
XVII.	Field blanks	ND	TB = 3

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-098-SA6-SB-2.0-3.0 S	11 1	VBLKB27	21		31	
2 1	DUP07-SA6-QC-072511 ↓	12 2	VBLKY49	22		32	
3 2	TB-072511 W	13		23		33	
4 1	SL-098-SA6-SB-2.0-3.0MS	14		24		34	
5 1	SL-098-SA6-SB-2.0-3.0MSD	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DC #: 26533 A/a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

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?	✓			

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 #: 26533A/c

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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

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
	7/27/11 19:45	CCV	Freon 113	26		All soils	J/UJ/A (c)

CONCAL_8260B.1S

LDC #: 26533A1e

VALIDATION FINDINGS WORKSHEET
Blanks

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

METHOD: / GC ___ HPLC

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

Y N N/A Were 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.

(B)

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:_____ **Blank analysis date:** 7/27/11 **Associated samples:** ALL SOILS
Conc. units: ug/kg

Compound	Blank ID	Sample Identification						
	VBLKB27	1	2					
F	7.5	-	-					
E	1.6	3.1/4.14	2.7/4.14					
CC	0.09	0.12/4.14	0.14/4.14					

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 #: 26533A/K

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/D 1Y49	Freon 133a	( )	75 (77-120)	( )	All waters	J/UJ/P (L)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC #: 26533 39/2

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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

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

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)		≤ 50 RPD
	1	2	
E	3.1	2.7	14
CC	0.12	0.14	15

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26533A/a

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 (SV std)	Recalculated RRF (SV std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	7/21/11	C (1st internal standard)	0.3422	0.3422	0.3505	0.3505	9	9
			EE (2nd internal standard)	1.8304	1.8304	1.7156	1.7156	7	7
			JJJ (3rd internal standard)	1.5137	1.5137	1.4916	1.4916	6	6
			(4th internal standard)						
2	ICAL	7/26/11	C (1st internal standard)	0.3634	0.3634	0.3670	0.3670	8	8
			EE (2nd internal standard)	1.9823	1.9823	1.8280	1.8280	6	6
			JJJ (3rd internal standard)	1.7721	1.7721	1.6684	1.6684	5	5
			(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 #: 26533A/R

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

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

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	7/27/11	C (1st internal standard)	0.3505	0.3321	0.3321	5	5
	19:45		EE (2nd internal standard)	1.7156	1.8228	1.8228	6	6
			JJJ (3rd internal standard)	1.4916	1.5457	1.5457	4	4
			(4th internal standard)					
2	CCV	7/29/11	C (1st internal standard)					
	11:21		EE (2nd internal standard)	0.3670	0.3749	0.3749	2	2
			JJJ (3rd internal standard)					
			(4th internal standard)					
3	CCV	7/29/11	C (1st internal standard)	0.3670	0.3749	0.3749	2	2
	11:21		EE (2nd internal standard)	1.8280	1.9428	1.9428	6	6
			JJJ (3rd internal standard)	1.6684	1.7556	1.7556	5	5
			(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 #: 26533A1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

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	51.983	104	104	0
1,2-Dichloroethane-d4	↓	51.283	103	103	↓
Toluene-d8		49.174	98	98	
Bromofluorobenzene		46.186	92	92	

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 #: 26533A1 2

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

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

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

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 4 + 5

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	19.16	19.16	ND	21.69	19.79	113	113	109	109	9	9
Trichloroethene	19.16	19.16	ND	18.65	16.81	97	97	93	93	10	10
Benzene	19.16	19.16	ND	18.95	17.07	99	99	94	94	10	10
Toluene	19.16	19.16	0.12	18.64	16.79	97	97	92	92	10	10
Chlorobenzene	19.16	19.16	ND	18.14	16.34	95	95	90	90	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.

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

LCS ID: LCS1B27

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	20.27	NA	101	101				
Trichloroethene	↓	↓	18.35	↓	92	92				
Benzene			18.99		95	95				
Toluene			18.69		93	93				
Chlorobenzene			18.90		94	94	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 #: 26533J1/2

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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. = (1759)(50)( )
(801415)(0.9307)(5.13)(0.95)
=

0.121 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:	July 25, 2011
LDC Report Date:	November 9, 2011
Matrix:	Soil/Water
Parameters:	1,4-Dioxane
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE208

Sample Identification

SL-098-SA6-SB-2.0-3.0
DUP07-SA6-QC-072511
TB-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 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-072511 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

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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No volatiles were detected in any of the samples.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511 TB-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A1b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FF
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: 7/25/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ ~~20~~ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 1, 2
XVII.	Field blanks	ND	TB = 3

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-098-SA6-SB-2.0-3.0	11 1	VBLKE30	21		31	
2 1	DUP07-SA6-QC-072511	12 2	VBLKE32	22		32	
3 3	TB-072511 W	13 3	VBLKE29	23		33	
4 1	SL-098-SA6-SB-2.0-3.0MS	14		24		34	
5 ~~3~~	SL-098-SA6-SB-2.0-3.0MSD	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DC #: 26533A1b

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 spikeduplicates				
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 #: 26533A16

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 #: 26533A1b

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 (5 std)	Recalculated RRF (5 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/17/11	1,4-Dioxane (1st internal standard)	1.4025	1.4025	1.4910	1.4910	6	6
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)	(10)	(10)				
2	ICAL	6/16/11	1,4-Dioxane (1st internal standard)	1.3847	1.3847	1.3534	1.3534	4	4
			(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 #: 26533A/b

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	CCV 12:59	7/27/11	1,4-Dioxane (1st internal standard)	1.4910	1.3647	1.3647	8	8
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
2	CCV 12:04	7/29/11	↓ (1st internal standard)	1.4910	1.4962	1.4962	0	0
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3	CCV 9:55	7/27/11	↓ (1st internal standard)	1.3554	1.4613	1.4613	8	8
			(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 #: 26533A1D

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	9.756	98	98	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 #: 26533A1b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

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

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

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 4

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	120.89	120.89	ND	104.68	100	87	87	83	83	4.5	4.5
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.

Reviewer: FT

2nd Reviewer: A

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

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

LCS ID: LCS ID # 30

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~~ 1,4-Dioxane	125	125	117.67	124.85	94	94	100	100	6	6
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 #: 26533A1b

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. _____ , _____:

Conc. = $\frac{(\quad\quad)(\quad\quad)(\quad\quad)}{(\quad\quad)(\quad\quad)(\quad\quad)(\quad\quad)}$

= 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: July 25, 2011

LDC Report Date: November 10, 2011

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 8270C for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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-098-SA6-SB-2.0-3.0MS/MSD (SL-098-SA6-SB-2.0-3.0)	4-Chloroaniline	-	-	50 (≤30)	J (all detects)	A
SL-098-SA6-SB-2.0-3.0MS/MSD (SL-098-SA6-SB-2.0-3.0)	4-Chlorophenyl-phenyl ether Benzidine	79 (80-109) 26 (35-141)	77 (80-109) 18 (35-141)	43 (≤30) - 36 (≤30)	J (all detects) UJ (all non-detects) 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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No semivolatiles were detected in any of the samples.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0	4-Chloroaniline	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (RPD) (Q)
DE208	SL-098-SA6-SB-2.0-3.0	4-Chlorophenyl-phenyl ether	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE208	SL-098-SA6-SB-2.0-3.0	Benzidine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A2a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/9/11
SDG #: DE208 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: 7/25/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r ≥ 2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
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	NP	D = 12, 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-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21	SBLK LC2/6	31	
2	SL-192-SA6-SS-0.0-0.5	12	SL-098-SA6-SB-2.0-3.0	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-289-SA6-SB-3.5-4.5	23		33	
4	SL-235-SA6-SS-0.0-0.5	14	DUP07-SA6-QC-072511	24		34	
5	SL-236-SA6-SS-0.0-0.5	15	SL-098-SA6-SB-2.0-3.0MS	25		35	
6	SL-245-SA6-SS-0.0-0.5	16	SL-098-SA6-SB-2.0-3.0MSD	26		36	
7	SL-253-SA6-SS-0.0-0.5	17		27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

LDC #: 26533A2a

VALIDATION FINDINGS CHECKLIST

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

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

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

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

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

LDC #: 26533A2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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
		15 + 16	~~Tetralin~~	~~55 (70-130)~~	( )	~~43 (30)~~	~~12~~ 12	~~J/UJ/A~~ (Q
			T	( )	( )	50 (↓)	↓	J/A det
			MM	79 (80-109)	77 (80-109)	( )		J/UJ/A
			SSS	26 (35-141)	18 (35-141)	36 (↓)	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

LDC #: 26535T07

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/8/11	Phenol (1st internal standard)	2.451	2.451	2.317	2.317	5	5
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.476	0.476	0.485	0.485	3	3
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.379	0.379	0.373	0.373	9	9
			Pentachlorophenol (4th internal standard)	0.131	0.131	0.125	0.125	8	8
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.658	0.658	0.649	0.649	3	3
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.541	1.541	1.478	1.478	7	7
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 #: 26533A29

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 16:23	8/15/11	Phenol (1st internal standard)	2.317	2.235	2.235	4	4
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.485	0.503	0.503	4	4
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.373	0.390	0.390	5	5
			Pentachlorophenol (4th internal standard)	0.125	0.105	0.105	16	16
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.649	0.716	0.716	10	10
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.478	1.548	1.548	5	5
2	CCV 0325	8/16/11	~~Phenol~~ (1st internal standard)		2.223	2.223	4	4
			Naphthalene (2nd internal standard)		0.515	0.515	6	6
			Fluorene (3rd internal standard)		0.385	0.385	3	3
			Pentachlorophenol (4th internal standard)		0.101	0.101	20	20
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.735	0.735	13	13
			~~Benzo(a)pyrene~~ (6th internal standard)		1.628	1.628	10	10
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 #: 26533A09

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

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

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	~~74~~ 73.712	74	74	0
2-Fluorobiphenyl	↓	75.081	75	75	
Terphenyl-d14	↓	66.309	66	66	
Phenol-d5	200	155.039	78	78	
2-Fluorophenol	↓	152.188	76	76	
2,4,6-Tribromophenol	↓	128.494	64	64	↓
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 #: 26533A2q

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: 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	1666.67	1666.67	ND	1219.07	1235.19	73	73	74	74	1	1
N-Nitroso-di-n-propylamine			ND	1248.79	1251.42	75	75	75	75	0	0
4-Chloro-3-methylphenol				1276.37	1283.93	77	77	77	77	1	1
Acenaphthene				1326.12	1328	80	80	80	80	0	0
Pentachlorophenol				1067.1	1032.11	64	64	62	62	3	3
Pyrene				1389.02	1358.13	83	83	81	81	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 #: 26353T-4

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

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

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

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

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

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

LCS/LCSD samples: 216LCLCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1666.67	NA	1541.84	NA	93	93				
N-Nitroso-di-n-propylamine			1587.77		95	95				
4-Chloro-3-methylphenol			1613.33		97	97				
Acenaphthene			1677.44		101	101				
Pentachlorophenol			1172.98		70	70				
Pyrene			1726.39		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 #: 26533A2S

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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. 4, Di-n-octylphthalate

Conc. = $\frac{(1536)(20)(1)(1000)(\quad)}{(324584)(1.478)(30)(0.99)(\quad)}$

= 22 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: July 25, 2011

LDC Report Date: November 21, 2011

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within the QC limits. Since the samples were diluted out, no data were qualified.

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
215LDLCS (All samples in SDG DE208)	Acenaphthene Fluorene Phenanthrene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene	132 (63-120) 221 (71-120) 139 (75-120) 1881 (63-143) 917 (54-142) 261 (58-128) 258 (56-134) 635(53-138)	- - - - - - - -	- - - - - - - -	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
215LDLCS (All samples in SDG DE208)	Anthracene Fluoranthene	43 (73-113) 53 (64-120)	- -	- -	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P
215LDLCS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511 SBLKLD215)	Chrysene Benzo(g,h,i)perylene	207 (73-114) 356 (66-150)	- -	- -	J (all detects) J (all detects)	P

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
215LDLCS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511 SBLKLD215)	Di-n-butylphthalate	44 (75-137)	-	-	J (all detects) UJ (all non-detects)	P
215LDLCS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511 SBLKLD215)	Butylbenzylphthalate	0 (65-131)	-	-	J (all detects) R (all non detects)	P
215LDLCS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511 SBLKLD215)	Bis(2-ethylhexyl)phthalate	195 (67-143)	-	-	J (all detects)	P
215LDLCS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511 SBLKLD215)	Di-n-octylphthalate	1884 (68-162)	-	-	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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 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-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Benzo(a)pyrene	5.4	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(b)fluoranthene	6.7	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(g,h,i)perylene	4.9	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(k)fluoranthene	5.6	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Chrysene	5.7	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Fluoranthene	4.1	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Di-n-octylphthalate	6.0	1.9U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Pyrene	4.4	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Acenaphthene Fluorene Phenanthrene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene	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)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Anthracene Fluoranthene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Chrysene Benzo(g,h,i)perylene	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511	Di-n-butylphthalate	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511	Butylbenzylphthalate	J (all detects) R (all non detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 DUP07-SA6-QC-072511	Bis(2-ethylhexyl)phthalate	J (all detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Di-n-octylphthalate	J (all detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Fluoranthene Di-n-octylphthalate Pyrene	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
SVOA 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: 7/25/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	~~3~~ A	% RSD = 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ± 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = ~~12~~ 13, 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-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21	SBLKLP015	31	
2	SL-192-SA6-SS-0.0-0.5	12	SL-098-SA6-SB-2.0-3.0	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-289-SA6-SB-3.5-4.5	23		33	
4	SL-235-SA6-SS-0.0-0.5	14	DUP07-SA6-QC-072511	24		34	
5	SL-236-SA6-SS-0.0-0.5	15	SL-098-SA6-SB-2.0-3.0MS	25		35	
6	SL-245-SA6-SS-0.0-0.5	16	SL-098-SA6-SB-2.0-3.0MSD	26		36	
7	SL-253-SA6-SS-0.0-0.5	17		27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

LDC #: 26533A2b

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 $\geq$ 0.990?	✓			
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $\geq$ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26533A26

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

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

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

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 #: 26533A2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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
		15+16	several %R	+ %R RPD	were		12	no qual
			outside limit	( )	( )			5x PQL
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

LDC #: 26533A2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

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

(L)

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		215LDLCS	GG	132 (63-120)	( )	( )	All	J/Pdet
			NN	221 (71-120)	( )	( )		
			UU	139 (75-120)	( )	( )		
			VV	43 (73-113)	( )	( )		J/UJ/P
			YY	53 (64-120)	( )	( )		
		-	DDD	207 (73-114)	( )	( )	except #11 for DDD	J/P det
		~~	GGG	1881 (63-143)	( )	( )		
			HHH	917 (54-142)	( )	( )		
			III	261 (58-129)	( )	( )		
			JJJ	258 (56-134)	( )	( )		
			KKK	635 (53-138)	( )	( )		
		✓	LLL	356 (66-150)	( )	( )	except #11 for LLL	
		-	XX	44 (75-137)	(→)	(BIK +)	#1, 2, 4, 5, 7, 9, 10, 11, 14	J/UJ/P
			AAA	0 (65-131)	(→)	( )	#1, 2, 4, 5, 7, 9, 10, 11, 14	J/R/P
			EEE	195 (67-143)	(→)	( )	#1, 2, 4, 5, 7, 10, 11, 14	J/Pdet
			FFF	~~1888~~ 1884 (68-162)	(→)	( )	#1, 2, 3, 5, 7, 9, 10, 11, 12, 13, 14	J/Pdet
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 26533A2h

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer: A

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

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

(Fd)

Compound	Concentration (ug/kg)		≤ 50 RPD	
	~~13~~ 12	14		
III	5.4	1.8 U	200	J/UJ/A
GGG	6.7			
LLL	4.9			
HHH	5.6			
DDD	5.7			

Compound	Concentration (ug/kg)		≤ 50 RPD	
	13	14		
YY	4.1	1.8 U	200	J/UJ/A
FFF	60	19 U		
ZZ	4.4	1.8 U		

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 16533040D

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	8/9/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	0.976	0.976	1.057	1.057	7	7
			Fluorene (3rd internal standard)	1.194	1.194	1.257	1.257	10	10
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.002	1.002	1.042	1.042	13	13
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.110	1.110	1.153	1.153	6	6
			Benzo(a)pyrene (6th internal standard)	1.266	1.266	1.304	1.304	12	12
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 #: 26533A06

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 16.18	8/10/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	1.057	0.987	0.987	7	7
			Fluorene (3rd internal standard)	1.257	1.202	1.202	4	4
			Anthracene ~~Pentachlorophenol~~ (4th internal standard)	1.042	1.006	1.006	3	3
			Chrysene ~~Bis(2-ethylhexyl)phthalate~~ (5th internal standard)	1.153	1.094	1.094	5	5
			Benzo(a)pyrene (6th internal standard)	1.304	1.283	1.283	2	2
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 #: 26533A2b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

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	1.0	1.06	106	106	0
2-Fluorobiphenyl	↓	0.933	93	93	↓
Terphenyl-d14	↓	1.053	105	105	↓
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 #: 26 33A&B

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

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

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

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC)

MSC = Matrix spike concentration
MSDC = Matrix spike duplicate concentration

MS/MSD samples: 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	33.33	33.33	ND	31.74	23.4	95	95	70	70	30	30
Pentachlorophenol											
Pyrene	↓	↓	4.14	31.84	24.08	83	83	60	60	28	28

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/Laboratory Control Sample Duplicates Results Verification

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

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

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

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

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

LCS/LCSD samples: 915DLCS

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	44.04	NA	132	132				
Pentachlorophenol										
Pyrene	33.33	1	37.79	NA	113	113	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 #: 26533A2b

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, Naphthalene

Conc. = $\frac{(74026)(1.0)(1)(1000)(\quad)}{(52630)(1.057)(30)(0.99)}$

=

4.48 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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: N-Nitrosodimethylamine

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5

Introduction

This data review covers 9 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
SBLKLA213	8/2/11	N-Nitrosodimethylamine	40.2 ng/Kg	All samples in SDG DE208

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-193-SA6-SS-0.0-0.5	N-Nitrosodimethylamine	17.0 ng/Kg	33.3U ng/Kg
SL-253-SA6-SS-0.0-0.5	N-Nitrosodimethylamine	17.2 ng/Kg	33.4U 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 DE208	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 DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	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 DE208

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE208	SL-193-SA6-SS-0.0-0.5	N-Nitrosodimethylamine	33.3U ng/Kg	A	B
DE208	SL-253-SA6-SS-0.0-0.5	N-Nitrosodimethylamine	33.4U ng/Kg	A	B

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A2c **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11

SDG #: DE208 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: FJ

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	A	Sampling dates: 7/25/11
II.	GC/MS Instrument performance check	N	not Required
III.	Initial calibration	A	%D ≤ 30
IV.	Continuing calibration/ICV	A	CCV ≤ 20 ICV ≤ 30
V.	Blanks	SW	
VI.	Surrogate spikes	A	
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: all

1	SL-190-SA6-SS-0.0-0.5	11	SBLKLA213	21		31	
2	SL-192-SA6-SS-0.0-0.5	12		22		32	
3	SL-193-SA6-SS-0.0-0.5	13		23		33	
4	SL-245-SA6-SS-0.0-0.5	14		24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10		20		30		40	

LDC #: 26533A2c

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: e

Method: Semivolatiles ~~(EPA SW 846 Method 8270C)~~ 1625C

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ ~~25%~~ 20 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?				
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26533A2c

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: CR

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

LDC #: 26533A2C

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

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

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: 8/2/11 **Blank analysis date:** 8/10/11
Conc. units: ng/kg Associated Samples: All

Compound	Blank ID	Sample Identification								
	SBLKLA213		3			5				
N-Nitrosodimethylamine	40.2		17.0/33.3 U			17.2/33.4 U				

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

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 #: 46533TdC

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/9/11	~~Phenol (1st internal standard)~~ NDMA	1.043	1.043	0.983	0.983	13	13
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			~~Benzo(a)pyrene (6th internal standard)~~						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

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

LDC #: 26533A2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 6 of 7
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 10:13	8/10/11	~~Phenol (1st internal standard)~~ NDMA	0.98295	1.01349	1.01349	3.10669	3.10669
			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 14:23	8/10/11	Phenol (1st internal standard) ↓	↓	1.07193	1.07193	9.05168	9.052
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3	CCV 21:27	8/10/11	~~Phenol (1st internal standard)~~ ↓	↓	1.01542	1.01542	3.30243	3.30243
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
	CCV 01:00	8/11/11	Pentachlorophenol (4th internal standard) ↓	↓	1.07078	1.07078	8.934	8.934
			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 #: 26533A2C

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

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	21.517	86	86	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 #: 10533D2C

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: 2/3 LALCS

Compound	Spike Added (ng/kg)		Spike Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~ NDMA	833.33	NA	830.01	NA	100	100	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 #: 26533702C

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. 3 , NDMA

Conc. = $\frac{(2337)(25)(1)(1000)(\quad)}{(116283)(0.983)(30)(0.99)(\quad)}$

= 17.20 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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of single compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
8/31/11	1P10242.55	RTX-CLPI	Endosulfan II Methoxychlor	23.1 21.7	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
8/31/11	1P10242.55	RTX-CLPII	Endosulfan II 4,4'-DDT Methoxychlor Endrin ketone	21.2 23.2 24.1 25.4	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A
8/13/11	1P10242.56	RTX-CLPII	Mirex	20.8	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
8/30/11	ICV	RTX-CLPI	Endosulfan II	29.6	All samples in SDG DE208	J (all detects) UJ (all non-detects)	A

Retention times (RT) of all compounds in the calibration standards were within QC limits.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0% .

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-268-SA6-SS-0.0-0.5	Not specified	Tetrachloro-m-xylene Decachlorobiphenyl	43 (50-130) 173 (20-120)	All TCL compounds	J (all detects) UJ (all non-detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-190-SA6-SS-0.0-0.5	4,4'-DDE	91.81	J (all detects)	A
SL-245-SA6-SS-0.0-0.5	4,4'-DDE	60.38	J (all detects)	A
SL-253-SA6-SS-0.0-0.5	4,4'-DDE	46.69	J (all detects)	A
SL-256-SA6-SS-0.0-0.5	Chlordane (Technical)	91.79	J (all detects)	A
SL-268-SA6-SS-0.0-0.5	4,4'-DDT	51.60	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE208	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

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

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	Endosulfan II 4,4'-DDT Methoxychlor Endrin ketone Mirex	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	Endosulfan II	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE208	SL-268-SA6-SS-0.0-0.5	All TCL compounds	J (all detects) UJ (all non-detects)	P	Surrogate spikes (%R) (S)
DE208	SL-190-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5	4,4'-DDE	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE208	SL-256-SA6-SS-0.0-0.5	Chlordane (Technical)	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE208	SL-268-SA6-SS-0.0-0.5	4,4'-DDT	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A3a

VALIDATION COMPLETENESS WORKSHEET

SDG #: DE208

Level IV

Laboratory: Lancaster Laboratories

Date: 11/8/11

Page: 1 of 2

Reviewer: EJ

2nd Reviewer: C

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: 7/25/11
II.	GC/ECD Instrument Performance Check	A	
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	N	client specified
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	N	

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

Validated Samples:

SOIL

1	SL-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21	PBLK07215	31	
2	SL-192-SA6-SS-0.0-0.5	12		22		32	
3	SL-193-SA6-SS-0.0-0.5	13		23		33	
4	SL-235-SA6-SS-0.0-0.5	14		24		34	
5	SL-236-SA6-SS-0.0-0.5	15		25		35	
6	SL-245-SA6-SS-0.0-0.5	16		26		36	
7	SL-253-SA6-SS-0.0-0.5	17		27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

Notes: _____

LDC #: 26533A3a
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: PT
2nd Reviewer:

Method: Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) $\leq$ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ___%D or ___%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns $\leq$ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) $\leq$ ~~15%.0~~ 20 or percent recoveries ~~85-115%~~ 80-120?		✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓	✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?		✓	✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 26533A3a
SDG #: all cores

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 #: 26533A3c

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?

(C)

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	8/30/11	ICV	RTX-CLP I	L	29.6	( )	All	J/UJ/A
						( )		
						( )		
						( )		
						( )		
	8/31/11	IP10242.55	RTX-CLP I	L	23.1	( )	1, 2, 8, 10, 11	J/UJ/A
				P	21.7	( )		
			RTX-CLP II	L	21.2	( )		
				Θ	23.2	( )		
				P	24.1	( )		
				Δ	25.4	( )		
						( )		
	8/31/11	IP10242.56	RTX-CLP II	Mirex	20.8	( )	↓	↓
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 26533A3a

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
	11	NS	Y	43 (50-130)	J/UJ/P (S)
			0	173 (20-120)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	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 #: 26533A3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

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

METHOD: ✓ GC __ HPLC

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

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

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

* XIII

#	Compound Name	% RPD Bet 2 col ≤40 Finding	Associated Samples	Qualifications
	J	91.81	1	J/A det * XIII
	J	60.38	6	↓
	J	46.69	7	↓
	chlordane (Technical)	91.79	10	↓
	o	51.60	11	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26533A3c
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 10/100 CF (std)	Recalculated 10/100 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/30/11	endosulfan 1 RTXCLP	2.24×10^3	2.24×10^3	2.27×10^3	2.27×10^3	3.1	3.1
			Methoxychlor ↓	8.50×10^2	8.50×10^2	8.27×10^2	8.27×10^2	4.2	4.2
2			↓ RTXCLP2	2.11×10^3	2.11×10^3	2.26×10^3	2.26×10^3	15.6	15.6
			↓	6.94×10^2	6.94×10^2	7.15×10^2	7.15×10^2	13.3	13.3
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 #: 26533A35
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: M
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	8/31/17	endosulfan I RT1 CLP1	10.0	9.26	9.26	7.4	7.4
	1:31		Methoxychlor	100.0	78.33	78.33	21.7	21.7
2			RT4 alp2	↓	8.63	8.63	13.7	13.7
			↓	↓	75.93	75.93	24.1	24.1
3								
4								

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

LDC #: _____ VALIDATION FINDINGS WORKSHEET Page: 1 of 1

SDG #: per cover

Surrogate Results Verification

Reviewer: _____

2nd reviewer: _____

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	RTXCLP2	1.04	0.925836	89	89	0
Decachlorobiphenyl	↓	1.04	0.925395	89	89	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 #: 26533A3S
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer:
2nd Reviewer:

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

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

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration

RPD = | LCS - LCSD | * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS0721S

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	0.34	NA	0.28	NA	82	82				
4,4'-DDT	0.71	↓	0.65	↓	92	92	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 #: 26533A3C
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 gamma BHC

Conc. = $\frac{(5785)(4/10)}{(3.54 \times 10^3)(60)(0.986)}$

=

0.11 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: July 25, 2011

LDC Report Date: November 21, 2011

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 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
8/8/11	CCV (14:51)	ZBMultiR2	Aroclor-5442	20.5	SL-190-SA6-SS-0.0-0.5	Aroclor-5442 Aroclor-5432 Aroclor-5460	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.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-192-SA6-SS-0.0-0.5	Not specified	Decachlorobiphenyl	44 (45-120)	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.

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No polychlorinated biphenyl contaminants were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/lg)		RPD (Limits)	Flags	A or P
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Aroclor-5460	3.4	3.5U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Aroclor-1254	1.7	1.8U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5	Aroclor-5442 Aroclor-5432 Aroclor-5460	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE208	SL-192-SA6-SS-0.0-0.5	All TCL compounds	J (all detects) UJ (all non-detects)	A	Surrogate spikes (%R) (S)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Aroclor-5460 Aroclor-1254	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/08/11
SDG #: DE208 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: 7/25/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	%D PSD ≤ 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	A	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	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 12 & 14
XVI.	Field blanks	N	

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

Validated Samples:

SOIL

1	SL-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21	PBLK132116	31	
2	SL-192-SA6-SS-0.0-0.5	12	SL-098-SA6-SB-2.0-3.0	22	PBLK132210	32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-289-SA6-SB-3.5-4.5	23		33	
4	SL-235-SA6-SS-0.0-0.5	14	DUP07-SA6-QC-072511	24		34	
5	SL-236-SA6-SS-0.0-0.5	15	SL-098-SA6-SB-2.0-3.0MS	25		35	
6	SL-245-SA6-SS-0.0-0.5	16	SL-098-SA6-SB-2.0-3.0MSD	26		36	
7	SL-253-SA6-SS-0.0-0.5	17		27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

Notes: _____

LDC #: 26533A3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
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 #: 26533A3b
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 #: 26533A3b

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
	8/8/11 14:51	CCV	ZB-5MS 1 HR2	Aroclor 5442	20.5	( )	1	J/UJ/A (C)
						( )		
						( )		(Aroclor 5432,
						( )		5442,
						( )		5460)
						( )		
						( )		
						( )		
						( )		
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						( )		

LDC #: 26533A3b

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
	2	NS	O	44 (45-120)	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 #: 26533A3b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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?

(Fd)

Compound	Concentration (ng/kg)		%RPD Limit ≤ 50	Qualification Parent only / All Samples
	12	14		
Aroclor 5460	3.4	3.54	200	J/UJ/A
~~PCB~~ - 1254	1.7	1.84	200	↓

Compound	Concentration ( )		%RPD Limit _____	Qualification Parent only / All Samples

LDC #: 26533A3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC ✓ HPLC ____

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

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (200std)	Recalculated CF (200std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	IP20214 ICAL	8/2/11	1260 / ZBMuHiR1	51	51	55	55	6.8	6.8
			↓ ZBMuHiR2	266	266	280	280	5.7	5.7
2	IP20223 ICAL	8/11/11	↓	37	37	39	39	8.0	8.0
				237	237	238	238	4.0	4.0
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 #: 76533f3b
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: E

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 23:09	8/5/11	Aroclor 1260 ZB multi R1	200.00	197.31	197.31	1.3	1.3
			ZB multi R2	200.00	201.03	201.03	0.5	0.5
2	CCV 6:15	8/6/11	↓	↓	166.24	166.24	16.9	16.9
			↓	↓	163.42	163.42	18.3	18.3
3	CCV 14:14	8/8/11	↓	↓	199.40	199.40	0.3	0.3
			↓	↓	195.78	195.78	2.1	2.1
4								

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

LDC #: [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: # 1 10X

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
TCMX	ZBMultiR2	104	0.949644	91	91	0
DCB	↓	104	1.194678	115	115	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: [illegible]

SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [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)											
PCB 1260	16.67	16.67	ND	13.78	16.01	83	83	96	96	15	15

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 #: 26533F35
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: P
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 132216

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	19.66	NA	118	118	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 #: 26533#3b
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 1254

Concentration = 123.45 / 0.986

= 125.20 ug/kg

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	1254-1 = 9436.365234 (20)	39.564 (60)	1254-1 =	79.5029	
			2 =	69.4480	
			3 =	82.594	
	=	79.50	4 =	71.703	
			5 =	152.52	
			6 =	284.958	
				12345	

Comments: [illegible]

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD
SL-098-SA6-SB-2.0-3.0DUP

Introduction

This data review covers 17 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Aluminum Boron Calcium Iron Manganese Phosphorus Strontium Tin Zirconium	6.171 mg/Kg 0.807 mg/Kg 13.291 mg/Kg 5.725 mg/Kg 0.042 mg/Kg 1.248 mg/Kg 0.075 mg/Kg 1.671 mg/Kg 0.557 mg/Kg	All samples in SDG DE208
ICB/CCB	Titanium	0.13 ug/L	SL-190-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0
ICB/CCB	Titanium	0.17 ug/L	SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB\CCB	Lead	0.36 ug/L	SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511

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-190-SA6-SS-0.0-0.5	Boron Tin Zirconium	2.8 mg/Kg 2.6 mg/Kg 1.8 mg/Kg	2.8U mg/Kg 2.6U mg/Kg 1.8U mg/Kg
SL-192-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.8 mg/Kg 2.2 mg/Kg 1.5 mg/Kg	1.8U mg/Kg 2.2U mg/Kg 1.5U mg/Kg
SL-193-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.3 mg/Kg 2.2 mg/Kg 2.4 mg/Kg	1.3U mg/Kg 2.2U mg/Kg 2.4U mg/Kg
SL-235-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.2 mg/Kg 2.2 mg/Kg 2.0 mg/Kg	1.2U mg/Kg 2.2U mg/Kg 2.0U mg/Kg
SL-236-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.97 mg/Kg 2.4 mg/Kg 2.6 mg/Kg	0.97U mg/Kg 2.4U mg/Kg 2.6U mg/Kg
SL-245-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.98 mg/Kg 2.2 mg/Kg 2.5 mg/Kg	0.98U mg/Kg 2.2U mg/Kg 2.5U mg/Kg
SL-253-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.2 mg/Kg 2.5 mg/Kg 2.3 mg/Kg	1.2U mg/Kg 2.5U mg/Kg 2.3U mg/Kg
SL-254-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.86 mg/Kg 3.3 mg/Kg 2.5 mg/Kg	0.86U mg/Kg 3.3U mg/Kg 2.5U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-255-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.93 mg/Kg 2.2 mg/Kg 1.8 mg/Kg	0.93U mg/Kg 2.2U mg/Kg 1.8U mg/Kg
SL-256-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.9 mg/Kg 2.4 mg/Kg 2.5 mg/Kg	1.9U mg/Kg 2.4U mg/Kg 2.5U mg/Kg
SL-268-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.76 mg/Kg 1.1 mg/Kg 1.5 mg/Kg	0.76U mg/Kg 1.1U mg/Kg 1.5U mg/Kg
SL-098-SA6-SB-2.0-3.0	Tin Zirconium	0.49 mg/Kg 2.2 mg/Kg	0.49U mg/Kg 2.2U mg/Kg
SL-289-SA6-SB-3.5-4.5	Boron Tin Zirconium	1.4 mg/Kg 2.2 mg/Kg 2.3 mg/Kg	1.4U mg/Kg 2.2U mg/Kg 2.3U mg/Kg
DUP07-SA6-QC-072511	Tin Zirconium	2.3 mg/Kg 2.0 mg/Kg	2.3U mg/Kg 2.0U mg/Kg

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-098-SA6-SB-2.0-3.0MS/MSD (All samples in SDG DE208)	Antimony	39 (75-125)	29 (75-125)	-	J (all detects) R (all non-detects)	A
SL-098-SA6-SB-2.0-3.0MS/MSD (All samples in SDG DE208)	Cobalt Cadmium	- -	- -	21 (≤20) 22 (≤20)	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-098-SA6-SB-2.0-3.0MS/MSD (All samples in SDG DE208)	Arsenic	147 (75-125)	-	-	J (all detects)	A
	Beryllium	127 (75-125)	-	-	J (all detects)	
	Chromium	126 (75-125)	-	-	J (all detects)	
	Copper	136 (75-125)	-	-	J (all detects)	
	Lead	156 (75-125)	-	-	J (all detects)	
	Molybdenum	130 (75-125)	-	-	J (all detects)	
	Nickel	140 (75-125)	-	-	J (all detects)	
	Selenium	126 (75-125)	-	-	J (all detects)	
	Silver	129 (75-125)	-	-	J (all detects)	
	Thallium	133 (75-125)	-	-	J (all detects)	
	Vanadium	141 (75-125)	-	-	J (all detects)	
	Cadmium	134 (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-098-SA6-SB-2.0-3.0DUP (All samples in SDG DE208)	Calcium	21 (≤20)	-	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. 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-098-SA6-SB-2.0-3.0	Aluminum Vanadium	11 (≤10) 14 (≤10)	All samples in SDG DE208	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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 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-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Aluminum	12600	12400	2 (≤50)	-	-
Antimony	0.17	0.17	0 (≤50)	-	-
Arsenic	5.1	6.9	30 (≤50)	-	-
Barium	93.4	123	27 (≤50)	-	-
Beryllium	0.53	0.78	38 (≤50)	-	-
Cadmium	0.20	0.14	35 (≤50)	-	-
Calcium	7920	5040	44 (≤50)	-	-
Chromium	20.4	29.8	37 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Cobalt	6.8	9.7	35 (≤50)	-	-
Copper	11.1	12.7	13 (≤50)	-	-
Iron	19800	24000	19 (≤50)	-	-
Lead	6.8	6.4	6 (≤50)	-	-
Lithium	25.0	28.6	13 (≤50)	-	-
Magnesium	5690	6090	7 (≤50)	-	-
Manganese	272	280	3 (≤50)	-	-
Mercury	0.026	0.0076U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Molybdenum	0.68	1.3	63 (≤50)	J (all detects)	A
Nickel	14.0	19.1	31 (≤50)	-	-
Phosphorus	401	408	2 (≤50)	-	-
Potassium	2810	2840	1 (≤50)	-	-
Selenium	0.16	0.11	37 (≤50)	-	-
Silver	0.037	0.032	14 (≤50)	-	-
Sodium	238	148	47 (≤50)	-	-
Strontium	24.6	14.9	49 (≤50)	-	-
Thallium	0.29	0.39	29 (≤50)	-	-
Tin	0.49	2.3	130 (≤50)	J (all detects)	A
Titanium	991	1210	20 (≤50)	-	-
Vanadium	37.9	52.3	32 (≤50)	-	-
Zinc	74.3	89.7	19 (≤50)	-	-
Zirconium	2.2	2.0	10 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE208

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Antimony	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Cobalt Cadmium	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (RPD) (E)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Arsenic Beryllium Chromium Copper Lead Molybdenum Nickel Selenium Silver Thallium Vanadium Cadmium	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)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Calcium	J (all detects) UJ (all non-detects)	A	Duplicate sample analysis (RPD) (E)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Aluminum Vanadium	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Mercury	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Molybdenum Tin	J (all detects) J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE208

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE208	SL-190-SA6-SS-0.0-0.5	Boron Tin Zirconium	2.8U mg/Kg 2.6U mg/Kg 1.8U mg/Kg	A	B
DE208	SL-192-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.8U mg/Kg 2.2U mg/Kg 1.5U mg/Kg	A	B
DE208	SL-193-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.3U mg/Kg 2.2U mg/Kg 2.4U mg/Kg	A	B
DE208	SL-235-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.2U mg/Kg 2.2U mg/Kg 2.0U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE208	SL-236-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.97U mg/Kg 2.4U mg/Kg 2.6U mg/Kg	A	B
DE208	SL-245-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.98U mg/Kg 2.2U mg/Kg 2.5U mg/Kg	A	B
DE208	SL-253-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.2U mg/Kg 2.5U mg/Kg 2.3U mg/Kg	A	B
DE208	SL-254-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.86U mg/Kg 3.3U mg/Kg 2.5U mg/Kg	A	B
DE208	SL-255-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.93U mg/Kg 2.2U mg/Kg 1.8U mg/Kg	A	B
DE208	SL-256-SA6-SS-0.0-0.5	Boron Tin Zirconium	1.9U mg/Kg 2.4U mg/Kg 2.5U mg/Kg	A	B
DE208	SL-268-SA6-SS-0.0-0.5	Boron Tin Zirconium	0.76U mg/Kg 1.1U mg/Kg 1.5U mg/Kg	A	B
DE208	SL-098-SA6-SB-2.0-3.0	Tin Zirconium	0.49U mg/Kg 2.2U mg/Kg	A	B
DE208	SL-289-SA6-SB-3.5-4.5	Boron Tin Zirconium	1.4U mg/Kg 2.2U mg/Kg 2.3U mg/Kg	A	B
DE208	DUP07-SA6-QC-072511	Tin Zirconium	2.3U mg/Kg 2.0U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 11-7-11

SDG #: DE208 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: CR

2nd Reviewer: W

METHOD: Metals (EPA SW 846 Method 6010B/6020~~A~~/~~7000~~ 7471A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/25/11
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
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	(12,14)
XV	Field Blanks	N	

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

Validated Samples: Soil

1	SL-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21		31	
2	SL-192-SA6-SS-0.0-0.5	12	SL-098-SA6-SB-2.0-3.0	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-289-SA6-SB-3.5-4.5	23		33	
4	SL-235-SA6-SS-0.0-0.5	14	DUP07-SA6-QC-072511	24		34	
5	SL-236-SA6-SS-0.0-0.5	15	SL-098-SA6-SB-2.0-3.0MS	25		35	
6	SL-245-SA6-SS-0.0-0.5	16	SL-098-SA6-SB-2.0-3.0MSD	26		36	
7	SL-253-SA6-SS-0.0-0.5	17	SL-098-SA6-SB-2.0-3.0DUP	27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

Notes:

DC #: 26533A4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer:

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?	✓			

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 #: 26539 14

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: JV

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-14		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-151		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 #: 26533A4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer:
2nd Reviewer:

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x x MS: 2xdil Reason: B
Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

Analyte	Maximum PB[a] (mg/Kg)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Al	6.171	30.86														
B	0.807	4.035	2.8	1.8	1.3	1.2	0.97	0.98	1.2	0.86	0.93	1.9	0.76		1.4	
Ca	13.291	66.46														
Fe	5.725	28.63														
Mn	0.042	0.21														
P	1.248	6.24														
Sr	0.075	0.375														
Sn	1.671	8.355	2.6	2.2	2.2	2.2	2.4	2.2	2.5	3.3	2.2	2.4	1.1	0.49	2.2	2.3
Zr	0.557	2.785	1.8	1.5	2.4	2.0	2.6	2.5	2.3	2.5	1.8	2.5	1.5	2.2	2.3	2.0

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									
Ti			0.13	0.07										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 2-11, 13, 14

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Ti			0.17	0.09										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 3-11, 13, 14

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Pb			0.36	0.18										

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 #: 26533A4

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

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 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	(ug/L) Finding	Associated Samples	Qualifications
	8/3/11	ICSA (05:57)	Mn	4 (<0.36)	All	No Qual (<10x)

Comments:

LDC #: 26533A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: CR
2nd Reviewer:

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

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

(Y) N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y (N) N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% ~~for water samples and ≤35%~~ for soil samples?

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	15/16	S	Sb	39	29		All	J/R/A Q (PS=70%)
			As	147				Jdet/A
			Be	127				↓
			~~Cd~~	~~134~~		~~22~~		~~J/UJ/A Q2~~
			Cr	126				Jdet/A ↓
			Co			21		J/UJ/A E
			Cu	136				Jdet/A Q
			Pb	156				
			Mo	130				
			Ni	140				
			Se	126				
			Ag	129				
			Tl	133				
			V	141				
			Cd	134				Jdet/A ↓
			Cd			22		J/UJ/A E

Comments:

LDC #: 26533A4

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
		17	S	Ca	21 (≤20)		All	J/UJ/A (E)

Comments: _____

LDC #: 26533J4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

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 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
		12	S	Al	11	All	J/UJ/A (A)
				V	14	↓	↓

Comments: _____

SDILICPMS.wpd

LDC#: 26533A4

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)	Qualifiers: Parents Only
	12	14		
Aluminum	12600	12400	2	
Antimony	0.17	0.17	0	
Arsenic	5.1	6.9	30	
Barium	93.4	123	27	
Beryllium	0.53	0.78	38	
Cadmium	0.20	0.14	35	
Calcium	7920	5040	44	
Chromium	20.4	29.8	37	
Cobalt	6.8	9.7	35	
Copper	11.1	12.7	13	
Iron	19800	24000	19	
Lead	6.8	6.4	6	
Lithium	25.0	28.6	13	
Magnesium	5690	6090	7	
Manganese	272	280	3	
Mercury	0.026	0.0076U	200	J/UJ/A (FD)
Molybdenum	0.68	1.3	63	Jdet/A (FD)
Nickel	14.0	19.1	31	
Phosphorus	401	408	2	

LDC#: 26533A4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: AV
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)	Qualifiers: Parents Only
	12	14		
Potassium	2810	2840	1	
Selenium	0.16	0.11	37	
Silver	0.037	0.032	14	
Sodium	238	148	47	
Strontium	24.6	14.9	49	
Thallium	0.29	0.39	29	
Tin	0.49	2.3	130	Jdet/A (FD)
Titanium	991	1210	20	
Vanadium	37.9	52.3	32	
Zinc	74.3	89.7	19	
Zirconium	2.2	2.0	10	

LDC #: 26553A4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
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)	Li	587.02	600	97.8	97.8	Y
ICV	ICP/MS (Initial calibration)	Cu	471.00	500	94.2	94.2	
ICV	CVAA (Initial calibration)	Hg	2.48	2.5	99.2	99.2	
CCV2 (06:55)	ICP (Continuing calibration)	Ti	492.66	500	98.5	98.5	
CCV2 (13:28)	ICP/MS (Continuing calibration)	V	230.80	250	92.3	92.3	
CCV3 (10:08)	CVAA (Continuing calibration)	Hg	0.81	1	81.0	81.0	
	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 #: 26533A4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Zn	20.1	20.0	100.5	100.5	Y
LCS	Laboratory control sample	P	1041.6	1000	104	104	
15	Matrix spike	Pb	(SSR-SR) 4.8597	3.1091	156	156	
17	Duplicate	V	37.8720	40.2313	6	6	
12	ICP serial dilution	Pb	33.590	35.0650	4	4	

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

LDC #: 26533A4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: AR
2nd reviewer: W

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

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

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Fe were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(100mL)(177.1260\ mg/L)}{0.986(1.02g)} = 17611.9\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	12600	12600	Y
		Sb	0.31	0.31	
		As	6.2	6.2	
		Ba	118	118	
		Be	0.70	0.70	
		B	2.8	2.8	
		Cd	0.47	0.47	
		Ca	3500	3500	
		Cr	20.7	20.7	
		Co	7.9	7.9	
		Cu	13.5	13.5	
		Fe	17600	17600	
		Pb	27.8	27.8	
		Li	26.2	26.2	
		Mg	3780	3780	
		Mn	318	318	
		Hg	0.058	0.058	
		Mo	1.1	1.1	
		Ni	15.1	15.1	
		P	459	459	

Note:

LDC #: 26533A4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 2 of 3
Reviewer: AC
2nd reviewer: V

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

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

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Cd 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:

$$\frac{(100mL)(2)(0.9618\ \mu g/L)}{0.946(1.04g)(1000)} = 0.196\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	K	3600	3600	Y
		Se	0.25	0.25	
		Ag	1.7	1.7	
		Na	67.9	67.9	
		Sr	24.3	24.3	
		Tl	0.35	0.35	
		Sn	2.6	2.6	
		Ti	964	964	
		V	34.0	34.0	
		Zn	194	194	
		Zr	1.8	1.8	
	12	Al	12600	12600	
		Sb	0.17	0.17	
		As	5.1	5.1	
		Ba	93.4	93.4	
		Be	0.53	0.53	
		Cd	0.20	0.20	
		Ca	7920	7920	
		Cr	20.4	20.4	
		Co	6.8	6.8	

Note:

LDC #: 26533A4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CC
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)
	12	Fe	19800	19800	Y
		Pb	6.8	6.8	
		Li	25.0	25.0	
		Mg	5690	5690	
		Mn	272	272	
		Hg	0.026	0.026	
		Mo	0.68	0.68	
		Ni	14.0	14.0	
		P	401	401	
		K	2810	2810	
		Se	0.16	0.16	
		Ag	0.037	0.037	
		Na	238	238	
		Sr	24.6	24.6	
		Tl	0.29	0.29	
		Sn	0.49	0.49	
		Ti	991	991	
		V	37.9	37.9	
		Zn	74.3	74.3	
		Zr	2.2	2.2	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Herbicides

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
8/9/11 (13:05)	1H15221.04	ZB-XLB	MCPP MCPA	23.6 22.1	PBLK18220	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
8/9/11 (18:38)	1H15221.16	ZB-XLB	MCPP MCPA	23.1 20.1	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
8/10/11 (00:09)	1H15221.28	ZB-XLB	MCPP	22.7	SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

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

No field blanks were identified in this SDG.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicate

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-190-SA6-SS-0.0-0.5	2,4-DB	66.83	J (all detects)	A
SL-192-SA6-SS-0.0-0.5	2,4-DP 2,4-DB	70.91 51.02	J (all detects) J (all detects)	A
SL-236-SA6-SS-0.0-0.5	2,4-DB	90.43	J (all detects)	A
SL-253-SA6-SS-0.0-0.5	2,4-DB	85.81	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE208	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 DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5	MCPP MCPA	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (c)
DE208	SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	MCPP	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (c)
DE208	SL-192-SA6-SS-0.0-0.5	2,4-DP 2,4-DB	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE208	SL-190-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5	2,4-DB	J (all detects)	A	Compound quantitation and RLs (RPD) (*IX)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A5 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Herbicides (EPA SW 846 Method 8151A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/25/11
II	Initial calibration	A	0% RSD ≤20
III.	Calibration verification/ICV	SW	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

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

Validated Samples: SOIL

1	SL-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21	PBLK18220	31	
2	SL-192-SA6-SS-0.0-0.5	12		22		32	
3	SL-193-SA6-SS-0.0-0.5	13		23		33	
4	SL-235-SA6-SS-0.0-0.5	14		24		34	
5	SL-236-SA6-SS-0.0-0.5	15		25		35	
6	SL-245-SA6-SS-0.0-0.5	16		26		36	
7	SL-253-SA6-SS-0.0-0.5	17		27		37	
8	SL-254-SA6-SS-0.0-0.5	18		28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

Notes: _____

LDC #: 26533A5
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?		✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26533A5
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: ___√GC ___HPLC

8310	8330	8151	8141	8141 (Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2.4.6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

LDC #: 26533A5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
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
	8/9/11	IH15221.04	ZB-XLB	I	23.6	( )	PBLK/8220	J/UJ/A (c)
	13:05			J	22.1	( )	↓	↓
						( )		
						( )		
						( )		
	8/9/11	IH15221.16	ZB-XLB	I	23.1	( )	1 → 7	↓ (c)
	18:38			J	20.1	( )	↓	
						( )		
						( )		
						( )		
						( )		
	8/10/11	IH15221.28	ZB-XLB	I	22.7	( )	8 → 11	↓ (c)
	0:09			~~J~~		( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 26533A5

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 Finding co/ ± 40	Associated Samples	Qualifications
	~~B~~ 2,4-DB	66.83	1	J/A det (*1X)
	2,4-DP	70.91	2	↓ (*1X)
	2,4-DB	51.02		
	2,4-DB	90.43	5	↓ (*1X)
	2,4-DB	85.81	7	↓ (*1X)
	~~MCPA~~		~~10~~	
	~~2,4,5-T~~	~~114.40~~	~~11~~	

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26533A5
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 (200.6/100.7 std)	Recalculated CF (std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/2/11	2,4-D ZB-XLB	1.32×10^{-1}	1.32×10^{-1}	1.28×10^{-1}	1.28×10^{-1}	9.9	9.9
			Dinoseb	3.82×10^{-1}	3.82×10^{-1}	4.26×10^{-1}	4.26×10^{-1}	17.0	17.0
			ZB-35	1.44×10^{-1}	1.44×10^{-1}	1.42×10^{-1}	1.42×10^{-1}	12.3	12.3
2			↓	3.70×10^{-1}	3.70×10^{-1}	4.13×10^{-1}	4.13×10^{-1}	16.2	16.2
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 #: 26533A5
SDG #: fw comm

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	BCV 13:05	8/9/11	2,4-D ZB-XLB	200.60	205.49	205.49	2.4	2.4
			Dinoseb ↓	100.70	81.48	81.48	19.1	19.1
			↓ ZB-35	200.60	195.00	195.00	2.8	2.8
2			↓	100.70	89.10	89.10	11.5	11.5
	ccv 18:38	8/9/11	2,4-D ZB-XLB	200.60	203.24	203.24	1.3	1.3
			Dinoseb ↓	100.70	82.09	82.09	18.5	18.5
3			↓ ZB-35	200.60	202.21	202.21	0.8	0.8
			↓	100.70	88.49	88.49	12.1	12.1
	ccv 009	8/10/11	2,4-D ZB-XLB	200.60	206.49	206.49	2.9	2.9
4			Dinoseb ↓	100.70	80.77	80.77	19.8	19.8
			↓ ZB-35	200.60	192.13	192.13	4.2	4.2
			↓	100.70	85.44	85.44	15.2	15.2

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

LDC #: [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	
2,4-DCAA	ZB-XLB	6.654	5.7/5397	86	86	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 #: 26533A5
SDG #: pc cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FD
2nd Reviewer: A

METHOD: ✓ GC __HPLC

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

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 1822 ✓

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	6.8	NA	82	82				
Dinoseb (8151)	14.18	↓	2.2	↓	16	16	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 #: 26533AJ
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 2, 4 DB

Concentration = $\frac{4150 \quad (100) \quad (2)}{76825 \quad (8.63 \times 10^{-2}) \quad (60.1) \quad (0.986)}$

$= 2.1 \text{ ug/kg}$

#	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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory, Area IV: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-235-SA6-SS-0.0-0.5
SL-236-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0DUP
SL-190-SA6-SS-0.0-0.5MS
SL-190-SA6-SS-0.0-0.5DUP

Introduction

This data review covers 18 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
SL-190-SA6-SS-0.0-0.5MS (SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5)	Fluoride	60 (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) 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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD (Limits)	Flags	A or P
	SL-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Fluoride	3.1	4.0	25 (≤50)	-	-
Hexavalent chromium	0.97	0.21U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE208

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5	Fluoride	J (all detects) UJ (all non-detects)	A	Matrix spike (%R) (Q)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-235-SA6-SS-0.0-0.5 SL-236-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A6

SDG #: DE208

Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 1-7-11

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: 7/25/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	~~A~~ 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	(12,14)
X	Field blanks	N	

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

Validated Samples: Soil

1	SL-190-SA6-SS-0.0-0.5	11	SL-268-SA6-SS-0.0-0.5	21		31	
2	SL-192-SA6-SS-0.0-0.5	12	SL-098-SA6-SB-2.0-3.0	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-289-SA6-SB-3.5-4.5	23		33	
4	SL-235-SA6-SS-0.0-0.5	14	DUP07-SA6-QC-072511	24		34	
5	SL-236-SA6-SS-0.0-0.5	15	SL-098-SA6-SB-2.0-3.0MS	25		35	
6	SL-245-SA6-SS-0.0-0.5	16	SL-098-SA6-SB-2.0-3.0DUP	26		36	
7	SL-253-SA6-SS-0.0-0.5	17	(12) MS	27		37	
8	SL-254-SA6-SS-0.0-0.5	18	↓ DUP	28		38	
9	SL-255-SA6-SS-0.0-0.5	19		29		39	
10	SL-256-SA6-SS-0.0-0.5	20		30		40	

Notes:

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?				

DC #: 2655570

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.			✓	

DC #: 26533A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-3, 6 11		pH TDS Cl (F) (NO3) NO2 SO4 PO4 ALK (CN-) NH3 TKN TOC (CR6+) (ClO4)
15, 12-14		pH TDS Cl (F) NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC (CR6+) (ClO4)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl (F) NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC (CR6+) (ClO4)
X: 15, 16 17, 18		pH TDS Cl F NO3 NO2 SO4 PO4 ALK (CN-) NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4

Comments:

LDC #: 26533T6

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: SM
2nd Reviewer:

METHOD: Inorganics, EPA Method 300.0

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 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
	17	S	Florida	60	-	80 - 120	1-10	J/UJ/A (a)

Comments:

LDC# 26533A6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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

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)	Qualifiers: Parents Only
	12	14		
Fluoride	3.1	4.0	25	
Hexavalent Chromium	0.97	0.21U	200	J/UJ/A

V:\FIELD DUPLICATES\FD_inorganic\26533A6.wpd

LDC #: 26533A6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: VA

Method: Inorganics, Method ~~314.0~~ see cover

The correlation coefficient (r) for the calibration of ~~ClO4~~ Q OT was recalculated. Calibration date: 8/9/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution

True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (ug/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	~~ClO4~~ Q OT	s1	0.0	0.00000	*0.9995*	0.9999	Y
		s2	10	0.04210			
		s3	50	0.45780			
		s4	100	1.05410			
		s5	200	2.11320			
		s6	300	3.21470			
Calibration verification	F	CCV	1.5	1.5150	101	101	
Calibration verification	NO_3	↓	1.5	1.4702	98	98	
Calibration verification	CN	↓	0.15	0.15340	102	102	✓

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 #: _____

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: QR
2nd Reviewer: L

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	NO3	10.1	10	101	—	Y
15	Matrix spike sample	dup	(SSR-SR) 498	497	100	100	↓
16	Duplicate sample	F	2.9	3.0	4	4	↓

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

LDC #: 26533A6

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 / Cr^{6+} reported with a positive detect were recalculated and verified using the following equation:

Concentration =

F: $y = 0.1962x - 0.0037$

Cr^{6+} = Area(95.7896) + 3.0158

Recalculation:

1: $F = \frac{(0.02 + 0.0037)50mL}{0.1962(4.95g)(0.986)} = 1.2 mg/kg$

12: $Cr^{6+} = \frac{(0.1966(95.7896) + 3.0158)}{25.2(0.9194)} = 0.94 mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
0.986	1	F	1.2	1.2	Y
		NO_3	1.4	1.4	
0.994	12	F	3.1	3.1	
		Cr^{6+}	0.97	0.94	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
TB-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

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 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-072511 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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 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 DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511 TB-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A7 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EF
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: 7/25/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 1 & 3
XIII.	Field blanks	ND	TB = 4

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-098-SA6-SB-2.0-3.0 S	11 1	BLKPY	21		31	
2 1	SL-289-SA6-SB-3.5-4.5	12 2	BLKRO	22		32	
3 1	DUP07-SA6-QC-072511	13		23		33	
4 2	TB-072511 W	14		24		34	
5 1	SL-098-SA6-SB-2.0-3.0MS	15		25		35	
6 1	SL-098-SA6-SB-2.0-3.0MSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

.DC #: 26533A7
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

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 #: 26533A7
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: PJ
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	11/29/11	GRO	35488	35488	37329	37329	12.7	12.7
				(550)	(550)				
2	ICAL	7/21/11	GRO	7092	7092	6764	6764	8.0	8.0
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 #: 26533A7
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 9:05	7/28/11	GRO	220.00	190.81	190.81	13.3	13.3
2	CCV 11:00	8/3/11	GRO	550.0	534.35	534.35	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: /

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TFT	NS	699.	566.03/43	81	81	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: [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: 5 + 6

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)	9.93	9.93	ND	6.87	7.56	69	69	73	73	10	10
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

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

LDC #: 26533A7
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FD
2nd Reviewer: A

METHOD: ✓ GC __HPLC

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

% Recovery = 100* (SSC-SC)/SA
RPD = 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: LCSNJ

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	7.47	NA	68	68	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 #: 2653347
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	July 25, 2011
LDC Report Date:	November 9, 2011
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

Introduction

This data review covers 14 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 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 with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-098-SA6-SB-2.0-3.0MS/MSD (SL-098-SA6-SB-2.0-3.0)	Extractable fuel hydrocarbons (C8-C11)	-	-	21 (≤20)	J (all detects)	A
	Extractable fuel hydrocarbons (C15-C20)	-	134(49-123)	29 (≤20)	J (all detects)	
	Extractable fuel hydrocarbons (C21-C30)	-	488(49-123)	132 (≤20)	J (all detects)	
	Extractable fuel hydrocarbons (C30-C40)	-	1213(49-123)	176 (≤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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 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-098-SA6-SB-2.0-3.0	DUP07-SA6-QC-072511			
Extractable fuel hydrocarbons (C30-C40)	0.65	3.1	131 (≤50)	J (all detects)	A
Extractable fuel hydrocarbons (C21-C30)	1.3U	1.5	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0	Extractable fuel hydrocarbons (C8-C11)	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE208	SL-098-SA6-SB-2.0-3.0	Extractable fuel hydrocarbons (C15-C20) Extractable fuel hydrocarbons (C21-C30) Extractable fuel hydrocarbons (C30-C40)	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Extractable fuel hydrocarbons (C30-C40)	J (all detects)	A	Field duplicates (RPD) (FD)
DE208	SL-098-SA6-SB-2.0-3.0 DUP07-SA6-QC-072511	Extractable fuel hydrocarbons (C21-C30)	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 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: 7/25/11
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	SW	D = 10 + 12
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-190-SA6-SS-0.0-0.5	11	SL-289-SA6-SB-3.5-4.5	21	PBLK29216	31	
2	SL-192-SA6-SS-0.0-0.5	12	DUP07-SA6-QC-072511	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-098-SA6-SB-2.0-3.0MS	23		33	
4	SL-245-SA6-SS-0.0-0.5	14	SL-098-SA6-SB-2.0-3.0MSD	24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10	SL-098-SA6-SB-2.0-3.0	20		30		40	

Notes: _____

.DC #: 26533 AS
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 #: 26533A8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

METHOD: ___ GC ___ HPLC

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

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

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

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	13 + 14	EFH (C8-C11)	( )	( )	21 (20)	10	J/Adet (Q)
		EFH (C15-C20)	( )	134 (49-123)	29 (↓)		
		EFH (C21-C30)	( )	488 (↓)	132 (↓)		
		EFH (C30-C40)	( )	1213 (↓)	176 (20)		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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LDC #: 26533Ag

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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?

(Fd)

Compound	Concentration (mg/kg)		%RPD Limit ≤ 50	Qualification Parent only / All Samples
	10	12		
EFH (C30-C40)	0.65	3.1	131	J/A det
EFH (C21-C30)	1.3U	1.5	200	J/UJ/A

Compound	Concentration ( )		%RPD Limit _____	Qualification Parent only / All Samples

LDC #: 26533B8
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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	7/12/11	C8 - C40	18866.84	18866.84	19634.26	19634.26	5.6 [2]	5.62
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 #: 26533AB
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 1:25	8/7/11	C8 – C40	575.96	515.31	515.31	10.5	10.5
	CCV 9:03	8/7/11	↓	287.98	276.47	276.47	4.0	4.0
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.

CONCLC.1S

LDC #: [illegible]
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
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	
chlorobenzene	NS	1.0	0.679816	68	68	0
orthoterphenyl	↓	1.0	0.907834	91	91	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: [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 SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 13 + 14

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 (C_8-C_{11})	0.84	0.84	ND	0.68	0.84	81	81	100	100	21	21

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 #: 76533TB
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 29216

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	0.64	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 #: 26533 AJ
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 $C_{30} - C_{40}$

Concentration = $\frac{32285969 \quad (1)}{19634.26 \quad (60) \quad (0.986)}$

= 28 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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5

Introduction

This data review covers 9 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) 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 DE208	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Explosives - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A40 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/25/11
II	Initial calibration	A	%RSD ≤20, r^2
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 ID
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	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: 8011

1	SL-190-SA6-SS-0.0-0.5	11	PBLK 152141	21		31	
2	SL-192-SA6-SS-0.0-0.5	12		22		32	
3	SL-193-SA6-SS-0.0-0.5	13		23		33	
4	SL-245-SA6-SS-0.0-0.5	14		24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10		20		30		40	

Notes:

.DC #: 26533A40
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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

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?			✓	

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 #: 26533A4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F?
2nd Reviewer: A

METHOD: GC Y 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 (499.5 / 502.5 std)	Recalculated CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	6/23/11	Nitrobenzene chrompack	2.17×10^2	2.17×10^2	2.07×10^2	2.07×10^2	4.6	4.6
			2,4,6-TNT	2.04×10^2	2.04×10^2	1.99×10^2	1.99×10^2	3.1	3.1
2			↓ Capcell	1.85×10^2	1.85×10^2	1.78×10^2	1.78×10^2	4.6	4.6
				2.00×10^2	2.00×10^2	1.85×10^2	1.85×10^2	12.2	12.2
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 #: 26533A40
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC _____ HPLC ✓

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 18:42	8/4/11	Nitrobenzene ~~chrompack~~ capcell	499.50	518.64	518.64	3.8	3.8
			2,4,6-TNT	500.50	549.18	549.18	9.7	9.7
2	CCV 3:11	8/5/11	↓ capcell	999.0	1011.99	1011.99	1.3	1.3
				1001.0	1108.61	1108.61	10.8	10.8
3	CCV 11:40	8/5/11	↓	499.50	509.68	509.68	2.0	2.0
				500.50	543.45	543.45	8.6	8.6
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 #: 26533A4U
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 18:42	8/4/11	Nitrobenzene chrompack	499.50	527.86	527.86	5.7	5.7
			2,4,6-TNT	500.50	514.57	514.57	2.8	2.8
2	CCV 3:11	8/5/11	↓	999.0	1068.47	1068.47	7.0	7.0
			↓	1001.0	1020.31	1020.31	1.9	1.9
3	CCV 11:40	8/5/11	↓	499.50	526.65	526.65	5.4	5.4
			↓	500.50	511.34	511.34	2.2	2.2
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 #: 263 33790
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: [signature]

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
2-Nitro m-xylene	Chroppack	~~1887~~ 1886.6	1986.624	105	105	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: 26533A4U
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
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 = | 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/5214

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	183.59	NA	92	92				
2,4,6-Trinitrotoluene (8330)	1999.2	NA	2237.24	↓	112	112	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 #: 26533A4U
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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Terphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

Introduction

This data review covers 14 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 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-268-SA6-SS-0.0-0.5	n-Triacontane-d62	6 (50-150)	All TCL compounds	J (all detects) R (all non-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.

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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No terphenyls were detected in any of the samples.

Santa Susana Field Laboratory
Terphenyls - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-268-SA6-SS-0.0-0.5	All TCL compounds	J (all detects) R (all non-detects)	P	Surrogate spikes (%R) (S)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A41 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 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: 7/25/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/~~ICV~~	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
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 = 10 + 12
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-190-SA6-SS-0.0-0.5	11	SL-289-SA6-SB-3.5-4.5	21	PBLK 30216	31	
2	SL-192-SA6-SS-0.0-0.5	12	DUP07-SA6-QC-072511	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-098-SA6-SB-2.0-3.0MS	23		33	
4	SL-245-SA6-SS-0.0-0.5	14	SL-098-SA6-SB-2.0-3.0MSD	24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10	SL-098-SA6-SB-2.0-3.0	20		30		40	

Notes:

.DC #: 26533A41
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	•	✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26533A4 |
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 #: 26533A4/

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
	9	NS	Z	6 (50-150)	J/R/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 #: 26533A41
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	Recalculated	Reported	Recalculated	Reported	Recalculated
				17.741 CF (std)	17.741 CF (std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	7ICAL	7/20/11	o-Terphenyl	2.07 X10^4	2.07X10^4	1.99 x10^4	1.99X10^4	2.5	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 #: 26533A41
SDG #: w 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 7:10	8/6/11	o-Terphenyl	17.74	17.48	17.48	1.5	1.5
	ccv 17:35	8/6/11	↓	17.74	18.81	18.81	6.0	6.0
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

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	NS	0.333	0.26558	80	79.7	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: [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: 13 + 14

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	ND	1.29	1.29	78	78	78	78	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 #: 26533A41
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 30216

Compound	Spike Added (mg/Kg)		Spiked Sample Concentration (mg/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
m-Terphenyl	1.65	NA	1.36	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 #: 26533A41
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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

Introduction

This data review covers 14 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

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

No field blanks were identified in this SDG.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No alcohols were detected in any of the samples.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A43 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer:

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/25/11
II	Initial calibration	A	% RSD ≤20
III.	Calibration verification/ICV	A	10%/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 = 10 + 12
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-190-SA6-SS-0.0-0.5	11	SL-289-SA6-SB-3.5-4.5	21	PBLK42209	31	
2	SL-192-SA6-SS-0.0-0.5	12	DUP07-SA6-QC-072511	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-098-SA6-SB-2.0-3.0MS	23		33	
4	SL-245-SA6-SS-0.0-0.5	14	SL-098-SA6-SB-2.0-3.0MSD	24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10	SL-098-SA6-SB-2.0-3.0	20		30		40	

Notes:

.DC #: 265334A43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26533A43
SDG #: see 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 #: 26533A43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC ✓ HPLC ____

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

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				5000 CF (std)	5000 CF (std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	7/29/11	Methanol RTX-200	8.84×10^{0}	8.84×10^{0}	6.92×10^{0}	6.92×10^{0}	16.2	16.2
			↓ SP-1000	3.25×10^{-1}	3.25×10^{-1}	3.46×10^{-1}	3.46×10^{-1}	14.0	14.0
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 #: 26533A43
SDG #: w 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	CCV 0:49	7/30/11	Methanol / RIX-002	10,000	8572.26	8572.26	14.3	14.3
2	CCV 13:29	7/30/11	↓ SP-1000	↓	9386.62	9386.62	6.1	6.1
3								
4								

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

LDC #: [illegible]

SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [signature]

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	col A	2500	2775.2423	111	111	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: 13 + 14

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	ND	2263.33	2751.17	91	91	110	110	19	19

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 #: 26533A43
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 42209

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	2237.14	NA	89	89	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 #: 26533A43
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. 3 Compound Name methanol

Concentration = $\frac{(2823)(5)}{(6.92 \times 10^{0})(10)(0.987)}$

= 206.66 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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Glycols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-098-SA6-SB-2.0-3.0
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-098-SA6-SB-2.0-3.0MS
SL-098-SA6-SB-2.0-3.0MSD

Introduction

This data review covers 14 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 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-098-SA6-SB-2.0-3.0MS/MSD (SL-098-SA6-SB-2.0-3.0)	Diethylene glycol	27 (59-109)	26 (59-109)	-	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
LCS04208	Ethylene glycol Propylene glycol Diethylene glycol	139 (65-122) 130 (75-125) 143 (75-125)	All samples in SDG DE208	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 DE208	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-098-SA6-SB-2.0-3.0 and DUP07-SA6-QC-072511 were identified as field duplicates. No glycols were detected in any of the samples.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-098-SA6-SB-2.0-3.0	Diethylene glycol	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	Ethylene glycol Propylene glycol Diethylene glycol	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5 SL-098-SA6-SB-2.0-3.0 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A45 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 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: 7/25/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	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 - 10, 12
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-190-SA6-SS-0.0-0.5	11	SL-289-SA6-SB-3.5-4.5	21	PBLK04208	31	
2	SL-192-SA6-SS-0.0-0.5	12	DUP07-SA6-QC-072511	22		32	
3	SL-193-SA6-SS-0.0-0.5	13	SL-098-SA6-SB-2.0-3.0MS	23		33	
4	SL-245-SA6-SS-0.0-0.5	14	SL-098-SA6-SB-2.0-3.0MSD	24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10	SL-098-SA6-SB-2.0-3.0	20		30		40	

Notes: _____

LDC #: 26533A5
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓	✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26533A45
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.			✓	

LDC #: 26533J

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

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

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
	13+14	Diethylene Glycol	27 (59-109)	26 (59-109)	( )	10	J/UJ/A (Q)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 26533A45

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 04208	ethylene glycol	139 (65-123	( )	( )	All	J/Pdet (L)
			( )	( )	( )		
		propylene glycol	130 (75-125	( )	( )	↓	↓
			( )	( )	( )		
		Diethylene glycol	143 (75-125	( )	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )	

LDC #: 25533AJ5
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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 2/10.7/88 CF (std)	Recalculated 2/10.7/88 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	7/13/11	Propylene glycol	7.60×10^2	7.60×10^2	7.67×10^2	7.67×10^2	2.4	2.4
2									
3									
4									

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

LDC #: 26533A45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FZ
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 13:53	7/27/11	Propylene Glycol	105.36	102.95	102.95	2.3	2.3
2	CCV 16:14	7/27/11	↓	↓	103.68	103.68	1.6	1.6
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: CA

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	192.5	180.374374	94	94	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: [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: 13 + 14

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	192.77	192.77	ND	126.68	125.23	66	66	65	65	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 #: 26533A5
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
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 = | 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 04208

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	192.77	NA	267.48	NA	139	139	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 #: 26533A45
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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-190-SA6-SS-0.0-0.5
SL-192-SA6-SS-0.0-0.5
SL-193-SA6-SS-0.0-0.5
SL-245-SA6-SS-0.0-0.5
SL-253-SA6-SS-0.0-0.5
SL-254-SA6-SS-0.0-0.5
SL-255-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-268-SA6-SS-0.0-0.5
SL-190-SA6-SS-0.0-0.5MS
SL-190-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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 DE208	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-190-SA6-SS-0.0-0.5 SL-192-SA6-SS-0.0-0.5 SL-193-SA6-SS-0.0-0.5 SL-245-SA6-SS-0.0-0.5 SL-253-SA6-SS-0.0-0.5 SL-254-SA6-SS-0.0-0.5 SL-255-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-268-SA6-SS-0.0-0.5	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A71 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/8/11
SDG #: DE208 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: 7/25/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/RS	A	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-190-SA6-SS-0.0-0.5	11	PBLK23208	21		31	
2	SL-192-SA6-SS-0.0-0.5	12		22		32	
3	SL-193-SA6-SS-0.0-0.5	13	#1MS	23		33	
4	SL-245-SA6-SS-0.0-0.5	14	#1MSD	24		34	
5	SL-253-SA6-SS-0.0-0.5	15		25		35	
6	SL-254-SA6-SS-0.0-0.5	16		26		36	
7	SL-255-SA6-SS-0.0-0.5	17		27		37	
8	SL-256-SA6-SS-0.0-0.5	18		28		38	
9	SL-268-SA6-SS-0.0-0.5	19		29		39	
10		20		30		40	

Notes: _____

.DC #: 26533A71
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?			✓	

DC #: 26533A71
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 #: 26533A71
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F7
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 2002 CF (std)	Recalculated 2002 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	IF4210	7/29/11	Formaldehyde	6.18X10'	6.18X10'	6.13X10'	6.13X10'	6.0	6.0
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 #: 1
SDG #: per 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	IF4210.30R	7/30/11	Formaldehyde	2002.00	1983.45	1983.45	0.9	0.9
	2:32							
2	IF4210.41R1	7/30/11	↓	↓	1970.20	1970.20	1.6	1.6
	4:17							
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: [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	
Butyraldehyde	NS	1971	3665.67/2	93	93	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: [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: 13+14

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	NR	5179.79	5017.44	103	103	101	101	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 #: 26533A71
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ✓ GC __HPLC

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

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS

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	4848.65	NA	97	97	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 #: 265 33A71
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: July 25, 2011

LDC Report Date: November 9, 2011

Matrix: Soil

Parameters: Perchlorate

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE208

Sample Identification

SL-235-SA6-SS-0.0-0.5
SL-256-SA6-SS-0.0-0.5
SL-289-SA6-SB-3.5-4.5
DUP07-SA6-QC-072511
SL-235-SA6-SS-0.0-0.5MS
SL-235-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 6 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

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation 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 DE208	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 DE208

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE208	SL-235-SA6-SS-0.0-0.5 SL-256-SA6-SS-0.0-0.5 SL-289-SA6-SB-3.5-4.5 DUP07-SA6-QC-072511	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 DE208

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG DE208

No Sample Data Qualified in this SDG

LDC #: 26533A87 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/08/11
SDG #: DE208 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

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: 7/25/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r2
IV.	Continuing calibration/ICV	A	ICV/CCV ± 15/30 LODV ± 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	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-235-SA6-SS-0.0-0.5	11	PBLK28220	21		31	
2	SL-256-SA6-SS-0.0-0.5	12		22		32	
3	SL-289-SA6-SB-3.5-4.5	13		23		33	
4	DUP07-SA6-QC-072511	14		24		34	
5	#1MS	15		25		35	
6	#1MSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26533A87

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?	NA			
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 #: 26533A87

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

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

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 # 26533A87
SDG# file copy

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer:

METHOD: Method 6850

Parameter: perchlorate

Date	Column	Compound	y	x	
08/11/2011	LCMS	perchlorate	0.030428	0.040	
			0.078523	0.100	
			0.175157	0.200	
			0.341583	0.400	
			0.915877	1.000	
			2.494238	2.500	

Regression Output:	Regression Output:	**Reported**	
Constant	-0.03639		
Std Err of Y Est	0.03425		
R Squared	0.99896		0.99673
No. of Observations	6.00000		
Degrees of Freedom	4.00000		
X Coefficient(s)	1.003E+000		

LDC #: 26533A87

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	MS5P222 11010	8/10/11	~~Phenol (1st internal standard)~~ Perchlorate	4	3.79	3.79	5	5
			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	MS5P222 11021	8/10/11 (LODV	~~Phenol (1st internal standard)~~ Perchlorate	0.4	0.495	0.495	24	24
			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 #: 16353A8 /

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: 5 & 6

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											
Perchlorate	100	100	ND	107	115	107	107	115	115	7	7

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

LDC #: 26153218V

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: LCS28220

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	10%	NA	10%	10%	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 #: 26533A87

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. _____ , _____:

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

= ND

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

SAMPLE DELIVERY GROUP

DE209

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
26-Jul-2011	TB-072611	6356773	TB	5030B	8015M	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3050B	6010B	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3050B	6020	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3060A	7199	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3546	1625C	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8015B	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8015M	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8081A	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8082	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8151A	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8270C	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	3550B	8270C SIM	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	8330	8330A	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	300.0	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	314.0	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	7471A	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	8015B	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	8015M	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	8315A	III
26-Jul-2011	SL-206-SA6-SS-0.0-0.5	6356764	N	METHOD	9012B	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3050B	6010B	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3050B	6020	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3060A	7199	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3546	1625C	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8015B	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	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
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8081A	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8082	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8151A	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8270C	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	3550B	8270C SIM	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	8330	8330A	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	300.0	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	314.0	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	7471A	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	8015B	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	8015M	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	8315A	III
26-Jul-2011	SL-213-SA6-SS-0.0-0.5	6356765	N	METHOD	9012B	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3050B	6010B	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3050B	6020	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3060A	7199	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3546	1625C	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8015B	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8015M	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8081A	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8082	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8151A	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8270C	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	3550B	8270C SIM	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	8330	8330A	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	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
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	314.0	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	7471A	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	8015B	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	8015M	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	8315A	III
26-Jul-2011	SL-217-SA6-SS-0.0-0.5	6356766	N	METHOD	9012B	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3050B	6010B	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3050B	6020	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3060A	7199	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3550B	8015B	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3550B	8015M	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3550B	8082	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3550B	8270C	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	3550B	8270C SIM	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	5035	8015M	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	METHOD	300.0	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	METHOD	314.0	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	METHOD	7471A	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	METHOD	8015B	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0	6356770	N	METHOD	8015M	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0DUP	P356770D270330B	DUP	METHOD	314.0	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0DUP	P356770D271723B	DUP	METHOD	300.0	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0MS	P356770R270416B	MS	METHOD	314.0	III
26-Jul-2011	SL-077-SA6-SB-4.0-5.0MS	P356770R271737B	MS	METHOD	300.0	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3050B	6010B	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	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
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3060A	7199	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3550B	8015B	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3550B	8015M	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3550B	8082	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3550B	8270C	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	3550B	8270C SIM	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	5035	8015M	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	METHOD	300.0	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	METHOD	314.0	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	METHOD	7471A	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	METHOD	8015B	III
26-Jul-2011	SL-077-SA6-SB-9.0-10.0	6356771	N	METHOD	8015M	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3050B	6010B	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3050B	6020	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3060A	7199	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3546	1625C	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8015B	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8015M	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8081A	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8082	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8151A	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8270C	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	3550B	8270C SIM	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	8330	8330A	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	300.0	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	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
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	7471A	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	8015B	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	8015M	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	8315A	III
26-Jul-2011	SL-204-SA6-SS-0.0-0.5	6356759	N	METHOD	9012B	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3050B	6010B	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3050B	6020	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3060A	7199	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3546	1625C	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8015B	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8015M	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8081A	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8082	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8151A	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8270C	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	3550B	8270C SIM	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	8330	8330A	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	300.0	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	314.0	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	7471A	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	8015B	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	8015M	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	8315A	III
26-Jul-2011	SL-319-SA6-SS-0.0-0.5	6356768	N	METHOD	9012B	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3050B	6010B	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	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
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3060A	7199	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3550B	8015B	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3550B	8015M	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3550B	8082	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3550B	8270C	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	3550B	8270C SIM	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	5035	8015M	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	METHOD	300.0	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	METHOD	314.0	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	METHOD	7471A	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	METHOD	8015B	III
26-Jul-2011	SL-080-SA6-SB-3.5-4.5	6356772	N	METHOD	8015M	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3005A	6010B	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3020A	6020	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8015B	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8015M	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8081A	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8082	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8270C	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3510C	8270C SIM	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	3520C	1625C	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	8330	8330A	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	Gen Prep	300.0	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	Gen Prep	314.0	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	Gen Prep	7199	III
26-Jul-2011	EB-SA6-SS-072611	6356774	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
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	Gen Prep	8015M	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	METHOD	7470A	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	METHOD	8151A	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	METHOD	8315A	III
26-Jul-2011	EB-SA6-SS-072611	6356774	EB	METHOD	9012B	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3050B	6010B	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3050B	6020	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3060A	7199	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3546	1625C	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8015B	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8015M	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8081A	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8082	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8151A	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8270C	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	3550B	8270C SIM	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	8330	8330A	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	300.0	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	314.0	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	7471A	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	8015B	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	8015M	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	8315A	III
26-Jul-2011	SL-311-SA6-SS-0.0-0.5	6356775	N	METHOD	9012B	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3050B	6010B	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	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
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3060A	7199	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3546	1625C	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8015B	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8015M	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8081A	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8082	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8151A	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8270C	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	3550B	8270C SIM	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	8330	8330A	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	300.0	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	314.0	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	7471A	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	8015B	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	8015M	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	8315A	III
26-Jul-2011	SL-317-SA6-SS-0.0-0.5	6356767	N	METHOD	9012B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3050B	6010B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3050B	6020	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3060A	7199	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3546	1625C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8015B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8081A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8082	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8151A	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8270C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	3550B	8270C SIM	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	8330	8330A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	300.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	314.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	7471A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	8015B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	8315A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5	6356760	N	METHOD	9012B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3050B	6010B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3050B	6020	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3060A	7199	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3546	1625C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8015B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8081A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8082	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8151A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8270C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	3550B	8270C SIM	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	8330	8330A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	300.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	314.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	7471A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	8315A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MS	6356761	MS	METHOD	9012B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3050B	6010B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3050B	6020	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3546	1625C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8015B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8081A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8082	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8151A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8270C	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	3550B	8270C SIM	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	8330	8330A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	METHOD	7471A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	METHOD	8015B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	METHOD	8015M	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5MSD	6356762	MSD	METHOD	8315A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	3050B	6010B	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	3050B	6020	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	3060A	7199	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	METHOD	300.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	METHOD	314.0	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	METHOD	7471A	III
26-Jul-2011	SL-205-SA6-SS-0.0-0.5DUP	6356763	DUP	METHOD	9012B	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	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
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3050B	6020	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3060A	7199	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3546	1625C	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8015B	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8015M	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8081A	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8082	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8151A	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8270C	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	3550B	8270C SIM	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	8330	8330A	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	300.0	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	314.0	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	7471A	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	8015B	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	8015M	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	8315A	III
26-Jul-2011	DUP08-SA6-QC-072611	6356769	FD	METHOD	9012B	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3050B	6010B	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3050B	6020	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3060A	7199	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3550B	8081A	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3550B	8082	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3550B	8151A	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	3550B	8270C	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	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
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	METHOD	300.0	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	METHOD	314.0	III
26-Jul-2011	SL-013-SA6-SS-0.0-0.5	6356758	N	METHOD	7471A	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3050B	6010B	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3050B	6020	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3060A	7199	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3550B	8081A	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3550B	8082	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3550B	8151A	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3550B	8270C	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	3550B	8270C SIM	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	METHOD	300.0	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	N	METHOD	314.0	III
26-Jul-2011	SL-012-SA6-SS-0.0-0.5	6356757	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: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 ***Collected:*** 7/26/2011 12:14:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-012-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 3:02:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-013-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 2:39:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.99	J	0.82	MDL	1.0	PQL	mg/Kg	J	Z, Q

Sample ID: SL-204-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 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	1.2		0.82	MDL	1.0	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.82	MDL	1.5	PQL	mg/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-206-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:18:00 ***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		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-213-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:38:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.4		0.85	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-217-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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	2.7		0.85	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-317-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.2		0.83	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-319-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 10:22:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1		0.80	MDL	1.0	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.66	J	0.356	MDL	4.95	PQL	mg/Kg	U	B
SODIUM	84.5	J	5.89	MDL	98.9	PQL	mg/Kg	J	Z
TIN	2.35	J	0.317	MDL	9.89	PQL	mg/Kg	U	B
Zirconium	2.73	J	0.455	MDL	4.95	PQL	mg/Kg	U	B

Sample ID: SL-012-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 3:02:00 *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	0.319	MDL	9.97	PQL	mg/Kg	U	B
Zirconium	1.86	J	0.459	MDL	4.99	PQL	mg/Kg	U	B

Sample ID: SL-013-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 2:39:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	91.9	J	5.89	MDL	99.0	PQL	mg/Kg	J	Z
TIN	2.41	J	0.317	MDL	9.90	PQL	mg/Kg	U	B
Zirconium	2.21	J	0.456	MDL	4.95	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-077-SA6-SB-4.0-5.0** ***Collected:*** **7/26/2011 9:30:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.79	J	0.386	MDL	5.36	PQL	mg/Kg	U	B
TIN	2.26	J	0.343	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	3.41	J	0.493	MDL	5.36	PQL	mg/Kg	J	Z

Sample ID: **SL-077-SA6-SB-9.0-10.0** ***Collected:*** **7/26/2011 9:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.10	J	0.415	MDL	5.77	PQL	mg/Kg	J	Z
TIN	2.33	J	0.369	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.55	J	0.531	MDL	5.77	PQL	mg/Kg	J	Z

Sample ID: **SL-080-SA6-SB-3.5-4.5** ***Collected:*** **7/26/2011 10:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	1.59	J	0.332	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	0.852	J	0.477	MDL	5.18	PQL	mg/Kg	U	B

Sample ID: **SL-204-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 10:00:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.04	J	0.350	MDL	4.86	PQL	mg/Kg	U	B
SODIUM	62.1	J	5.78	MDL	97.1	PQL	mg/Kg	J	Z
TIN	1.87	J	0.311	MDL	9.71	PQL	mg/Kg	U	B
Zirconium	2.69	J	0.447	MDL	4.86	PQL	mg/Kg	U	B

Sample ID: **SL-205-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 12:06:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.58	J	0.370	MDL	5.14	PQL	mg/Kg	U	B
SODIUM	88.4	J	6.12	MDL	103	PQL	mg/Kg	J	Z
TIN	2.37	J	0.329	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	2.86	J	0.473	MDL	5.14	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-206-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 8:18:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.22	J	0.327	MDL	10.2	PQL	mg/Kg	U	B

Sample ID: SL-213-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 8:38:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	96.1	J	5.98	MDL	101	PQL	mg/Kg	J	Z
TIN	2.16	J	0.322	MDL	10.1	PQL	mg/Kg	U	B

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 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
SODIUM	95.5	J	6.13	MDL	103	PQL	mg/Kg	J	Z
TIN	2.12	J	0.330	MDL	10.3	PQL	mg/Kg	U	B

Sample ID: SL-311-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 11:31:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.45	J	0.351	MDL	4.87	PQL	mg/Kg	U	B
SODIUM	89.4	J	5.79	MDL	97.4	PQL	mg/Kg	J	Z
TIN	2.74	J	0.312	MDL	9.74	PQL	mg/Kg	U	B
Zirconium	2.51	J	0.448	MDL	4.87	PQL	mg/Kg	U	B

Sample ID: SL-317-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 11:50:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.00	J	0.354	MDL	4.92	PQL	mg/Kg	U	B
SODIUM	74.2	J	5.85	MDL	98.4	PQL	mg/Kg	J	Z
TIN	2.64	J	0.315	MDL	9.84	PQL	mg/Kg	U	B
Zirconium	2.63	J	0.452	MDL	4.92	PQL	mg/Kg	U	B

Sample ID: SL-319-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 10:22:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.83	J	0.349	MDL	4.85	PQL	mg/Kg	U	B
SODIUM	77.1	J	5.77	MDL	96.9	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-319-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 10:22:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.20	J	0.310	MDL	9.69	PQL	mg/Kg	U	B
Zirconium	2.31	J	0.446	MDL	4.85	PQL	mg/Kg	U	B

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 **Collected:** 7/26/2011 12:14:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.102	J	0.0754	MDL	0.204	PQL	mg/Kg	J	Z, Q
ARSENIC	4.39		0.0815	MDL	0.407	PQL	mg/Kg	J	Q
LEAD	8.20		0.0104	MDL	0.204	PQL	mg/Kg	J	Q
THALLIUM	0.247		0.0306	MDL	0.102	PQL	mg/Kg	J	Q
VANADIUM	36.4		0.0224	MDL	0.102	PQL	mg/Kg	J	Q

Sample ID: DUP08-SA6-QC-072611 **Collected:** 7/26/2011 12:14:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.189	J	0.0591	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: SL-012-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 3:02:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0768	U	0.0768	MDL	0.207	PQL	mg/Kg	UJ	Q
ARSENIC	3.13		0.0830	MDL	0.415	PQL	mg/Kg	J	Q
LEAD	8.45		0.0106	MDL	0.207	PQL	mg/Kg	J	Q
SILVER	0.0515	J	0.0147	MDL	0.104	PQL	mg/Kg	J	Z
THALLIUM	0.224		0.0311	MDL	0.104	PQL	mg/Kg	J	Q
VANADIUM	27.7		0.0228	MDL	0.104	PQL	mg/Kg	J	Q

Sample ID: SL-012-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 3:02:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0894	J	0.0602	MDL	0.415	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-013-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 2:39:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0719	U	0.0719	MDL	0.194	PQL	mg/Kg	UJ	Q
ARSENIC	3.98		0.0777	MDL	0.389	PQL	mg/Kg	J	Q
LEAD	17.6		0.0099	MDL	0.194	PQL	mg/Kg	J	Q
SILVER	0.0497	J	0.0138	MDL	0.0971	PQL	mg/Kg	J	Z
THALLIUM	0.214		0.0291	MDL	0.0971	PQL	mg/Kg	J	Q
VANADIUM	31.9		0.0214	MDL	0.0971	PQL	mg/Kg	J	Q

Sample ID: SL-013-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 2:39:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0959	J	0.0563	MDL	0.389	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA6-SB-4.0-5.0 **Collected:** 7/26/2011 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
ANTIMONY	0.0802	U	0.0802	MDL	0.217	PQL	mg/Kg	UJ	Q
ARSENIC	3.95		0.0867	MDL	0.433	PQL	mg/Kg	J	Q
LEAD	4.88		0.0110	MDL	0.217	PQL	mg/Kg	J	Q
SILVER	0.0176	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z
THALLIUM	0.160		0.0325	MDL	0.108	PQL	mg/Kg	J	Q
VANADIUM	30.9		0.0238	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-077-SA6-SB-4.0-5.0 **Collected:** 7/26/2011 9:30:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0765	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA6-SB-9.0-10.0 **Collected:** 7/26/2011 9:50:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0869	J	0.0821	MDL	0.222	PQL	mg/Kg	J	Z, Q
ARSENIC	5.21		0.0887	MDL	0.444	PQL	mg/Kg	J	Q
LEAD	8.22		0.0113	MDL	0.222	PQL	mg/Kg	J	Q
SILVER	0.0254	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z
THALLIUM	0.278		0.0333	MDL	0.111	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-077-SA6-SB-9.0-10.0 ***Collected:*** 7/26/2011 9:50:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	50.5		0.0244	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-077-SA6-SB-9.0-10.0 ***Collected:*** 7/26/2011 9:50:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.169	J	0.0643	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: SL-080-SA6-SB-3.5-4.5 ***Collected:*** 7/26/2011 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
ANTIMONY	0.0775	U	0.0775	MDL	0.209	PQL	mg/Kg	UJ	Q
ARSENIC	1.53		0.0838	MDL	0.419	PQL	mg/Kg	J	Q
CADMIUM	0.0466	J	0.0461	MDL	0.105	PQL	mg/Kg	J	Z
LEAD	2.55		0.0107	MDL	0.209	PQL	mg/Kg	J	Q
SILVER	0.0149	J	0.0149	MDL	0.105	PQL	mg/Kg	J	Z
THALLIUM	0.104	J	0.0314	MDL	0.105	PQL	mg/Kg	J	Z, Q
VANADIUM	35.5		0.0230	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-204-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:00:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.174	J	0.0719	MDL	0.194	PQL	mg/Kg	J	Z, Q
ARSENIC	3.77		0.0777	MDL	0.389	PQL	mg/Kg	J	Q
LEAD	12.7		0.0099	MDL	0.194	PQL	mg/Kg	J	Q
THALLIUM	0.213		0.0291	MDL	0.0971	PQL	mg/Kg	J	Q
VANADIUM	31.5		0.0214	MDL	0.0971	PQL	mg/Kg	J	Q

Sample ID: SL-204-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:00:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.125	J	0.0563	MDL	0.389	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.108	J	0.0738	MDL	0.200	PQL	mg/Kg	J	Z, Q
ARSENIC	4.19		0.0798	MDL	0.399	PQL	mg/Kg	J	Q
LEAD	7.20		0.0102	MDL	0.200	PQL	mg/Kg	J	Q
THALLIUM	0.265		0.0299	MDL	0.0998	PQL	mg/Kg	J	Q
VANADIUM	34.3		0.0220	MDL	0.0998	PQL	mg/Kg	J	Q

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.189	J	0.0579	MDL	0.399	PQL	mg/Kg	J	Z

Sample ID: SL-206-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:18:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0749	MDL	0.202	PQL	mg/Kg	J	Z, Q
ARSENIC	6.03		0.0810	MDL	0.405	PQL	mg/Kg	J	Q
LEAD	11.4		0.0103	MDL	0.202	PQL	mg/Kg	J	Q
SILVER	0.0421	J	0.0144	MDL	0.101	PQL	mg/Kg	J	Z
THALLIUM	0.342		0.0304	MDL	0.101	PQL	mg/Kg	J	Q
VANADIUM	57.4		0.0223	MDL	0.101	PQL	mg/Kg	J	Q

Sample ID: SL-206-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:18:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.155	J	0.0587	MDL	0.405	PQL	mg/Kg	J	Z

Sample ID: SL-213-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:38:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.112	J	0.0774	MDL	0.209	PQL	mg/Kg	J	Z, Q
ARSENIC	5.84		0.0837	MDL	0.418	PQL	mg/Kg	J	Q
LEAD	10.5		0.0107	MDL	0.209	PQL	mg/Kg	J	Q
SILVER	0.0469	J	0.0149	MDL	0.105	PQL	mg/Kg	J	Z
THALLIUM	0.330		0.0314	MDL	0.105	PQL	mg/Kg	J	Q
VANADIUM	60.3		0.0230	MDL	0.105	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-213-SA6-SS-0.0-0.5 **Collected: 7/26/2011 8:38:00** **Analysis Type: REA6** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.139	J	0.0607	MDL	0.418	PQL	mg/Kg	J	Z

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected: 7/26/2011 9:00:00** **Analysis Type: REA4** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.205	J	0.0778	MDL	0.210	PQL	mg/Kg	J	Z, Q
ARSENIC	6.38		0.0841	MDL	0.421	PQL	mg/Kg	J	Q
LEAD	11.0		0.0107	MDL	0.210	PQL	mg/Kg	J	Q
SILVER	0.0611	J	0.0149	MDL	0.105	PQL	mg/Kg	J	Z
THALLIUM	0.367		0.0315	MDL	0.105	PQL	mg/Kg	J	Q
VANADIUM	62.0		0.0231	MDL	0.105	PQL	mg/Kg	J	Q

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected: 7/26/2011 9:00:00** **Analysis Type: REA6** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.191	J	0.0610	MDL	0.421	PQL	mg/Kg	J	Z

Sample ID: SL-311-SA6-SS-0.0-0.5 **Collected: 7/26/2011 11:31:00** **Analysis Type: REA4** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.141	J	0.0735	MDL	0.199	PQL	mg/Kg	J	Z, Q
ARSENIC	4.12		0.0794	MDL	0.397	PQL	mg/Kg	J	Q
LEAD	26.1		0.0101	MDL	0.199	PQL	mg/Kg	J	Q
THALLIUM	0.174		0.0298	MDL	0.0993	PQL	mg/Kg	J	Q
VANADIUM	25.5		0.0218	MDL	0.0993	PQL	mg/Kg	J	Q

Sample ID: SL-311-SA6-SS-0.0-0.5 **Collected: 7/26/2011 11:31:00** **Analysis Type: REA6** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.109	J	0.0576	MDL	0.397	PQL	mg/Kg	J	Z

Sample ID: SL-317-SA6-SS-0.0-0.5 **Collected: 7/26/2011 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
ANTIMONY	0.126	J	0.0735	MDL	0.199	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-317-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 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
ARSENIC	3.56		0.0795	MDL	0.397	PQL	mg/Kg	J	Q
LEAD	15.9		0.0101	MDL	0.199	PQL	mg/Kg	J	Q
THALLIUM	0.252		0.0298	MDL	0.0993	PQL	mg/Kg	J	Q
VANADIUM	28.4		0.0219	MDL	0.0993	PQL	mg/Kg	J	Q

Sample ID: SL-317-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 11:50:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.165	J	0.0576	MDL	0.397	PQL	mg/Kg	J	Z

Sample ID: SL-319-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:22:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.490		0.0717	MDL	0.194	PQL	mg/Kg	J	Q
ARSENIC	4.02		0.0776	MDL	0.388	PQL	mg/Kg	J	Q
LEAD	32.5		0.0099	MDL	0.194	PQL	mg/Kg	J	Q
THALLIUM	0.170		0.0291	MDL	0.0969	PQL	mg/Kg	J	Q
VANADIUM	28.9		0.0213	MDL	0.0969	PQL	mg/Kg	J	Q

Sample ID: SL-319-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:22:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0855	J	0.0562	MDL	0.388	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-012-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 3:02:00 ***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	0.21	MDL	1.0	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-013-SA6-SS-0.0-0.5 **Collected: 7/26/2011 2:39:00** **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	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA6-SB-4.0-5.0 **Collected: 7/26/2011 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	0.42	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-204-SA6-SS-0.0-0.5 **Collected: 7/26/2011 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	0.43	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-206-SA6-SS-0.0-0.5 **Collected: 7/26/2011 8:18:00** **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	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-213-SA6-SS-0.0-0.5 **Collected: 7/26/2011 8:38:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.76	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected: 7/26/2011 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	0.67	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-311-SA6-SS-0.0-0.5 **Collected: 7/26/2011 11:31:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.96	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7470A **Matrix:** AQ

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 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
MERCURY	0.000043	J	0.000026	MDL	0.00020	PQL	mg/L	U	B, B

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0186	J	0.0067	MDL	0.0952	PQL	mg/Kg	U	F

Sample ID: SL-012-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 3:02:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0327	J	0.0070	MDL	0.0991	PQL	mg/Kg	U	F

Sample ID: SL-013-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 2:39:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0341	J	0.0070	MDL	0.0997	PQL	mg/Kg	U	F

Sample ID: SL-077-SA6-SB-4.0-5.0 *Collected:* 7/26/2011 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	0.0222	J	0.0074	MDL	0.106	PQL	mg/Kg	U	F

Sample ID: SL-080-SA6-SB-3.5-4.5 *Collected:* 7/26/2011 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
MERCURY	0.0291	J	0.0071	MDL	0.100	PQL	mg/Kg	U	F

Sample ID: SL-204-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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
MERCURY	0.0198	J	0.0070	MDL	0.100	PQL	mg/Kg	U	F

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-205-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 12:06:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0222	J	0.0069	MDL	0.0977	PQL	mg/Kg	U	F

Sample ID: SL-206-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 8:18:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0099	J	0.0071	MDL	0.101	PQL	mg/Kg	U	B, F

Sample ID: SL-213-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 8:38:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0098	J	0.0070	MDL	0.0993	PQL	mg/Kg	U	B, F

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 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	0.0088	J	0.0072	MDL	0.103	PQL	mg/Kg	U	B, F

Sample ID: SL-311-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 11:31:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0835	J	0.0067	MDL	0.0951	PQL	mg/Kg	J	Z

Sample ID: SL-317-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 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	0.0157	J	0.0068	MDL	0.0972	PQL	mg/Kg	U	B, F

Sample ID: SL-319-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 10:22:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0610	J	0.0067	MDL	0.0950	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 1625C **Matrix:** AQ

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 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
N-NITROSODIMETHYLAMINE	3.56		0.498	MDL	0.996	PQL	ng/L	J	S

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: SL-317-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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	18.5	J	16.7	MDL	33.4	PQL	ng/Kg	J	Z

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *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	0.82	MDL	2.5	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA6-SB-9.0-10.0 *Collected:* 7/26/2011 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
EFH (C15-C20)	0.94	J	0.92	MDL	2.8	PQL	mg/Kg	J	Z

Sample ID: SL-080-SA6-SB-3.5-4.5 *Collected:* 7/26/2011 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 (C12-C14)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	S
EFH (C15-C20)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	S
EFH (C21-C30)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	S
EFH (C30-C40)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	S
EFH (C8-C11)	0.42	U	0.42	MDL	1.3	PQL	mg/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-204-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 10:00:00 **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)	0.90	J	0.40	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 12:06:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.1	U	5.1	MDL	10	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.1	U	5.1	MDL	10	PQL	mg/Kg	UJ	Q

Sample ID: SL-205-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 12:06:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C12-C14)	0.82	U	0.82	MDL	2.5	PQL	mg/Kg	R	Q
EFH (C15-C20)	1.2	J	0.82	MDL	2.5	PQL	mg/Kg	J	Z
EFH (C8-C11)	0.82	U	0.82	MDL	2.5	PQL	mg/Kg	R	Q

Sample ID: SL-213-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 8:38:00 **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)	0.89	J	0.84	MDL	2.5	PQL	mg/Kg	J	Z

Sample ID: SL-217-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 9:00:00 **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)	0.65	J	0.42	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-317-SA6-SS-0.0-0.5 **Collected:** 7/26/2011 11:50:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.73	J	0.41	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8081A **Matrix:** AQ

Sample ID: EB-SA6-SS-072611 ***Collected:*** 7/26/2011 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
HEPTACHLOR	0.0074	J	0.0026	MDL	0.0098	PQL	ug/L	J	Z

Method Category: SVOA **Method:** 8081A **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 ***Collected:*** 7/26/2011 12:14:00 ***Analysis Type:*** DL-BASE/NEUTRAL ***Dilution:*** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	46		1.4	MDL	7.0	PQL	ug/Kg	J	FD

Sample ID: SL-012-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 3:02:00 ***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	0.25	J	0.068	MDL	0.35	PQL	ug/Kg	J	Z, S
HEPTACHLOR EPOXIDE	0.047	J	0.035	MDL	0.17	PQL	ug/Kg	J	Z, S

Sample ID: SL-013-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 2:39:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	2.3	J	0.81	MDL	3.4	PQL	ug/Kg	J	Z
ENDOSULFAN II	0.22	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
gamma-BHC (Lindane)	0.050	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.040	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***Analysis Type:*** DL-BASE/NEUTRAL ***Dilution:*** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	28	U	28	MDL	28	PQL	ug/Kg	UJ	FD

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***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	R	Q
ENDOSULFAN I	0.045	U	0.045	MDL	0.17	PQL	ug/Kg	R	Q
ENDOSULFAN SULFATE	0.31	U	0.31	MDL	0.35	PQL	ug/Kg	R	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-206-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:18:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	1.6	J	0.84	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-213-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:38:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDRIN KETONE	0.18	J	0.069	MDL	0.36	PQL	ug/Kg	J	Z

Sample ID: SL-317-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 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
4,4'-DDE	0.19	J	0.067	MDL	0.34	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.073	J	0.034	MDL	0.17	PQL	ug/Kg	J	Z

Sample ID: SL-319-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:22:00 ***Analysis Type:*** DL-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	7.9		0.33	MDL	1.7	PQL	ug/Kg	J	H

Sample ID: SL-319-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:22:00 ***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	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	H
4,4'-DDE	0.48	U	0.48	MDL	0.48	PQL	ug/Kg	UJ	H
ALDRIN	0.067	U	0.067	MDL	0.17	PQL	ug/Kg	UJ	H
ALPHA-BHC	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	H
BETA-BHC	0.060	U	0.060	MDL	0.17	PQL	ug/Kg	UJ	H
Chlordane	0.81	U	0.81	MDL	3.4	PQL	ug/Kg	UJ	H
DELTA-BHC	0.14	U	0.14	MDL	0.17	PQL	ug/Kg	UJ	H
DIELDRIN	0.25	U	0.25	MDL	0.34	PQL	ug/Kg	UJ	H
ENDOSULFAN I	0.044	U	0.044	MDL	0.17	PQL	ug/Kg	UJ	H
ENDOSULFAN II	0.26	U	0.26	MDL	0.34	PQL	ug/Kg	UJ	H
ENDOSULFAN SULFATE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	H
ENDRIN	0.32	U	0.32	MDL	0.34	PQL	ug/Kg	UJ	H
ENDRIN ALDEHYDE	0.83	U	0.83	MDL	0.83	PQL	ug/Kg	UJ	H
ENDRIN KETONE	0.067	U	0.067	MDL	0.34	PQL	ug/Kg	UJ	H

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-319-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 10:22:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
gamma-BHC (Lindane)	0.034	U	0.034	MDL	0.17	PQL	ug/Kg	UJ	H
HEPTACHLOR	0.060	U	0.060	MDL	0.17	PQL	ug/Kg	UJ	H
HEPTACHLOR EPOXIDE	0.11	U	0.11	MDL	0.17	PQL	ug/Kg	UJ	H
METHOXYCHLOR	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	H
MIREX	0.40	U	0.40	MDL	0.40	PQL	ug/Kg	UJ	H
TOXAPHENE	2.2	U	2.2	MDL	6.7	PQL	ug/Kg	UJ	H

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *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	18		0.34	MDL	1.7	PQL	ug/Kg	J	FD

Sample ID: SL-012-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 3:02:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.3	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 12:06:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	67		1.7	MDL	8.7	PQL	ug/Kg	J	FD

Sample ID: SL-213-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 8:38:00 *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	0.72	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-217-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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
AROCLOR 1254	1.5	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8082 **Matrix:** SO

Sample ID: SL-319-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 10:22:00 *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	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
AROCLOR 1221	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
AROCLOR 1232	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
AROCLOR 1242	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
AROCLOR 1248	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
AROCLOR 1254	15		0.33	MDL	1.7	PQL	ug/Kg	J	H
AROCLOR 1260	24		0.39	MDL	1.7	PQL	ug/Kg	J	H
Aroclor 1262	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
Aroclor 1268	0.33	U	0.33	MDL	1.7	PQL	ug/Kg	UJ	H
Aroclor 5432	1.0	U	1.0	MDL	3.3	PQL	ug/Kg	UJ	H
Aroclor 5442	1.0	U	1.0	MDL	3.3	PQL	ug/Kg	UJ	H
Aroclor 5460	18		1.0	MDL	3.3	PQL	ug/Kg	J	H

Method Category: SVOA **Method:** 8151A **Matrix:** AQ

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 11:30:00 *Analysis Type:* DL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-T	1.6		0.16	MDL	0.52	PQL	ug/L	UJ	L, B

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 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
2,4-D	4.8		0.17	MDL	0.52	PQL	ug/L	U	B

Method Category: SVOA **Method:** 8151A **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	0.82	U	0.82	MDL	2.5	PQL	ug/Kg	R	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: **SL-012-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 3:02:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	0.83	U	0.83	MDL	2.5	PQL	ug/Kg	R	L
MCPA	140	J	79	MDL	260	PQL	ug/Kg	J	Z

Sample ID: **SL-013-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 2:39:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	0.94	J	0.63	MDL	1.7	PQL	ug/Kg	J	Z
DINOSEB	0.81	U	0.81	MDL	2.4	PQL	ug/Kg	R	L

Sample ID: **SL-204-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 10:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	0.81	U	0.81	MDL	2.4	PQL	ug/Kg	R	L

Sample ID: **SL-205-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 12:06:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	0.82	U	0.82	MDL	2.5	PQL	ug/Kg	R	L

Sample ID: **SL-206-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 8:18:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	0.98	J	0.65	MDL	1.8	PQL	ug/Kg	J	Z
DINOSEB	0.84	U	0.84	MDL	2.5	PQL	ug/Kg	R	L

Sample ID: **SL-213-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 8:38:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.12	J	0.078	MDL	0.18	PQL	ug/Kg	J	Z
DINOSEB	0.83	U	0.83	MDL	2.5	PQL	ug/Kg	R	L

Sample ID: **SL-217-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 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
2,4,5-TP (Silvex)	0.079	J	0.078	MDL	0.18	PQL	ug/Kg	J	Z
2,4-DB	0.72	J	0.65	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-217-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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
DINOSEB	0.84	U	0.84	MDL	2.5	PQL	ug/Kg	R	L

Sample ID: SL-311-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 11:31:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-T	0.084	U	0.084	MDL	0.17	PQL	ug/Kg	UJ	S
2,4,5-TP (Silvex)	0.11	J	0.077	MDL	0.17	PQL	ug/Kg	J	Z, S
2,4-D	1.2	U	1.2	MDL	3.7	PQL	ug/Kg	UJ	S
2,4-DB	14		0.63	MDL	1.7	PQL	ug/Kg	J	S
DALAPON	4.5	U	4.5	MDL	9.2	PQL	ug/Kg	UJ	S
DICAMBA	0.41	U	0.41	MDL	1.2	PQL	ug/Kg	UJ	S
DICHLOROPROP	0.82	U	0.82	MDL	1.7	PQL	ug/Kg	UJ	S
DINOSEB	0.82	U	0.82	MDL	2.5	PQL	ug/Kg	R	L
MCPA	390	U	390	MDL	390	PQL	ug/Kg	UJ	S
MCPP	77	U	77	MDL	260	PQL	ug/Kg	UJ	S

Sample ID: SL-317-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 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
DINOSEB	0.81	U	0.81	MDL	2.4	PQL	ug/Kg	R	L

Sample ID: SL-319-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 10:22:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DINOSEB	0.81	U	0.81	MDL	2.4	PQL	ug/Kg	R	L

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 11:30:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	15	PQL	ug/L	UJ	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP08-SA6-QC-072611 ***Collected:*** 7/26/2011 12:14:00 ***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	17	MDL	340	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	19	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	20	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-012-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 3:02:00 ***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	20	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-013-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 2:39:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	23	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	42	J	17	MDL	340	PQL	ug/Kg	J	Z
PYRENE	18	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-077-SA6-SB-9.0-10.0 ***Collected:*** 7/26/2011 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
BENZO(A)PYRENE	33	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	31	J	19	MDL	190	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	29	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	43	J	19	MDL	190	PQL	ug/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***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	1200	U	1200	MDL	3400	PQL	ug/Kg	R	Q
BENZO(B)FLUORANTHENE	18	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	45	J	17	MDL	340	PQL	ug/Kg	J	Z, FD
CHRYSENE	23	J	17	MDL	170	PQL	ug/Kg	J	Z
FLUORANTHENE	20	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	20	J	17	MDL	170	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: **SL-206-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 8:18:00** ***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	91	J	18	MDL	350	PQL	ug/Kg	J	Z

Sample ID: **SL-217-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 9:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	41	J	18	MDL	350	PQL	ug/Kg	J	Z

Sample ID: **SL-311-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 11:31:00** ***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	26	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	32	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	49	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	42	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	25	J	17	MDL	170	PQL	ug/Kg	J	Z
Di-n-butylphthalate	21	J	17	MDL	170	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	32	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	60	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: **SL-317-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 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
BIS(2-ETHYLHEXYL)PHTHALATE	18	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: **SL-319-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 10:22:00** ***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	63	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	49	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	65	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	36	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	40	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	36	J	17	MDL	340	PQL	ug/Kg	J	Z
CHRYSENE	70	J	17	MDL	170	PQL	ug/Kg	J	Z
FLUORANTHENE	100	J	17	MDL	170	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-319-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 10:22:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	30	J	17	MDL	170	PQL	ug/Kg	J	Z
PHENANTHRENE	33	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	130	J	17	MDL	170	PQL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: EB-SA6-SS-072611 *Collected:* 7/26/2011 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
Dimethylphthalate	0.049	U	0.049	MDL	0.98	PQL	ug/L	UJ	L
Di-n-butylphthalate	0.14	J	0.049	MDL	0.98	PQL	ug/L	J	Z

Method Category: SVOA

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

Sample ID: DUP08-SA6-QC-072611 *Collected:* 7/26/2011 12:14:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	5.8	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	3.4	U	3.4	MDL	8.6	PQL	ug/Kg	UJ	FD
PHENANTHRENE	3.8	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-012-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 3:02:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	4.6	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	5.1	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-013-SA6-SS-0.0-0.5 *Collected:* 7/26/2011 2:39:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	6.0	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
CHRYSENE	5.0	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z
FLUORANTHENE	6.8	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: SL-077-SA6-SB-4.0-5.0 ***Collected:*** 7/26/2011 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
BENZO(A)ANTHRACENE	0.78	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.2	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.84	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.86	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-204-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	1.1	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
Butylbenzylphthalate	7.3	J	6.1	MDL	18	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.3	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
Di-n-butylphthalate	16	J	6.1	MDL	18	PQL	ug/Kg	J	Z
Di-n-octylphthalate	11	J	6.1	MDL	18	PQL	ug/Kg	J	Z
NAPHTHALENE	0.89	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-205-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 12:06:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	6.0	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	4.4	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-206-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:18:00 ***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	0.48	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.6	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z
Di-n-octylphthalate	15	J	6.3	MDL	19	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.2	J	0.70	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-213-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:38:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.4	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory:** LL

EDD Filename: PrepDE209_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-213-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 8:38:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	0.74	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.95	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	0.91	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.72	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-217-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 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
CHRYSENE	0.45	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.72	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-311-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 11:31:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	4.3	J	1.7	MDL	8.5	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	3.7	J	3.4	MDL	8.5	PQL	ug/Kg	J	Z

Sample ID: SL-317-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 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
ACENAPHTHYLENE	0.42	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
ANTHRACENE	1.2	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
Di-n-octylphthalate	11	J	6.1	MDL	18	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-319-SA6-SS-0.0-0.5 ***Collected:*** 7/26/2011 10:22:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.1	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
ACENAPHTHYLENE	1.6	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
Butylbenzylphthalate	6.6	J	6.0	MDL	18	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.0	J	0.67	MDL	1.7	PQL	ug/Kg	J	Z
Di-n-butylphthalate	9.1	J	6.0	MDL	18	PQL	ug/Kg	J	Z
Di-n-octylphthalate	11	J	6.0	MDL	18	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8015B** ***Matrix:*** **SO**

Sample ID: **SL-205-SA6-SS-0.0-0.5** ***Collected:*** **7/26/2011 12:06:00** ***Analysis Type:*** **REA3** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
m-Terphenyl	1.5	U	1.5	MDL	3.6	PQL	mg/Kg	UJ	Q
p-Terphenyl	1.5	U	1.5	MDL	3.6	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: PrepDE209_v1 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE209

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE209
EDD Filename: PrepDE209_v1

Laboratory: LL
eQAPP Name: CDM_SSFL_110509

Method: 8081A **Preparation Method: 3510C**
Matrix: SO

Sample ID	Type	Actual	Criteria	Units	Flag
SL-319-SA6-SS-0.0-0.5 (RES)	Sampling To Extraction	20.00	14.00	DAYS	J (all detects)
SL-319-SA6-SS-0.0-0.5 (DL)		20.00	14.00	DAYS	UJ (all non-detects)

Method: 8082 **Preparation Method: 3510C**
Matrix: SO

Sample ID	Type	Actual	Criteria	Units	Flag
SL-319-SA6-SS-0.0-0.5 (RES)	Sampling To Extraction	20.00	14.00	DAYS	J (all detects) UJ (all non-detects)

Method Blank Outlier Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P20848AB221837	7/28/2011 6:37:00 PM	BORON STRONTIUM Zirconium	0.0029 mg/L 0.00029 mg/L 0.0059 mg/L	EB-SA6-SS-072611

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21308DB220929	8/3/2011 9:29:00 AM	BORON CALCIUM IRON PHOSPHORUS STRONTIUM TIN Zirconium	0.529 mg/Kg 6.80 mg/Kg 3.81 mg/Kg 1.36 mg/Kg 0.0356 mg/Kg 1.68 mg/Kg 0.616 mg/Kg	DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-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
DUP08-SA6-QC-072611(REA)	BORON	1.66 mg/Kg	1.66U mg/Kg
DUP08-SA6-QC-072611(REA)	TIN	2.35 mg/Kg	2.35U mg/Kg
DUP08-SA6-QC-072611(REA)	Zirconium	2.73 mg/Kg	2.73U mg/Kg
SL-012-SA6-SS-0.0-0.5(REA)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-012-SA6-SS-0.0-0.5(REA)	Zirconium	1.86 mg/Kg	1.86U mg/Kg
SL-013-SA6-SS-0.0-0.5(REA)	TIN	2.41 mg/Kg	2.41U mg/Kg
SL-013-SA6-SS-0.0-0.5(REA)	Zirconium	2.21 mg/Kg	2.21U mg/Kg
SL-077-SA6-SB-4.0-5.0(REA)	BORON	1.79 mg/Kg	1.79U mg/Kg
SL-077-SA6-SB-4.0-5.0(REA)	TIN	2.26 mg/Kg	2.26U mg/Kg
SL-077-SA6-SB-9.0-10.0(REA)	TIN	2.33 mg/Kg	2.33U mg/Kg
SL-080-SA6-SB-3.5-4.5(REA)	TIN	1.59 mg/Kg	1.59U mg/Kg
SL-080-SA6-SB-3.5-4.5(REA)	Zirconium	0.852 mg/Kg	0.852U mg/Kg
SL-204-SA6-SS-0.0-0.5(REA)	BORON	2.04 mg/Kg	2.04U mg/Kg
SL-204-SA6-SS-0.0-0.5(REA)	TIN	1.87 mg/Kg	1.87U mg/Kg
SL-204-SA6-SS-0.0-0.5(REA)	Zirconium	2.69 mg/Kg	2.69U mg/Kg
SL-205-SA6-SS-0.0-0.5(REA)	BORON	2.58 mg/Kg	2.58U mg/Kg
SL-205-SA6-SS-0.0-0.5(REA)	TIN	2.37 mg/Kg	2.37U mg/Kg
SL-205-SA6-SS-0.0-0.5(REA)	Zirconium	2.86 mg/Kg	2.86U mg/Kg
SL-206-SA6-SS-0.0-0.5(REA)	TIN	2.22 mg/Kg	2.22U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **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-213-SA6-SS-0.0-0.5(REA)	TIN	2.16 mg/Kg	2.16U mg/Kg
SL-217-SA6-SS-0.0-0.5(REA)	TIN	2.12 mg/Kg	2.12U mg/Kg
SL-311-SA6-SS-0.0-0.5(REA)	BORON	2.45 mg/Kg	2.45U mg/Kg
SL-311-SA6-SS-0.0-0.5(REA)	TIN	2.74 mg/Kg	2.74U mg/Kg
SL-311-SA6-SS-0.0-0.5(REA)	Zirconium	2.51 mg/Kg	2.51U mg/Kg
SL-317-SA6-SS-0.0-0.5(REA)	BORON	1.00 mg/Kg	1.00U mg/Kg
SL-317-SA6-SS-0.0-0.5(REA)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-317-SA6-SS-0.0-0.5(REA)	Zirconium	2.63 mg/Kg	2.63U mg/Kg
SL-319-SA6-SS-0.0-0.5(REA)	BORON	1.83 mg/Kg	1.83U mg/Kg
SL-319-SA6-SS-0.0-0.5(REA)	TIN	2.20 mg/Kg	2.20U mg/Kg
SL-319-SA6-SS-0.0-0.5(REA)	Zirconium	2.31 mg/Kg	2.31U mg/Kg

Method: 7470A
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21013CB220815	8/1/2011 8:15:00 AM	MERCURY	0.00011 mg/L	EB-SA6-SS-072611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SS-072611(RES)	MERCURY	0.000043 mg/L	0.000043U mg/L

Method: 8015M
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P18185AB320448A	8/9/2011 4:48:00 AM	EFH (C30-C40)	0.41 mg/Kg	DUP08-SA6-QC-072611 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8151A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11115AB241015A	8/11/2011 10:15:00 AM	2,4,5-T 2,4-D	23 ug/L 84 ug/L	EB-SA6-SS-072611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SS-072611(DL)	2,4,5-T	1.6 ug/L	1.6U ug/L
EB-SA6-SS-072611(RES)	2,4-D	4.8 ug/L	4.8U ug/L

Method: **8315A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P08085AB240403A	7/28/2011 4:03:00 AM	FORMALDEHYDE	19 ug/L	EB-SA6-SS-072611

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	DIETHYLENE GLYCOL ETHYLENE GLYCOL	15 50	16 54	63.00-109.00 63.00-107.00	- -	DIETHYLENE GLYCOL ETHYLENE GLYCOL	J (all detects) UJ (all non-detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	AROCLOR 1260	213	340	39.00-149.00	-	AROCLOR 1242 AROCLOR 1248 AROCLOR 1254 AROCLOR 1260	No Qual, Diluted Out

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	4,4'-DDE 4,4'-DDT DIELDRIN ENDOSULFAN II ENDRIN ENDRIN ALDEHYDE HEPTACHLOR EPOXIDE	1995 5887 1418 449 488 627 758	2282 7325 1732 1062 655 252 985	18.00-161.00 10.00-176.00 19.00-154.00 28.00-154.00 11.00-149.00 10.00-148.00 13.00-157.00	- - - 81 (50.00) - 86 (35.00) -	4,4'-DDE 4,4'-DDT DIELDRIN ENDOSULFAN II ENDRIN ENDRIN ALDEHYDE HEPTACHLOR EPOXIDE	J(all detects)
SL-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	4,4'-DDD ENDOSULFAN I ENDOSULFAN SULFATE	0 0 0	0 0 0	16.00-163.00 16.00-137.00 21.00-160.00	- - -	4,4'-DDD ENDOSULFAN I ENDOSULFAN SULFATE	J(all detects) R(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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	m-Terphenyl p-Terphenyl	68 72	73 73	75.00-125.00 75.00-125.00	- -	m-Terphenyl p-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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	EFH (C21-C30) EFH (C30-C40)	291 256	333 1383	49.00-123.00 49.00-123.00	- 42 (20.00)	EFH (C21-C30) EFH (C30-C40)	No Qual, >4x

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	EFH (C12-C14) EFH (C8-C11)	- 0	0 0	49.00-123.00 49.00-123.00	200 (20.00) -	EFH (C12-C14) EFH (C8-C11)	J(all detects) R(all non-detects)

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	2,4,5-TP (Silvex)	-	-	24.00-141.00	41 (35.00)	2,4,5-TP (Silvex)	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-205-SA6-SS-0.0-0.5MS (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	ARSENIC VANADIUM ZINC	133 137 146	- - -	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ARSENIC VANADIUM ZINC	J(all detects) Zn No Qual >4x
SL-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	ANTIMONY	26	26	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike = 95%

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209

EDD Filename: DE209_v1

Laboratory: LL

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-205-SA6-SS-0.0-0.5MSD (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	LEAD THALLIUM	- -	67 73	75.00-125.00 75.00-125.00	- -	LEAD THALLIUM	J(all detects) UJ(all non-detects)
SL-205-SA6-SS-0.0-0.5MS **SL-205-SA6-SS-0.0-0.5MSD** (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	BARIUM	153	126	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-205-SA6-SS-0.0-0.5MS **SL-205-SA6-SS-0.0-0.5MSD** (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	ALUMINUM CALCIUM MAGNESIUM TITANIUM	1373 202 195 175	1370 169 - 153	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM CALCIUM MAGNESIUM TITANIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	IRON	410	-420	75.00-125.00	-	IRON	No Qual, >4x
SL-205-SA6-SS-0.0-0.5MSD (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-077-SA6-SB-4.0-5.0 SL-077-SA6-SB-9.0-10.0 SL-080-SA6-SB-3.5-4.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-311-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	MANGANESE	-	58	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-205-SA6-SS-0.0-0.5MS (DUP08-SA6-QC-072611 SL-012-SA6-SS-0.0-0.5 SL-013-SA6-SS-0.0-0.5 SL-204-SA6-SS-0.0-0.5 SL-205-SA6-SS-0.0-0.5 SL-206-SA6-SS-0.0-0.5 SL-213-SA6-SS-0.0-0.5 SL-217-SA6-SS-0.0-0.5 SL-317-SA6-SS-0.0-0.5 SL-319-SA6-SS-0.0-0.5)	FLUORIDE	40	-	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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_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-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	BIS(2-ETHYLHEXYL)PHTHALAT Di-n-butylphthalate Di-n-octylphthalate	- - 232	266 166 238	39.00-167.00 65.00-148.00 40.00-192.00	59 (30.00) - -	BIS(2-ETHYLHEXYL)PHTHALA Di-n-butylphthalate Di-n-octylphthalate	No Qual, Diluted Out
SL-205-SA6-SS-0.0-0.5MS SL-205-SA6-SS-0.0-0.5MSD (SL-205-SA6-SS-0.0-0.5)	BENZO(G,H,I)PERYLENE CHRYSENE	- 65	31 -	33.00-141.00 67.00-134.00	- -	BENZO(G,H,I)PERYLENE CHRYSENE	No Qual, Diluted Out

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-205-SA6-SS-0.0-0.5DUP (DUP08-SA6-QC-072611	ANTIMONY	30	20.00	
SL -012-SA6-SS-0.0-0.5	SILVER	32	20.00	
SL -013-SA6-SS-0.0-0.5				
SL -077-SA6-SB-4.0-5.0				
SL -077-SA6-SB-9.0-10.0				
SL -080-SA6-SB-3.5-4.5				
SL -204-SA6-SS-0.0-0.5				No Qual, OK by Difference
SL -205-SA6-SS-0.0-0.5				
SL -206-SA6-SS-0.0-0.5				
SL -213-SA6-SS-0.0-0.5				
SL -217-SA6-SS-0.0-0.5				
SL -311-SA6-SS-0.0-0.5				
SL -317-SA6-SS-0.0-0.5				
SL -319-SA6-SS-0.0-0.5)				

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-205-SA6-SS-0.0-0.5DUP (DUP08-SA6-QC-072611	HEXAVALENT CHROMIUM	200	20.00	
SL -012-SA6-SS-0.0-0.5				
SL -013-SA6-SS-0.0-0.5				
SL -077-SA6-SB-4.0-5.0				
SL -077-SA6-SB-9.0-10.0				
SL -080-SA6-SB-3.5-4.5				
SL -204-SA6-SS-0.0-0.5				No Qual, OK by Difference
SL -205-SA6-SS-0.0-0.5				
SL -206-SA6-SS-0.0-0.5				
SL -213-SA6-SS-0.0-0.5				
SL -217-SA6-SS-0.0-0.5				
SL -311-SA6-SS-0.0-0.5				
SL -317-SA6-SS-0.0-0.5				
SL -319-SA6-SS-0.0-0.5)				

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-205-SA6-SS-0.0-0.5DUP (DUP08 -SA6-QC-072611 SL -012-SA6-SS-0.0-0.5 SL -013-SA6-SS-0.0-0.5 SL -077-SA6-SB-4.0-5.0 SL -077-SA6-SB-9.0-10.0 SL -080-SA6-SB-3.5-4.5 SL -204-SA6-SS-0.0-0.5 SL -205-SA6-SS-0.0-0.5 SL -206-SA6-SS-0.0-0.5 SL -213-SA6-SS-0.0-0.5 SL -217-SA6-SS-0.0-0.5 SL -311-SA6-SS-0.0-0.5 SL -317-SA6-SS-0.0-0.5 SL -319-SA6-SS-0.0-0.5)	MERCURY	30	20.00	No Qual, OK by Difference

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-077-SA6-SB-4.0-5.0DUP (SL-077-SA6-SB-4.0-5.0 SL -077-SA6-SB-9.0-10.0 SL -080-SA6-SB-3.5-4.5 SL -311-SA6-SS-0.0-0.5)	FLUORIDE Nitrate-NO3	23 21	20.00 20.00	No Qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209
EDD Filename: DE209_v1

Laboratory: LL
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
P12106AQ242049A P12106AY242131A (EB-SA6-SS-072611)	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE PETN	110 110 133	- 110 133	76.00-109.00 69.00-107.00 80.00-120.00	- - -	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE PETN	J (all detects)

Method: 8151A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12115AQ241456A P12115AY241523A (EB-SA6-SS-072611)	2,4,5-T DALAPON	196 -	180 105	63.00-147.00 40.00-100.00	- -	2,4,5-T DALAPON	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
P0WALCSQ262148 (EB-SA6-SS-072611)	ACENAPHTHENE FLUORENE	116 116	- -	74.00-109.00 75.00-114.00	- -	ACENAPHTHENE FLUORENE	J(all detects)
P0WALCSQ262148 P0WALCSY262221 (EB-SA6-SS-072611)	Dimethylphthalate	26	30	40.00-119.00	-	Dimethylphthalate	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
P0WBLCSQ260445 P0WBLCSY260510 (EB-SA6-SS-072611)	2,4,5-TRICHLOROPHENOL 4-BROMOPHENYL-PHENYLETH	113 -	- 120	79.00-107.00 75.00-115.00	- -	2,4,5-TRICHLOROPHENOL 4-BROMOPHENYL-PHENYLET	J(all detects)
P0WBLCSY260510 (EB-SA6-SS-072611)	BENZOIC ACID	-	-	10.00-69.00	33 (30.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12209AQ240445A (DUP08 -SA6-QC-072611 SL -012-SA6-SS-0.0-0.5 SL -013-SA6-SS-0.0-0.5 SL -204-SA6-SS-0.0-0.5 SL -205-SA6-SS-0.0-0.5 SL -206-SA6-SS-0.0-0.5 SL -213-SA6-SS-0.0-0.5 SL -217-SA6-SS-0.0-0.5 SL -311-SA6-SS-0.0-0.5 SL -317-SA6-SS-0.0-0.5 SL -319-SA6-SS-0.0-0.5)	DINOSEB	8	-	10.00-36.00	-	DINOSEB	J(all detects) R(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P21326CQ222239A (DUP08 -SA6-QC-072611 SL -012-SA6-SS-0.0-0.5 SL -013-SA6-SS-0.0-0.5 SL -077-SA6-SB-4.0-5.0 SL -077-SA6-SB-9.0-10.0 SL -080-SA6-SB-3.5-4.5 SL -204-SA6-SS-0.0-0.5 SL -205-SA6-SS-0.0-0.5 SL -206-SA6-SS-0.0-0.5 SL -213-SA6-SS-0.0-0.5 SL -217-SA6-SS-0.0-0.5 SL -311-SA6-SS-0.0-0.5 SL -317-SA6-SS-0.0-0.5 SL -319-SA6-SS-0.0-0.5)	ANTIMONY	62	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within Limits

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P21308DQ220933 (DUP08 -SA6-QC-072611 SL -012-SA6-SS-0.0-0.5 SL -013-SA6-SS-0.0-0.5 SL -077-SA6-SB-4.0-5.0 SL -077-SA6-SB-9.0-10.0 SL -080-SA6-SB-3.5-4.5 SL -204-SA6-SS-0.0-0.5 SL -205-SA6-SS-0.0-0.5 SL -206-SA6-SS-0.0-0.5 SL -213-SA6-SS-0.0-0.5 SL -217-SA6-SS-0.0-0.5 SL -311-SA6-SS-0.0-0.5 SL -317-SA6-SS-0.0-0.5 SL -319-SA6-SS-0.0-0.5)	ALUMINUM TITANIUM	131 158	- -	80.00-120.00 80.00-120.00	- -	ALUMINUM TITANIUM	No Qual, SRM within Limits

Surrogate Outlier Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 1625C
Matrix: AQ

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-SA6-SS-072611	N-Nitrosodimethylamine-d6	174	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-311-SA6-SS-0.0 -0.5	n-Triacontane-d62	188	50.00-150.00	All Target Analytes	J(all detects)

Method: 8015M
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-080-SA6-SB-3.5 -4.5	CHLOROBENZENE	32	37.00-125.00	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-012-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	174	20.00-120.00	All Target Analytes	J(all detects)
SL-311-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	151	20.00-120.00	All Target Analytes	No Qual, Diluted Out
SL-319-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	157	20.00-120.00	All Target Analytes	J(all detects)

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-311-SA6-SS-0.0 -0.5	TETRACHLORO-M-XYLENE	7	53.00-139.00	All Target Analytes	No Qual, Diluted Out
SL-311-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	10	45.00-120.00	All Target Analytes	No Qual, Diluted Out

Method: 8151A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-311-SA6-SS-0.0 -0.5	2,4-Dichlorophenylacetic acid	11	36.00-156.00	All Target Analytes	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
MOISTURE	2.7	2.8	4		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
FLUORIDE	2.1	2.2	5	50.00	No Qualifiers Applied
Nitrate-NO3	4.2	4.0	5	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
ALUMINUM	18100	17500	3	50.00	No Qualifiers Applied
BORON	2.58	1.66	43	50.00	
CALCIUM	2410	2470	2	50.00	
IRON	19900	20100	1	50.00	
LITHIUM	23.2	23.3	0	50.00	
MAGNESIUM	4160	4290	3	50.00	
MANGANESE	223	223	0	50.00	
PHOSPHORUS	294	317	8	50.00	
POTASSIUM	2750	3020	9	50.00	
SODIUM	88.4	84.5	5	50.00	
STRONTIUM	21.7	21.7	0	50.00	
TIN	2.37	2.35	1	50.00	
TITANIUM	1010	1000	1	50.00	
Zirconium	2.86	2.73	5	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
ANTIMONY	0.108	0.102	6	50.00	No Qualifiers Applied
ARSENIC	4.19	4.39	5	50.00	
BARIUM	99.4	103	4	50.00	
BERYLLIUM	0.598	0.606	1	50.00	
CADMIUM	0.272	0.376	32	50.00	
CHROMIUM	16.3	17.5	7	50.00	
COBALT	5.27	5.43	3	50.00	
COPPER	7.36	8.56	15	50.00	
LEAD	7.20	8.20	13	50.00	
MOLYBDENUM	0.537	0.609	13	50.00	
NICKEL	11.5	12.5	8	50.00	
SELENIUM	0.189	0.189	0	50.00	
SILVER	0.123	0.106	15	50.00	
THALLIUM	0.265	0.247	7	50.00	
VANADIUM	34.3	36.4	6	50.00	
ZINC	49.4	57.1	14	50.00	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
MERCURY	0.0222	0.0186	18	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
EFH (C15-C20)	1.2	1.3	8	50.00	No Qualifiers Applied
EFH (C21-C30)	13	19	38	50.00	
EFH (C30-C40)	48	69	36	50.00	

Method: 8081A
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
4,4'-DDT	28 U	46	200	50.00	J(all detects) UJ(all non-detects)

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
AROCLOR 1254	67	18	115	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
PHENANTHRENE	4.4	3.8	15	50.00	No Qualifiers Applied
BENZO(G,H,I)PERYLENE	6.0	8.6 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
FLUORANTHENE	20	19	5	50.00	No Qualifiers Applied
PYRENE	20	20	0	50.00	
BIS(2-ETHYLHEXYL)PHTHALATE	45	19	81	50.00	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 9045M

Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-205-SA6-SS-0.0-0.5	DUP08-SA6-QC-072611			
PH	6.43	6.34	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

EDD Filename: DE209_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 7470A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SS-072611	MERCURY	J	0.000043	0.00020	PQL	mg/L	J (all detects)

Method: 8081A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SS-072611	HEPTACHLOR	J	0.0074	0.0098	PQL	ug/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SS-072611	Di-n-butylphthalate	J	0.14	0.98	PQL	ug/L	J (all detects)

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-317-SA6-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	18.5	33.4	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-013-SA6-SS-0.0-0.5	FLUORIDE	J	0.99	1.0	PQL	mg/Kg	J (all detects)
SL-204-SA6-SS-0.0-0.5	Nitrate-NO3	J	1.4	1.5	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	BORON	J	1.66	4.95	PQL	mg/Kg	J (all detects)
	SODIUM	J	84.5	98.9	PQL	mg/Kg	
	TIN	J	2.35	9.89	PQL	mg/Kg	
	Zirconium	J	2.73	4.95	PQL	mg/Kg	
SL-012-SA6-SS-0.0-0.5	TIN	J	2.71	9.97	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.86	4.99	PQL	mg/Kg	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

EDD Filename: DE209_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-013-SA6-SS-0.0-0.5	SODIUM	J	91.9	99.0	PQL	mg/Kg	J (all detects)
	TIN	J	2.41	9.90	PQL	mg/Kg	
	Zirconium	J	2.21	4.95	PQL	mg/Kg	
SL-077-SA6-SB-4.0-5.0	BORON	J	1.79	5.36	PQL	mg/Kg	J (all detects)
	TIN	J	2.26	10.7	PQL	mg/Kg	
	Zirconium	J	3.41	5.36	PQL	mg/Kg	
SL-077-SA6-SB-9.0-10.0	BORON	J	4.10	5.77	PQL	mg/Kg	J (all detects)
	TIN	J	2.33	11.5	PQL	mg/Kg	
	Zirconium	J	4.55	5.77	PQL	mg/Kg	
SL-080-SA6-SB-3.5-4.5	TIN	J	1.59	10.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	0.852	5.18	PQL	mg/Kg	
SL-204-SA6-SS-0.0-0.5	BORON	J	2.04	4.86	PQL	mg/Kg	J (all detects)
	SODIUM	J	62.1	97.1	PQL	mg/Kg	
	TIN	J	1.87	9.71	PQL	mg/Kg	
	Zirconium	J	2.69	4.86	PQL	mg/Kg	
SL-205-SA6-SS-0.0-0.5	BORON	J	2.58	5.14	PQL	mg/Kg	J (all detects)
	SODIUM	J	88.4	103	PQL	mg/Kg	
	TIN	J	2.37	10.3	PQL	mg/Kg	
	Zirconium	J	2.86	5.14	PQL	mg/Kg	
SL-206-SA6-SS-0.0-0.5	TIN	J	2.22	10.2	PQL	mg/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	SODIUM	J	96.1	101	PQL	mg/Kg	J (all detects)
	TIN	J	2.16	10.1	PQL	mg/Kg	
SL-217-SA6-SS-0.0-0.5	SODIUM	J	95.5	103	PQL	mg/Kg	J (all detects)
	TIN	J	2.12	10.3	PQL	mg/Kg	
SL-311-SA6-SS-0.0-0.5	BORON	J	2.45	4.87	PQL	mg/Kg	J (all detects)
	SODIUM	J	89.4	97.4	PQL	mg/Kg	
	TIN	J	2.74	9.74	PQL	mg/Kg	
	Zirconium	J	2.51	4.87	PQL	mg/Kg	
SL-317-SA6-SS-0.0-0.5	BORON	J	1.00	4.92	PQL	mg/Kg	J (all detects)
	SODIUM	J	74.2	98.4	PQL	mg/Kg	
	TIN	J	2.64	9.84	PQL	mg/Kg	
	Zirconium	J	2.63	4.92	PQL	mg/Kg	
SL-319-SA6-SS-0.0-0.5	BORON	J	1.83	4.85	PQL	mg/Kg	J (all detects)
	SODIUM	J	77.1	96.9	PQL	mg/Kg	
	TIN	J	2.20	9.69	PQL	mg/Kg	
	Zirconium	J	2.31	4.85	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	ANTIMONY	J	0.102	0.204	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.189	0.407	PQL	mg/Kg	
SL-012-SA6-SS-0.0-0.5	SELENIUM	J	0.0894	0.415	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0515	0.104	PQL	mg/Kg	
SL-013-SA6-SS-0.0-0.5	SELENIUM	J	0.0959	0.389	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0497	0.0971	PQL	mg/Kg	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-077-SA6-SB-4.0-5.0	SELENIUM	J	0.0765	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0176	0.108	PQL	mg/Kg	
SL-077-SA6-SB-9.0-10.0	ANTIMONY	J	0.0869	0.222	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.169	0.444	PQL	mg/Kg	
	SILVER	J	0.0254	0.111	PQL	mg/Kg	
SL-080-SA6-SB-3.5-4.5	CADMIUM	J	0.0466	0.105	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0149	0.105	PQL	mg/Kg	
	THALLIUM	J	0.104	0.105	PQL	mg/Kg	
SL-204-SA6-SS-0.0-0.5	ANTIMONY	J	0.174	0.194	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.125	0.389	PQL	mg/Kg	
SL-205-SA6-SS-0.0-0.5	ANTIMONY	J	0.108	0.200	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.189	0.399	PQL	mg/Kg	
SL-206-SA6-SS-0.0-0.5	ANTIMONY	J	0.129	0.202	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.155	0.405	PQL	mg/Kg	
	SILVER	J	0.0421	0.101	PQL	mg/Kg	
SL-213-SA6-SS-0.0-0.5	ANTIMONY	J	0.112	0.209	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.139	0.418	PQL	mg/Kg	
	SILVER	J	0.0469	0.105	PQL	mg/Kg	
SL-217-SA6-SS-0.0-0.5	ANTIMONY	J	0.205	0.210	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.191	0.421	PQL	mg/Kg	
	SILVER	J	0.0611	0.105	PQL	mg/Kg	
SL-311-SA6-SS-0.0-0.5	ANTIMONY	J	0.141	0.199	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.109	0.397	PQL	mg/Kg	
SL-317-SA6-SS-0.0-0.5	ANTIMONY	J	0.126	0.199	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.165	0.397	PQL	mg/Kg	
SL-319-SA6-SS-0.0-0.5	SELENIUM	J	0.0855	0.388	PQL	mg/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.48	1.0	PQL	mg/Kg	J (all detects)
SL-013-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.48	1.0	PQL	mg/Kg	J (all detects)
SL-077-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.42	1.1	PQL	mg/Kg	J (all detects)
SL-204-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.43	1.0	PQL	mg/Kg	J (all detects)
SL-206-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.70	1.1	PQL	mg/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.76	1.0	PQL	mg/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.67	1.1	PQL	mg/Kg	J (all detects)
SL-311-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.96	1.0	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE209 **Laboratory: LL**

EDD Filename: DE209_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	MERCURY	J	0.0186	0.0952	PQL	mg/Kg	J (all detects)
SL-012-SA6-SS-0.0-0.5	MERCURY	J	0.0327	0.0991	PQL	mg/Kg	J (all detects)
SL-013-SA6-SS-0.0-0.5	MERCURY	J	0.0341	0.0997	PQL	mg/Kg	J (all detects)
SL-077-SA6-SB-4.0-5.0	MERCURY	J	0.0222	0.106	PQL	mg/Kg	J (all detects)
SL-080-SA6-SB-3.5-4.5	MERCURY	J	0.0291	0.100	PQL	mg/Kg	J (all detects)
SL-204-SA6-SS-0.0-0.5	MERCURY	J	0.0198	0.100	PQL	mg/Kg	J (all detects)
SL-205-SA6-SS-0.0-0.5	MERCURY	J	0.0222	0.0977	PQL	mg/Kg	J (all detects)
SL-206-SA6-SS-0.0-0.5	MERCURY	J	0.0099	0.101	PQL	mg/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	MERCURY	J	0.0098	0.0993	PQL	mg/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	MERCURY	J	0.0088	0.103	PQL	mg/Kg	J (all detects)
SL-311-SA6-SS-0.0-0.5	MERCURY	J	0.0835	0.0951	PQL	mg/Kg	J (all detects)
SL-317-SA6-SS-0.0-0.5	MERCURY	J	0.0157	0.0972	PQL	mg/Kg	J (all detects)
SL-319-SA6-SS-0.0-0.5	MERCURY	J	0.0610	0.0950	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	EFH (C15-C20)	J	1.3	2.5	PQL	mg/Kg	J (all detects)
SL-077-SA6-SB-9.0-10.0	EFH (C15-C20)	J	0.94	2.8	PQL	mg/Kg	J (all detects)
SL-204-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.90	1.2	PQL	mg/Kg	J (all detects)
SL-205-SA6-SS-0.0-0.5	EFH (C15-C20)	J	1.2	2.5	PQL	mg/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.89	2.5	PQL	mg/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.65	1.3	PQL	mg/Kg	J (all detects)
SL-317-SA6-SS-0.0-0.5	EFH (C15-C20)	J	0.73	1.2	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA6-SS-0.0-0.5	ENDOSULFAN II	J	0.25	0.35	PQL	ug/Kg	J (all detects)
	HEPTACHLOR EPOXIDE	J	0.047	0.17	PQL	ug/Kg	
SL-013-SA6-SS-0.0-0.5	Chlordane	J	2.3	3.4	PQL	ug/Kg	J (all detects)
	ENDOSULFAN II	J	0.22	0.34	PQL	ug/Kg	
	gamma-BHC (Lindane)	J	0.050	0.17	PQL	ug/Kg	
	HEPTACHLOR EPOXIDE	J	0.040	0.17	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-206-SA6-SS-0.0-0.5	Chlordane	J	1.6	3.6	PQL	ug/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	ENDRIN KETONE	J	0.18	0.36	PQL	ug/Kg	J (all detects)
SL-317-SA6-SS-0.0-0.5	4,4'-DDE HEPTACHLOR EPOXIDE	J J	0.19 0.073	0.34 0.17	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA6-SS-0.0-0.5	Aroclor 5460	J	1.3	3.4	PQL	ug/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	AROCLOR 1254	J	0.72	1.8	PQL	ug/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	AROCLOR 1254	J	1.5	1.8	PQL	ug/Kg	J (all detects)

Method: 8151A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA6-SS-0.0-0.5	MCPA	J	140	260	PQL	ug/Kg	J (all detects)
SL-013-SA6-SS-0.0-0.5	2,4-DB	J	0.94	1.7	PQL	ug/Kg	J (all detects)
SL-206-SA6-SS-0.0-0.5	2,4-DB	J	0.98	1.8	PQL	ug/Kg	J (all detects)
SL-213-SA6-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.12	0.18	PQL	ug/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	2,4,5-TP (Silvex) 2,4-DB	J J	0.079 0.72	0.18 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-311-SA6-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.11	0.17	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	BIS(2-ETHYLHEXYL)PHTHALATE FLUORANTHENE PYRENE	J J J	19 19 20	340 170 170	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-012-SA6-SS-0.0-0.5	CHRYSENE	J	20	170	PQL	ug/Kg	J (all detects)
SL-013-SA6-SS-0.0-0.5	BENZO(G,H,I)PERYLENE BIS(2-ETHYLHEXYL)PHTHALATE PYRENE	J J J	23 42 18	170 340 170	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

EDD Filename: DE209_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-077-SA6-SB-9.0-10.0	BENZO(A)PYRENE	J	33	190	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	31	190	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	29	190	PQL	ug/Kg	
	PYRENE	J	43	190	PQL	ug/Kg	
SL-205-SA6-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	18	170	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	45	340	PQL	ug/Kg	
	CHRYSENE	J	23	170	PQL	ug/Kg	
	FLUORANTHENE	J	20	170	PQL	ug/Kg	
	PYRENE	J	20	170	PQL	ug/Kg	
SL-206-SA6-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	91	350	PQL	ug/Kg	J (all detects)
SL-217-SA6-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	41	350	PQL	ug/Kg	J (all detects)
SL-311-SA6-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	26	170	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	32	170	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	49	170	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	42	170	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	25	170	PQL	ug/Kg	
	Di-n-butylphthalate	J	21	170	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	32	170	PQL	ug/Kg	
	PYRENE	J	60	170	PQL	ug/Kg	
SL-317-SA6-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	340	PQL	ug/Kg	J (all detects)
SL-319-SA6-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	63	170	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	49	170	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	65	170	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	36	170	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	40	170	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	36	340	PQL	ug/Kg	
	CHRYSENE	J	70	170	PQL	ug/Kg	
	FLUORANTHENE	J	100	170	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	30	170	PQL	ug/Kg	
	PHENANTHRENE	J	33	170	PQL	ug/Kg	
	PYRENE	J	130	170	PQL	ug/Kg	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA6-QC-072611	BENZO(B)FLUORANTHENE	J	5.8	8.6	PQL	ug/Kg	J (all detects)
	PHENANTHRENE	J	3.8	8.6	PQL	ug/Kg	
SL-012-SA6-SS-0.0-0.5	BENZO(A)PYRENE	J	4.6	8.6	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	5.1	8.6	PQL	ug/Kg	
SL-013-SA6-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	6.0	8.4	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	5.0	8.4	PQL	ug/Kg	
	FLUORANTHENE	J	6.8	8.4	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE209

Laboratory: LL

EDD Filename: DE209_v1

eQAPP Name: CDM_SSFL_110509

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-077-SA6-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	0.78	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.0	1.8	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	
	CHRYSENE	J	1.2	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	0.84	1.8	PQL	ug/Kg	
	PYRENE	J	0.86	1.8	PQL	ug/Kg	
SL-204-SA6-SS-0.0-0.5	ACENAPHTHYLENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	Butylbenzylphthalate	J	7.3	18	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	1.3	1.7	PQL	ug/Kg	
	Di-n-butylphthalate	J	16	18	PQL	ug/Kg	
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	
	NAPHTHALENE	J	0.89	1.7	PQL	ug/Kg	
SL-205-SA6-SS-0.0-0.5	BENZO(G,H,I)PERYLENE	J	6.0	8.6	PQL	ug/Kg	J (all detects)
	PHENANTHRENE	J	4.4	8.6	PQL	ug/Kg	
SL-206-SA6-SS-0.0-0.5	ANTHRACENE	J	0.48	1.8	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.6	1.8	PQL	ug/Kg	
	Di-n-octylphthalate	J	15	19	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.2	1.8	PQL	ug/Kg	
SL-213-SA6-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.4	1.7	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.74	1.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.95	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	0.91	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.72	1.7	PQL	ug/Kg	
SL-217-SA6-SS-0.0-0.5	CHRYSENE	J	0.45	1.7	PQL	ug/Kg	J (all detects)
	PHENANTHRENE	J	0.72	1.7	PQL	ug/Kg	
SL-311-SA6-SS-0.0-0.5	ANTHRACENE	J	4.3	8.5	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	3.7	8.5	PQL	ug/Kg	
SL-317-SA6-SS-0.0-0.5	ACENAPHTHYLENE	J	0.42	1.7	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	1.2	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.7	PQL	ug/Kg	
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.7	PQL	ug/Kg	
SL-319-SA6-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	1.1	1.7	PQL	ug/Kg	J (all detects)
	ACENAPHTHYLENE	J	1.6	1.7	PQL	ug/Kg	
	Butylbenzylphthalate	J	6.6	18	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	1.0	1.7	PQL	ug/Kg	
	Di-n-butylphthalate	J	9.1	18	PQL	ug/Kg	
	Di-n-octylphthalate	J	11	18	PQL	ug/Kg	

LDC #: 26533B4
SDG #: DE209
Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11/7/11
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: 7/26/11
II.	ICP/MS Tune	N	
III.	Calibration	SW	
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
VII.	Duplicate Sample Analysis	N	Sb, Ag, Ag ΣFXKL
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB = 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:

1	SL-012-SA6-SS-0.0-0.5	11	SL-077-SA6-SB-4.0-5.0	21	MB	31	
2	SL-013-SA6-SS-0.0-0.5	12	SL-077-SA6-SB-9.0-10.0	22		32	
3	SL-204-SA6-SS-0.0-0.5	13	SL-080-SA6-SB-3.5-4.5	23		33	
4	SL-205-SA6-SS-0.0-0.5	14	EB-SA6-SS-072611 A	24		34	
5	SL-206-SA6-SS-0.0-0.5	15	SL-311-SA6-SS-0.0-0.5	25		35	
6	SL-213-SA6-SS-0.0-0.5	16	SL-205-SA6-SS-0.0-0.5MS	26		36	
7	SL-217-SA6-SS-0.0-0.5	17	SL-205-SA6-SS-0.0-0.5MSD	27		37	
8	SL-317-SA6-SS-0.0-0.5	18	SL-205-SA6-SS-0.0-0.5DUP	28		38	
9	SL-319-SA6-SS-0.0-0.5	19		29		39	
10	DUP08-SA6-QC-072611	20		30		40	

Notes: _____

LDC #: 26533B4

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	14									
Hg		0.115	0.097	0.575	0.043									

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	5	6	7	8						
Hg			0.019	0.016	0.0099	0.0098	0.0088	0.016						

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 #: 26533B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/6020/7000)
(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: ug/L **Associated sample units:** mg/Kg
Sampling date: 7/26/11 Soil factor applied Hg: 167
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	14	Action Level	1	2	3	4	5	6	7	8	10	11	13
Hg	0.043	0.036	0.033	0.034	0.020	0.022	0.0099	0.0098	0.0088	0.016	0.019	0.022	0.029

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.: DE209
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6356760BKG Matrix Spike Lab Sample ID: 6356761MS Matrix Spike Duplicate Lab Sample ID: 6356762MSD
% Solids for Sample: 97.3
Batch Id(s): P21308D, P21326C, P21311D

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		18122.9640		20863.1527		20805.8229		199.5630	195.7618	MG/KG	1373		1370		0			20	P
Antimony	121	0.1078	B	0.4243		0.4218		1.2333	1.1859	MG/KG	26	N	26	N	1		75 - 125	20	MS
Arsenic	75	4.1928		6.9229		6.6211		2.0555	1.9764	MG/KG	133	N	123		4		75 - 125	20	MS
Barium	137	99.4223		115.1490		111.8863		10.2775	9.8822	MG/KG	153		126		3			20	MS
Beryllium	9	0.5983		1.3589		1.3048		0.8222	0.7906	MG/KG	93		89		4		75 - 125	20	MS
Boron		2.5827	B	190.9249		187.1492		199.5630	195.7618	MG/KG	94		94		2		84 - 115	20	P
Cadmium	111	0.2716		1.3223		1.2309		1.0277	0.9882	MG/KG	102		97		7		75 - 125	20	MS
Calcium		2406.8119		3212.3450		3067.3665		399.1259	391.5235	MG/KG	202		169		5			20	P
Chromium	52	16.2883		26.1459		25.5159		10.2775	9.8822	MG/KG	96		93		2		75 - 125	20	MS
Cobalt	59	5.2744		55.0668		51.0712		51.3875	49.4110	MG/KG	97		93		8		75 - 125	20	MS
Copper	63	7.3619		17.8767		16.3452		10.2775	9.8822	MG/KG	102		91		9		75 - 125	20	MS
Iron		19925.8150		20335.1480		19515.1578		99.7815	97.8809	MG/KG	410		-420		4			20	P
Lead	208	7.2022		11.0113		9.1984		3.0832	2.9647	MG/KG	124		67	N	18		75 - 125	20	MS
Lithium		23.2004		122.3570		120.6450		99.7815	97.8809	MG/KG	99		100		1		82 - 114	20	P
Magnesium		4159.9075		4549.0007		4344.5642		199.5630	195.7618	MG/KG	195		94		5			20	P
Manganese		223.3422		277.3486		251.6214		49.8907	48.9404	MG/KG	108		58		10			20	P
Mercury		0.0222	B	0.1934		0.1822		0.1653	0.1612	MG/KG	104		99		6		65 - 135	20	CV
Molybdenum	98	0.5368		10.5406		9.6747		10.2775	9.8822	MG/KG	97		92		9		75 - 125	20	MS
Nickel	60	11.5168		22.8571		21.2863		10.2775	9.8822	MG/KG	110		99		7		75 - 125	20	MS
Phosphorus		294.2898		400.6955		378.7951		99.7815	97.8809	MG/KG	107		86		6		75 - 125	20	P
Potassium		2752.2261		3946.6039		3796.1611		997.8148	978.8088	MG/KG	120		107		4		75 - 125	20	P
Selenium	78	0.1888	B	2.1727		2.1227		2.0555	1.9764	MG/KG	97		98		2		75 - 125	20	MS
Silver	107	0.1234		10.5529		9.7656		10.2775	9.8822	MG/KG	101		98		8		75 - 125	20	MS
Sodium		88.3936	B	1011.4619		992.6159		997.8148	978.8088	MG/KG	93		92		2		75 - 125	20	P
Strontium		21.7081		119.8954		116.9314		99.7815	97.8809	MG/KG	98		97		3		75 - 115	20	P
Thallium	203	0.2650		0.6158		0.5546		0.4111	0.3953	MG/KG	85		73	N	10		75 - 125	20	MS
Tin		2.3731	B	332.0358		329.6227		399.1259	391.5235	MG/KG	83		84		1		80 - 110	20	P
Titanium		1010.0576		1184.2475		1159.6741		99.7815	97.8809	MG/KG	175		153		2			20	P
Vanadium	51	34.3248		48.4275		46.5254		10.2775	9.8822	MG/KG	137	N	123		4		75 - 125	20	MS
Zinc	66	49.4317		64.4810		59.6885		10.2775	9.8822	MG/KG	146		104		8			20	MS
Zirconium		2.8602	B	93.6988		92.8997		99.7815	97.8809	MG/KG	91		92		1		75 - 125	20	P

* Sb post spike = 95% J/UJ

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.: DE209
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6356760BKG
% Solids for Duplicate: 97.5
Batch ID(s): P21308D, P21326C, P21311D
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6356763DUP
% Solids for Sample: 97.3

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			18122.9640		17572.8941		3		P
Antimony	121		0.1078	B	0.0800	B	30		MS
Arsenic	75		4.1928		4.3125		3		MS
Barium	137		99.4223		97.2190		2		MS
Beryllium	9		0.5983		0.6250		4		MS
Boron			2.5827	B	2.6208	B	1		P
Cadmium	111	0.1	0.2716		0.2766		2		MS
Calcium			2406.8119		2555.3809		6		P
Chromium	52		16.2883		16.2629		0		MS
Cobalt	59		5.2744		5.0533		4		MS
Copper	63		7.3619		7.4425		1		MS
Iron			19925.8150		19566.2997		2		P
Lead	208		7.2022		7.1047		1		MS
Lithium			23.2004		22.9129		1		P
Magnesium			4159.9075		4120.1844		1		P
Manganese			223.3422		226.0683		1		P
Mercury			0.0222	B	0.0163	B	31		CV
Molybdenum	98		0.5368		0.5743		7		MS
Nickel	60		11.5168		11.3073		2		MS
Phosphorus			294.2898		316.0546		7		P
Potassium			2752.2261		2905.9679		5		P
Selenium	78		0.1888	B	0.1923	B	2		MS
Silver	107	0.1	0.1234		0.0895	B	32		MS
Sodium			88.3936	B	85.8171	B	3		P
Strontium			21.7081		22.6727		4		P
Thallium	203	0.1	0.2650		0.2395		10		MS
Tin			2.3731	B	2.3530	B	1		P
Titanium			1010.0576		998.5977		1		P
Vanadium	51		34.3248		34.5975		1		MS
Zinc	66		49.4317		50.2071		2		MS
Zirconium			2.8602	B	3.3343	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.

DE209 6818

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

SAMPLE DELIVERY GROUP

DE210

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
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3050B	6010B	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3050B	6020	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3060A	7199	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3550B	8081A	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3550B	8082	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3550B	8151A	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3550B	8270C	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	3550B	8270C SIM	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	METHOD	300.0	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	METHOD	314.0	III
27-Jul-2011	SL-028-SA6-SS-0.0-0.5	6358386	N	METHOD	7471A	III
27-Jul-2011	TB-072711	6358396	TB	5030B	8015M	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3050B	6010B	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3050B	6020	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3060A	7199	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3550B	8081A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3550B	8082	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3550B	8151A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3550B	8270C	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	3550B	8270C SIM	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	METHOD	300.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	METHOD	314.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5	6358381	N	METHOD	7471A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3050B	6010B	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3050B	6020	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	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
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3550B	8081A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3550B	8082	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3550B	8151A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3550B	8270C	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	3550B	8270C SIM	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	METHOD	300.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	METHOD	314.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MS	6358382	MS	METHOD	7471A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3050B	6010B	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3050B	6020	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3550B	8081A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3550B	8082	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3550B	8151A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3550B	8270C	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	3550B	8270C SIM	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5MSD	6358383	MSD	METHOD	7471A	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	3050B	6010B	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	3050B	6020	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	3060A	7199	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	METHOD	300.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	METHOD	314.0	III
27-Jul-2011	SL-009-SA6-SS-0.0-0.5DUP	6358384	DUP	METHOD	7471A	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3050B	6010B	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3050B	6020	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3060A	7199	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3550B	8081A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3550B	8082	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3550B	8151A	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3550B	8270C	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	3550B	8270C SIM	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	METHOD	300.0	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	METHOD	314.0	III
27-Jul-2011	DUP09-SA6-QC-072711	6358387	FD	METHOD	7471A	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3050B	6010B	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3050B	6020	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3060A	7199	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3550B	8015B	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3550B	8015M	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3550B	8082	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3550B	8270C	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	3550B	8270C SIM	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	5035	8015M	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	300.0	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	314.0	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	6850	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	7471A	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	8015B	III
27-Jul-2011	SL-069-SA6-SB-4.0-5.0	6358388	N	METHOD	8015M	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3050B	6010B	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3050B	6020	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3060A	7199	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	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
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3550B	8015M	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3550B	8082	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3550B	8270C	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	3550B	8270C SIM	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	5035	8015M	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	METHOD	300.0	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	METHOD	314.0	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	METHOD	7471A	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	METHOD	8015B	III
27-Jul-2011	SL-069-SA6-SB-9.0-10.0	6358389	N	METHOD	8015M	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3050B	6010B	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3050B	6020	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3060A	7199	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8015B	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8015M	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8081A	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8082	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8151A	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8270C	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	3550B	8270C SIM	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	METHOD	300.0	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	METHOD	314.0	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	METHOD	7471A	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	METHOD	8015B	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5	6358385	N	METHOD	8015M	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5MSD	P358385M320038A	MSD	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
27-Jul-2011	SL-017-SA6-SS-0.0-0.5MSD	P358385M320653A	MSD	3550B	8015B	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5MS	P358385R320014A	MS	3550B	8015M	III
27-Jul-2011	SL-017-SA6-SS-0.0-0.5MS	P358385R320058A	MS	3550B	8015B	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3050B	6010B	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3050B	6020	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3060A	7199	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3550B	8015B	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3550B	8015M	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3550B	8082	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3550B	8270C	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	3550B	8270C SIM	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	5035	8015M	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	METHOD	300.0	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	METHOD	314.0	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	METHOD	7471A	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	METHOD	8015B	III
27-Jul-2011	SL-089-SA6-SB-4.0-5.0	6358391	N	METHOD	8015M	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3050B	6010B	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3050B	6020	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3060A	7199	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3550B	8015B	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3550B	8015M	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3550B	8082	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3550B	8270C	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	3550B	8270C SIM	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	5035	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	METHOD	300.0	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	METHOD	314.0	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	METHOD	7471A	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	METHOD	8015B	III
27-Jul-2011	SL-089-SA6-SB-9.0-10.0	6358392	N	METHOD	8015M	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3050B	6010B	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3050B	6020	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3060A	7199	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3550B	8015B	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3550B	8015M	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3550B	8082	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3550B	8270C	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	3550B	8270C SIM	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	5035	8015M	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	METHOD	300.0	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	METHOD	314.0	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	METHOD	7471A	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	METHOD	8015B	III
27-Jul-2011	SL-076-SA6-SB-2.0-3.0	6358390	N	METHOD	8015M	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3050B	6010B	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3050B	6020	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3060A	7199	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3550B	8015B	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3550B	8015M	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3550B	8082	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3550B	8270C	III

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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
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	3550B	8270C SIM	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	5035	8015M	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	METHOD	300.0	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	METHOD	314.0	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	METHOD	7471A	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	METHOD	8015B	III
27-Jul-2011	SL-117-SA6-SB-2.0-3.0	6358393	N	METHOD	8015M	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3005A	6010B	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3020A	6020	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3510C	8015B	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3510C	8015M	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3510C	8082	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3510C	8270C	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3510C	8270C SIM	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	3520C	1625C	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	5030B	8015M	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	5030B	8260B	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	5030B	8260B SIM	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	8330	8330A	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	Gen Prep	300.0	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	Gen Prep	314.0	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	Gen Prep	7199	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	Gen Prep	8015B	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	Gen Prep	8015M	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	METHOD	7470A	III
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	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
27-Jul-2011	EB-SA6-SB-072711	6358397	EB	METHOD	9012B	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3050B	6010B	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3050B	6020	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3060A	7199	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3546	1625C	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3550B	8015B	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3550B	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3550B	8082	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3550B	8270C	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	3550B	8270C SIM	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	5035	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	8330	8330A	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	300.0	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	314.0	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	7471A	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	8015B	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	8315A	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0	6358394	N	METHOD	9012B	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0DU	P358394D270527B	DUP	METHOD	300.0	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0DU	P358394D270843B	DUP	METHOD	314.0	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0MS	P358394R270541B	MS	METHOD	300.0	III
27-Jul-2011	SL-179-SA5DN-SB-4.0-5.0MS	P358394R270929B	MS	METHOD	314.0	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3050B	6010B	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3050B	6020	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3060A	7199	III

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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
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3546	1625C	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3550B	8015B	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3550B	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3550B	8082	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3550B	8270C	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	3550B	8270C SIM	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	5035	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	8330	8330A	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	300.0	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	314.0	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	7471A	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	8015B	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	8015M	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	8315A	III
27-Jul-2011	SL-179-SA5DN-SB-9.0-10.0	6358395	N	METHOD	9012B	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: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-179-SA5DN-SB-9.0-10.0 *Collected:* 7/27/2011 2:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.1	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** AQ

Sample ID: EB-SA6-SB-072711 *Collected:* 7/27/2011 1:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0035	J	0.0022	MDL	0.0500	PQL	mg/L	U	B
SODIUM	0.295	J	0.0647	MDL	1.00	PQL	mg/L	J	Z
STRONTIUM	0.00026	J	0.00022	MDL	0.0050	PQL	mg/L	J	Z
Zirconium	0.0049	J	0.0042	MDL	0.0500	PQL	mg/L	U	B, B

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 *Collected:* 7/27/2011 8:28:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2850		11.6	MDL	51.4	PQL	mg/Kg	J	Q
SODIUM	98.5	J	6.12	MDL	103	PQL	mg/Kg	U	F
TIN	3.96	J	0.329	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	2.79	J	0.473	MDL	5.14	PQL	mg/Kg	J	Z

Sample ID: SL-009-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 8:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3300		11.5	MDL	50.9	PQL	mg/Kg	J	Q
SODIUM	94.4	J	6.05	MDL	102	PQL	mg/Kg	U	F
TIN	3.02	J	0.326	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	3.31	J	0.468	MDL	5.09	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-017-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 9:14:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.83	J	0.360	MDL	5.00	PQL	mg/Kg	J	Z
POTASSIUM	2520		11.3	MDL	50.0	PQL	mg/Kg	J	Q
SODIUM	124		5.96	MDL	100	PQL	mg/Kg	U	F
TIN	2.97	J	0.320	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	2.77	J	0.460	MDL	5.00	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.35	J	0.354	MDL	4.92	PQL	mg/Kg	J	Z
POTASSIUM	2670		11.1	MDL	49.2	PQL	mg/Kg	J	Q
SODIUM	110		5.85	MDL	98.3	PQL	mg/Kg	U	F
TIN	3.31	J	0.315	MDL	9.83	PQL	mg/Kg	U	B
Zirconium	2.85	J	0.452	MDL	4.92	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3330		11.9	MDL	52.6	PQL	mg/Kg	J	Q
TIN	3.02	J	0.337	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.37	J	0.484	MDL	5.26	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 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
POTASSIUM	4300		12.9	MDL	56.9	PQL	mg/Kg	J	Q
TIN	3.08	J	0.364	MDL	11.4	PQL	mg/Kg	U	B

Sample ID: SL-076-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 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	3120		11.9	MDL	52.6	PQL	mg/Kg	J	Q
TIN	3.71	J	0.337	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.96	J	0.484	MDL	5.26	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-089-SA6-SB-4.0-5.0 **Collected:** 7/27/2011 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
POTASSIUM	3270		11.8	MDL	52.3	PQL	mg/Kg	J	Q
TIN	2.87	J	0.335	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.86	J	0.481	MDL	5.23	PQL	mg/Kg	J	Z

Sample ID: SL-089-SA6-SB-9.0-10.0 **Collected:** 7/27/2011 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
POTASSIUM	3940		12.5	MDL	55.1	PQL	mg/Kg	J	Q
TIN	2.92	J	0.353	MDL	11.0	PQL	mg/Kg	U	B

Sample ID: SL-117-SA6-SB-2.0-3.0 **Collected:** 7/27/2011 12:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.25	J	0.365	MDL	5.07	PQL	mg/Kg	J	Z
POTASSIUM	2870		11.5	MDL	50.7	PQL	mg/Kg	J	Q
TIN	2.92	J	0.324	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	2.50	J	0.466	MDL	5.07	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-4.0-5.0 **Collected:** 7/27/2011 2:31:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2890		11.2	MDL	49.4	PQL	mg/Kg	J	Q
SODIUM	108		5.88	MDL	98.8	PQL	mg/Kg	U	F
TIN	2.71	J	0.316	MDL	9.88	PQL	mg/Kg	U	B
Zirconium	3.92	J	0.454	MDL	4.94	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-9.0-10.0 **Collected:** 7/27/2011 2:49:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3120		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	3.29	J	0.354	MDL	11.1	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0725	J	0.0596	MDL	0.411	PQL	mg/Kg	J	Z

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	3.89		0.0514	MDL	0.103	PQL	mg/Kg	J	FD

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	98.8		0.109	MDL	0.411	PQL	mg/Kg	J	E

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.370		0.0761	MDL	0.206	PQL	mg/Kg	J	Q, FD
ARSENIC	5.52		0.0822	MDL	0.411	PQL	mg/Kg	J	FD
CADMIUM	1.06		0.0452	MDL	0.103	PQL	mg/Kg	J	FD
CHROMIUM	24.5		0.123	MDL	0.411	PQL	mg/Kg	J	A
COPPER	57.7		0.0822	MDL	0.411	PQL	mg/Kg	J	E, FD
LEAD	59.4		0.0105	MDL	0.206	PQL	mg/Kg	J	E, FD
NICKEL	31.5		0.103	MDL	0.411	PQL	mg/Kg	J	Q, FD
SILVER	0.506		0.0146	MDL	0.103	PQL	mg/Kg	J	E
VANADIUM	34.1		0.0226	MDL	0.103	PQL	mg/Kg	J	A

Sample ID: SL-009-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 8:20:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.113	J	0.0573	MDL	0.395	PQL	mg/Kg	J	Z

Sample ID: SL-009-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 8:20:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.576		0.0494	MDL	0.0988	PQL	mg/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-009-SA6-SS-0.0-0.5 **Collected:** 7/27/2011 8:20:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	97.4		0.105	MDL	0.395	PQL	mg/Kg	J	E

Sample ID: SL-009-SA6-SS-0.0-0.5 **Collected:** 7/27/2011 8:20:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.123	J	0.0731	MDL	0.198	PQL	mg/Kg	J	Z, Q, FD
ARSENIC	3.12		0.0791	MDL	0.395	PQL	mg/Kg	J	FD
CADMIUM	0.613		0.0435	MDL	0.0988	PQL	mg/Kg	J	FD
CHROMIUM	18.4		0.119	MDL	0.395	PQL	mg/Kg	J	A
COPPER	12.2		0.0791	MDL	0.395	PQL	mg/Kg	J	E, FD
LEAD	27.3		0.0101	MDL	0.198	PQL	mg/Kg	J	E, FD
NICKEL	13.7		0.0988	MDL	0.395	PQL	mg/Kg	J	Q, FD
SILVER	0.513		0.0140	MDL	0.0988	PQL	mg/Kg	J	E
VANADIUM	30.0		0.0217	MDL	0.0988	PQL	mg/Kg	J	A

Sample ID: SL-017-SA6-SS-0.0-0.5 **Collected:** 7/27/2011 9:14:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.148	J	0.0581	MDL	0.400	PQL	mg/Kg	J	Z

Sample ID: SL-017-SA6-SS-0.0-0.5 **Collected:** 7/27/2011 9:14:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	75.6		0.106	MDL	0.400	PQL	mg/Kg	J	E

Sample ID: SL-017-SA6-SS-0.0-0.5 **Collected:** 7/27/2011 9:14:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0741	U	0.0741	MDL	0.200	PQL	mg/Kg	UJ	Q
CHROMIUM	30.2		0.120	MDL	0.400	PQL	mg/Kg	J	A
COPPER	16.2		0.0801	MDL	0.400	PQL	mg/Kg	J	E
LEAD	13.3		0.0102	MDL	0.200	PQL	mg/Kg	J	E
NICKEL	9.96		0.100	MDL	0.400	PQL	mg/Kg	J	Q
SILVER	0.0768	J	0.0142	MDL	0.100	PQL	mg/Kg	J	Z, E
VANADIUM	28.0		0.0220	MDL	0.100	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.109	J	0.0593	MDL	0.409	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	71.9		0.108	MDL	0.409	PQL	mg/Kg	J	E

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.124	J	0.0757	MDL	0.204	PQL	mg/Kg	J	Z, Q
CHROMIUM	15.3		0.123	MDL	0.409	PQL	mg/Kg	J	A
COPPER	13.5		0.0818	MDL	0.409	PQL	mg/Kg	J	E
LEAD	34.3		0.0104	MDL	0.204	PQL	mg/Kg	J	E
NICKEL	11.3		0.102	MDL	0.409	PQL	mg/Kg	J	Q
SILVER	0.107		0.0145	MDL	0.102	PQL	mg/Kg	J	E
VANADIUM	31.2		0.0225	MDL	0.102	PQL	mg/Kg	J	A

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.151	J	0.0622	MDL	0.429	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	86.9		0.114	MDL	0.429	PQL	mg/Kg	J	E

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0794	U	0.0794	MDL	0.215	PQL	mg/Kg	UJ	Q
CHROMIUM	18.0		0.129	MDL	0.429	PQL	mg/Kg	J	A
COPPER	9.76		0.0858	MDL	0.429	PQL	mg/Kg	J	E
LEAD	5.46		0.0109	MDL	0.215	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	12.0		0.107	MDL	0.429	PQL	mg/Kg	J	Q
SILVER	0.0405	J	0.0152	MDL	0.107	PQL	mg/Kg	J	Z, E
VANADIUM	39.8		0.0236	MDL	0.107	PQL	mg/Kg	J	A

Sample ID: SL-069-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 8:45:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.149	J	0.0660	MDL	0.455	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 8:45:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.121	MDL	0.455	PQL	mg/Kg	J	E

Sample ID: SL-069-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 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	0.101	J	0.0842	MDL	0.228	PQL	mg/Kg	J	Z, Q
CHROMIUM	27.7		0.137	MDL	0.455	PQL	mg/Kg	J	A
COPPER	13.8		0.0910	MDL	0.455	PQL	mg/Kg	J	E
LEAD	7.98		0.0116	MDL	0.228	PQL	mg/Kg	J	E
NICKEL	17.7		0.114	MDL	0.455	PQL	mg/Kg	J	Q
SILVER	0.0308	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z, E
VANADIUM	56.8		0.0250	MDL	0.114	PQL	mg/Kg	J	A

Sample ID: SL-076-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 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	0.0901	J	0.0598	MDL	0.413	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 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	99.0		0.109	MDL	0.413	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-076-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 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
ANTIMONY	0.0764	U	0.0764	MDL	0.206	PQL	mg/Kg	UJ	Q
CHROMIUM	20.3		0.124	MDL	0.413	PQL	mg/Kg	J	A
COPPER	29.1		0.0825	MDL	0.413	PQL	mg/Kg	J	E
LEAD	6.79		0.0105	MDL	0.206	PQL	mg/Kg	J	E
NICKEL	18.0		0.103	MDL	0.413	PQL	mg/Kg	J	Q
SILVER	0.0295	J	0.0147	MDL	0.103	PQL	mg/Kg	J	Z, E
VANADIUM	39.3		0.0227	MDL	0.103	PQL	mg/Kg	J	A

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 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	0.113	J	0.0613	MDL	0.423	PQL	mg/Kg	J	Z

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 9:50:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	83.5		0.112	MDL	0.423	PQL	mg/Kg	J	E

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 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	0.0782	U	0.0782	MDL	0.211	PQL	mg/Kg	UJ	Q
CHROMIUM	18.3		0.127	MDL	0.423	PQL	mg/Kg	J	A
COPPER	9.46		0.0845	MDL	0.423	PQL	mg/Kg	J	E
LEAD	5.52		0.0108	MDL	0.211	PQL	mg/Kg	J	E
NICKEL	11.6		0.106	MDL	0.423	PQL	mg/Kg	J	Q
SILVER	0.0241	J	0.0150	MDL	0.106	PQL	mg/Kg	J	Z, E
VANADIUM	38.1		0.0232	MDL	0.106	PQL	mg/Kg	J	A

Sample ID: SL-089-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 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	0.166	J	0.0615	MDL	0.424	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-089-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 10:00:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	87.9		0.112	MDL	0.424	PQL	mg/Kg	J	E

Sample ID: SL-089-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 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	0.108	J	0.0785	MDL	0.212	PQL	mg/Kg	J	Z, Q
CHROMIUM	20.4		0.127	MDL	0.424	PQL	mg/Kg	J	A
COPPER	11.9		0.0848	MDL	0.424	PQL	mg/Kg	J	E
LEAD	8.45		0.0108	MDL	0.212	PQL	mg/Kg	J	E
NICKEL	12.4		0.106	MDL	0.424	PQL	mg/Kg	J	Q
SILVER	0.0321	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z, E
VANADIUM	43.2		0.0233	MDL	0.106	PQL	mg/Kg	J	A

Sample ID: SL-117-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 12:15:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.107	J	0.0599	MDL	0.413	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 12:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	69.7		0.110	MDL	0.413	PQL	mg/Kg	J	E

Sample ID: SL-117-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 12:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.158	J	0.0765	MDL	0.207	PQL	mg/Kg	J	Z, Q
CADMIUM	0.0626	J	0.0455	MDL	0.103	PQL	mg/Kg	J	Z
CHROMIUM	11.3		0.124	MDL	0.413	PQL	mg/Kg	J	A
COPPER	4.98		0.0827	MDL	0.413	PQL	mg/Kg	J	E
LEAD	3.37		0.0105	MDL	0.207	PQL	mg/Kg	J	E
NICKEL	6.82		0.103	MDL	0.413	PQL	mg/Kg	J	Q
SILVER	0.0147	U	0.0147	MDL	0.103	PQL	mg/Kg	UJ	E
VANADIUM	26.5		0.0227	MDL	0.103	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-179-SA5DN-SB-4.0-5.0 ***Collected:*** 7/27/2011 2:31:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.191	J	0.0590	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-4.0-5.0 ***Collected:*** 7/27/2011 2:31:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	80.2		0.108	MDL	0.407	PQL	mg/Kg	J	E

Sample ID: SL-179-SA5DN-SB-4.0-5.0 ***Collected:*** 7/27/2011 2:31:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.169	J	0.0753	MDL	0.203	PQL	mg/Kg	J	Z, Q
CHROMIUM	15.5		0.122	MDL	0.407	PQL	mg/Kg	J	A
COPPER	12.6		0.0814	MDL	0.407	PQL	mg/Kg	J	E
LEAD	6.21		0.0104	MDL	0.203	PQL	mg/Kg	J	E
NICKEL	11.2		0.102	MDL	0.407	PQL	mg/Kg	J	Q
SILVER	0.0299	J	0.0144	MDL	0.102	PQL	mg/Kg	J	Z, E
VANADIUM	40.0		0.0224	MDL	0.102	PQL	mg/Kg	J	A

Sample ID: SL-179-SA5DN-SB-9.0-10.0 ***Collected:*** 7/27/2011 2:49:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0951	J	0.0655	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-9.0-10.0 ***Collected:*** 7/27/2011 2:49:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	100		0.120	MDL	0.452	PQL	mg/Kg	J	E

Sample ID: SL-179-SA5DN-SB-9.0-10.0 ***Collected:*** 7/27/2011 2:49:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0835	U	0.0835	MDL	0.226	PQL	mg/Kg	UJ	Q
CHROMIUM	24.0		0.135	MDL	0.452	PQL	mg/Kg	J	A
COPPER	11.0		0.0903	MDL	0.452	PQL	mg/Kg	J	E
LEAD	6.83		0.0115	MDL	0.226	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: PrepDE210_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-179-SA5DN-SB-9.0-10.0 **Collected: 7/27/2011 2:49:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	17.7		0.113	MDL	0.452	PQL	mg/Kg	J	Q
SILVER	0.0375	J	0.0160	MDL	0.113	PQL	mg/Kg	J	Z, E
VANADIUM	47.9		0.0248	MDL	0.113	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP09-SA6-QC-072711 **Collected: 7/27/2011 8:28:00** **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	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-009-SA6-SS-0.0-0.5 **Collected: 7/27/2011 8:20:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.59	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA6-SS-0.0-0.5 **Collected: 7/27/2011 7:30:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.72	J	0.20	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 **Collected: 7/27/2011 8:35:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.76	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7470A **Matrix: AQ**

Sample ID: EB-SA6-SB-072711 **Collected: 7/27/2011 1:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000029	J	0.000026	MDL	0.00020	PQL	mg/L	U	B, B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0528	J	0.0071	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-009-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 8:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0573	J	0.0071	MDL	0.100	PQL	mg/Kg	J	Z

Sample ID: SL-017-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 9:14:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0930	J	0.0069	MDL	0.0978	PQL	mg/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0198	J	0.0076	MDL	0.108	PQL	mg/Kg	U	F

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 9:50:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0189	J	0.0073	MDL	0.104	PQL	mg/Kg	U	F

Sample ID: SL-179-SA5DN-SB-4.0-5.0 ***Collected:*** 7/27/2011 2:31:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0594	J	0.0071	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-9.0-10.0 ***Collected:*** 7/27/2011 2:49:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0085	J	0.0078	MDL	0.111	PQL	mg/Kg	U	B, F

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** AQ

Sample ID: EB-SA6-SB-072711 *Collected:* 7/27/2011 1:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	2.30		0.482	MDL	0.964	PQL	ng/L	J	S

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-017-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 9:14:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.2	U	5.2	MDL	10	PQL	mg/Kg	UJ	Q

Sample ID: SL-089-SA6-SB-9.0-10.0 *Collected:* 7/27/2011 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
EFH (C15-C20)	0.93	J	0.89	MDL	2.7	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 *Collected:* 7/27/2011 8:28:00 *Analysis Type:* DL-BASE/NEUTRAL *Dilution:* 25

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	140		4.2	MDL	22	PQL	ug/Kg	J	FD

Sample ID: DUP09-SA6-QC-072711 *Collected:* 7/27/2011 8:28:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	4.5	U	4.5	MDL	4.5	PQL	ug/Kg	UJ	FD
Chlordane	4.1	U	4.1	MDL	17	PQL	ug/Kg	UJ	FD

Sample ID: SL-009-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 8:20:00 *Analysis Type:* DL-BASE/NEUTRAL *Dilution:* 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	66		3.4	MDL	17	PQL	ug/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-009-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 8:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	13		0.68	MDL	3.5	PQL	ug/Kg	J	FD
Chlordane	27	J	8.2	MDL	35	PQL	ug/Kg	J	Z, FD

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 *Collected:* 7/27/2011 8:28:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	4300		340	MDL	1700	PQL	ug/Kg	J	FD
AROCLOR 1260	400	U	400	MDL	1700	PQL	ug/Kg	UJ	FD
Aroclor 5460	9000		1000	MDL	3400	PQL	ug/Kg	J	FD

Sample ID: SL-009-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 8:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.34	U	0.34	MDL	1.7	PQL	ug/Kg	UJ	FD
AROCLOR 1260	14		0.40	MDL	1.7	PQL	ug/Kg	J	FD
Aroclor 5460	17		1.0	MDL	3.4	PQL	ug/Kg	J	FD

Sample ID: SL-017-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 9:14:00 *Analysis Type:* RES *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	33	J	10	MDL	34	PQL	ug/Kg	J	Z

Sample ID: SL-028-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 7:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.0	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA6-SB-2.0-3.0 *Collected:* 7/27/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.3	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-179-SA5DN-SB-4.0-5.0 *Collected:* 7/27/2011 2:31:00 *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	1.6	J	0.40	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	2.6	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 *Collected:* 7/27/2011 8:28:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	3.4		0.63	MDL	1.7	PQL	ug/Kg	J	FD

Sample ID: SL-009-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 8:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	1.2	J	0.64	MDL	1.7	PQL	ug/Kg	J	Z, Q, Q, FD
DINOSEB	0.82	U	0.82	MDL	2.5	PQL	ug/Kg	R	Q, Q

Sample ID: SL-028-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 7:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPP	150	J	76	MDL	250	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** AQ

Sample ID: EB-SA6-SB-072711 *Collected:* 7/27/2011 1:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	16	PQL	ug/L	UJ	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***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	22	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	23	J	17	MDL	170	PQL	ug/Kg	J	Z
CHRYSENE	25	J	17	MDL	170	PQL	ug/Kg	J	Z
Di-n-butylphthalate	24	J	17	MDL	170	PQL	ug/Kg	J	Z, FD
PYRENE	17	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-009-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 8:20:00 ***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	340	U	340	MDL	1000	PQL	ug/Kg	UJ	Q
3,3'-DICHLOROBENZIDINE	100	U	100	MDL	340	PQL	ug/Kg	R	Q, Q
3-NITROANILINE	34	U	34	MDL	170	PQL	ug/Kg	UJ	Q
4-CHLOROANILINE	69	U	69	MDL	170	PQL	ug/Kg	UJ	Q
4-NITROANILINE	69	U	69	MDL	170	PQL	ug/Kg	UJ	Q
ANILINE	170	U	170	MDL	510	PQL	ug/Kg	R	Q
BENZIDINE	1200	U	1200	MDL	3400	PQL	ug/Kg	R	Q
Di-n-butylphthalate	17	U	17	MDL	170	PQL	ug/Kg	UJ	FD

Sample ID: SL-017-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 9:14:00 ***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	38	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	17	MDL	340	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	19	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	29	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	24	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	27	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	27	J	18	MDL	180	PQL	ug/Kg	J	Z
CHRYSENE	35	J	18	MDL	180	PQL	ug/Kg	J	Z
FLUORANTHENE	55	J	18	MDL	180	PQL	ug/Kg	J	Z
PHENANTHRENE	41	J	18	MDL	180	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-069-SA6-SB-4.0-5.0 *Collected:* 7/27/2011 8:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	65	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-069-SA6-SB-9.0-10.0 *Collected:* 7/27/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	20	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	27	J	19	MDL	190	PQL	ug/Kg	J	Z
FLUORANTHENE	24	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	22	J	19	MDL	190	PQL	ug/Kg	J	Z

Sample ID: SL-089-SA6-SB-9.0-10.0 *Collected:* 7/27/2011 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	22	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	37	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	23	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	30	J	19	MDL	190	PQL	ug/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-4.0-5.0 *Collected:* 7/27/2011 2:31:00 *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	17	MDL	350	PQL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: EB-SA6-SB-072711 *Collected:* 7/27/2011 1:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	0.062	J	0.053	MDL	1.1	PQL	ug/L	J	Z
Diethylphthalate	0.080	J	0.053	MDL	1.1	PQL	ug/L	J	Z
Dimethylphthalate	0.053	U	0.053	MDL	1.1	PQL	ug/L	UJ	L
Di-n-butylphthalate	0.50	J	0.053	MDL	1.1	PQL	ug/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: DUP09-SA6-QC-072711 ***Collected:*** 7/27/2011 8:28:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.1	J	1.7	MDL	8.6	PQL	ug/Kg	J	Z, FD
BENZO(A)ANTHRACENE	4.8	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	5.5	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD
BENZO(K)FLUORANTHENE	4.3	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	17		3.4	MDL	8.6	PQL	ug/Kg	J	FD
INDENO(1,2,3-CD)PYRENE	3.6	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	5.6	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD

Sample ID: SL-009-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 8:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.7	U	1.7	MDL	8.6	PQL	ug/Kg	UJ	FD
BENZO(A)ANTHRACENE	6.3	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	3.4	U	3.4	MDL	8.6	PQL	ug/Kg	UJ	FD
BENZO(G,H,I)PERYLENE	3.6	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	22		3.4	MDL	8.6	PQL	ug/Kg	J	FD
FLUORANTHENE	4.6	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z, FD
INDENO(1,2,3-CD)PYRENE	3.4	U	3.4	MDL	8.6	PQL	ug/Kg	UJ	FD
PHENANTHRENE	3.4	U	3.4	MDL	8.6	PQL	ug/Kg	UJ	FD
PYRENE	6.1	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-017-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 9:14:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	3.2	J	1.7	MDL	8.6	PQL	ug/Kg	J	Z
ANTHRACENE	7.1	J	1.7	MDL	8.6	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	6.2	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z
PHENANTHRENE	4.5	J	3.4	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.62	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.1	J	6.1	MDL	18	PQL	ug/Kg	J	Z
Butylbenzylphthalate	7.5	J	6.1	MDL	18	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-028-SA6-SS-0.0-0.5 ***Collected:*** 7/27/2011 7:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	7.7	J	6.1	MDL	18	PQL	ug/Kg	J	Z
Dimethylphthalate	8.4	J	6.1	MDL	18	PQL	ug/Kg	J	Z
Di-n-butylphthalate	9.7	J	6.1	MDL	18	PQL	ug/Kg	J	Z
NAPHTHALENE	0.76	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-069-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 8:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.83	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
NAPHTHALENE	0.82	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-069-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 8:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.0	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	0.79	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-076-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 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
1-METHYLNAPHTHALENE	0.79	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	0.84	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	7.4	J	6.5	MDL	20	PQL	ug/Kg	J	Z
NAPHTHALENE	0.77	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 9:50:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	7.9	J	1.8	MDL	9.2	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	7.2	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	6.1	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	4.7	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
FLUORENE	4.1	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory:** LL

EDD Filename: PrepDE210_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-089-SA6-SB-4.0-5.0 ***Collected:*** 7/27/2011 9:50:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	4.9	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
PHENANTHRENE	8.3	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
PYRENE	8.5	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z

Sample ID: SL-089-SA6-SB-9.0-10.0 ***Collected:*** 7/27/2011 10:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	0.46	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	14	J	6.7	MDL	20	PQL	ug/Kg	J	Z
FLUORENE	0.96	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA6-SB-2.0-3.0 ***Collected:*** 7/27/2011 12:15:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.4	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.2	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.2	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-179-SA5DN-SB-4.0-5.0 ***Collected:*** 7/27/2011 2:31:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.5	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	4.6	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z
CHRYSENE	4.9	J	1.7	MDL	8.6	PQL	ug/Kg	J	Z
FLUORANTHENE	5.3	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z
PYRENE	5.5	J	3.5	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-179-SA5DN-SB-9.0-10.0 ***Collected:*** 7/27/2011 2:49:00 ***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	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	15	J	6.8	MDL	21	PQL	ug/Kg	J	Z
FLUORENE	1.1	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: PrepDE210_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8330A **Matrix: SO**

Sample ID: SL-179-SA5DN-SB-4.0-5.0 *Collected:* 7/27/2011 2:31:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitroglycerin	830	U	830	MDL	2500	PQL	ug/Kg	UJ	L

Sample ID: SL-179-SA5DN-SB-9.0-10.0 *Collected:* 7/27/2011 2:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitroglycerin	910	U	910	MDL	2700	PQL	ug/Kg	UJ	L

Method Category: VOA

Method: 8015B **Matrix: SO**

Sample ID: SL-017-SA6-SS-0.0-0.5 *Collected:* 7/27/2011 9:14:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.5	U	1.5	MDL	3.6	PQL	mg/Kg	R	S
O-TERPHENYL	1.5	U	1.5	MDL	3.6	PQL	mg/Kg	R	S
p-Terphenyl	1.5	U	1.5	MDL	3.6	PQL	mg/Kg	R	S

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: EB-SA6-SB-072711 *Collected:* 7/27/2011 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Chloro-1,1,1-trifluoroethane	2	U	2	MDL	5	PQL	ug/L	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: PrepDE210_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
*#	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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: PrepDE210_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: PrepDE210_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE210

Method Blank Outlier Report

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21548DB220528	8/5/2011 5:28:00 AM	BORON Zirconium	0.0024 mg/L 0.0069 mg/L	EB-SA6-SB-072711

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SB-072711(REA2)	BORON	0.0035 mg/L	0.0035U mg/L
EB-SA6-SB-072711(REA2)	Zirconium	0.0049 mg/L	0.0049U mg/L

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21408DB222152	8/4/2011 9:52:00 PM	ALUMINUM BORON CALCIUM IRON MANGANESE PHOSPHORUS STRONTIUM TIN	8.06 mg/Kg 0.427 mg/Kg 6.22 mg/Kg 2.83 mg/Kg 0.0451 mg/Kg 1.22 mg/Kg 0.0333 mg/Kg 1.70 mg/Kg	DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-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
DUP09-SA6-QC-072711(RES)	TIN	3.96 mg/Kg	3.96U mg/Kg
SL-009-SA6-SS-0.0-0.5(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-017-SA6-SS-0.0-0.5(RES)	TIN	2.97 mg/Kg	2.97U mg/Kg
SL-028-SA6-SS-0.0-0.5(RES)	TIN	3.31 mg/Kg	3.31U mg/Kg
SL-069-SA6-SB-4.0-5.0(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-069-SA6-SB-9.0-10.0(RES)	TIN	3.08 mg/Kg	3.08U mg/Kg
SL-076-SA6-SB-2.0-3.0(RES)	TIN	3.71 mg/Kg	3.71U mg/Kg
SL-089-SA6-SB-4.0-5.0(RES)	TIN	2.87 mg/Kg	2.87U mg/Kg
SL-089-SA6-SB-9.0-10.0(RES)	TIN	2.92 mg/Kg	2.92U mg/Kg
SL-117-SA6-SB-2.0-3.0(RES)	TIN	2.92 mg/Kg	2.92U mg/Kg
SL-179-SA5DN-SB-4.0-5.0(RES)	TIN	2.71 mg/Kg	2.71U mg/Kg
SL-179-SA5DN-SB-9.0-10.0(RES)	TIN	3.29 mg/Kg	3.29U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. eQAPP Name: CDM_SSFL_110509

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21426AB220423A	8/5/2011 4:23:00 AM	VANADIUM	0.0358 mg/Kg	DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0

Method: 7470A
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21013CB220815	8/1/2011 8:15:00 AM	MERCURY	0.00011 mg/L	EB-SA6-SB-072711

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SB-072711(RES)	MERCURY	0.000029 mg/L	0.000029U mg/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. 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-017-SA6-SS-0.0-0.5MS SL-017-SA6-SS-0.0-0.5MSD (SL-017-SA6-SS-0.0-0.5)	DIETHYLENE GLYCOL	21	23	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-017-SA6-SS-0.0-0.5MS SL-017-SA6-SS-0.0-0.5MSD (SL-017-SA6-SS-0.0-0.5)	EFH (C12-C14)	0	0	49.00-123.00	-	EFH (C12-C14)	No Qual, Diluted Out
	EFH (C15-C20)	0	0	49.00-123.00	-	EFH (C15-C20)	
	EFH (C21-C30)	-6272	-6258	49.00-123.00	-	EFH (C21-C30)	
	EFH (C30-C40)	-38230	-44001	49.00-123.00	-	EFH (C30-C40)	
	EFH (C8-C11)	0	0	49.00-123.00	-	EFH (C8-C11)	

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	ENDOSULFAN II	529	3517	28.00-154.00	148 (50.00)	ENDOSULFAN II	No Qual, Diluted Out
	ENDRIN ALDEHYDE	500	2580	10.00-148.00	135 (35.00)	ENDRIN ALDEHYDE	
	HEPTACHLOR EPOXIDE	1227	15336	13.00-157.00	170 (50.00)	HEPTACHLOR EPOXIDE	
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	4,4'-DDD	0	0	16.00-163.00	-	4,4'-DDD	No Qual Diluted Out
	4,4'-DDE	-62	36352	16.00-161.00	181 (50.00)	4,4'-DDE	
	4,4'-DDT	-191	62732	10.00-176.00	156 (50.00)	4,4'-DDT	
	ALDRIN	0	0	16.00-126.00	-	ALDRIN	
	ALPHA-BHC	0	0	10.00-129.00	-	ALPHA-BHC	
	BETA-BHC	0	0	14.00-147.00	-	BETA-BHC	
	DELTA-BHC	0	0	23.00-140.00	-	DELTA-BHC	
	DIELDRIN	0	21726	19.00-154.00	200 (50.00)	DIELDRIN	
	ENDOSULFAN I	0	0	16.00-137.00	-	ENDOSULFAN I	
	ENDOSULFAN SULFATE	0	0	21.00-160.00	-	ENDOSULFAN SULFATE	
	ENDRIN	519	0	11.00-149.00	200 (50.00)	ENDRIN	
	ENDRIN KETONE	0	0	22.00-165.00	-	ENDRIN KETONE	
	gamma-BHC (Lindane)	0	-	10.00-140.00	200 (50.00)	gamma-BHC (Lindane)	
	HEPTACHLOR	0	312	13.00-126.00	200 (50.00)	HEPTACHLOR	
	METHOXYCHLOR	0	0	32.00-147.00	-	METHOXYCHLOR	

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	DINOSEB	9	0	10.00-46.00	200 (35.00)	DINOSEB	J(all detects) R(all non-detects)
SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	2,4-DB	-	1	10.00-201.00	157 (50.00)	2,4-DB	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_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-009-SA6-SS-0.0-0.5MSD (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	NICKEL	-	127	75.00-125.00	-	NICKEL	J(all detects)
SL-009-SA6-SS-0.0-0.5MS **SL-009-SA6-SS-0.0-0.5MSD** (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	ANTIMONY ZINC	28 -	29 14	75.00-125.00 75.00-125.00	- -	ANTIMONY ZINC	J(all detects) UJ(all non-detects) Zn, No Qual, >4x Sb post spike= 88%
SL-009-SA6-SS-0.0-0.5MS **SL-009-SA6-SS-0.0-0.5MSD** (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	LEAD	231	30	75.00-125.00	-	LEAD	No Qual, >4x
SL-009-SA6-SS-0.0-0.5MS **SL-009-SA6-SS-0.0-0.5MSD** (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	BARIUM	37	297	75.00-125.00	22 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_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-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	ALUMINUM CALCIUM	548 193	367 -	75.00-125.00 75.00-125.00	- -	ALUMINUM CALCIUM	No Qual, >4x
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	IRON MAGNESIUM MANGANESE	-1613 43 -8	-1628 -69 -34	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MAGNESIUM MANGANESE	No Qual, >4x
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	PHOSPHORUS POTASSIUM TITANIUM	59 - -	30 70 62	75.00-125.00 75.00-125.00 75.00-125.00	- - -	PHOSPHORUS POTASSIUM TITANIUM	J(all detects) UJ(all non-detects) P, Ti, No Qual, >4x

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	BIS(2-ETHYLHEXYL)PHTHALAT Dimethylphthalate Di-n-butylphthalate FLUORANTHENE NAPHTHALENE	312 - 159 169 -	578 139 199 157 106	39.00-167.00 74.00-118.00 65.00-148.00 51.00-149.00 61.00-102.00	60 (30.00) - - - -	BIS(2-ETHYLHEXYL)PHTHALA Dimethylphthalate Di-n-butylphthalate FLUORANTHENE NAPHTHALENE	No Qual, Diluted Out
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	BENZO(K)FLUORANTHENE	43	36	57.00-153.00	-	BENZO(K)FLUORANTHENE	No Qual Diluted Out

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **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-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	HEXACHLOROCYCLOPENTADI	-	-	10.00-153.00	84 (30.00)	HEXACHLOROCYCLOPENTAD	J(all detects)
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	3,3'-DICHLOROBENZIDINE ANILINE BENZIDINE	0 0 0	10 - 0	28.00-109.00 18.00-116.00 35.00-141.00	200 (30.00) 200 (30.00) -	3,3'-DICHLOROBENZIDINE ANILINE BENZIDINE	J(all detects) R(all non-detects)
SL-009-SA6-SS-0.0-0.5MS SL-009-SA6-SS-0.0-0.5MSD (SL-009-SA6-SS-0.0-0.5)	2,4-DINITROPHENOL 3-NITROANILINE 4-CHLOROANILINE 4-NITROANILINE	- 14 10 20	17 56 - -	20.00-143.00 59.00-122.00 13.00-107.00 41.00-109.00	31 (30.00) 118 (30.00) 96 (30.00) 81 (30.00)	2,4-DINITROPHENOL 3-NITROANILINE 4-CHLOROANILINE 4-NITROANILINE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-009-SA6-SS-0.0-0.5DUP (DUP09-SA6-QC-072711 SL -009-SA6-SS-0.0-0.5 SL -017-SA6-SS-0.0-0.5 SL -028-SA6-SS-0.0-0.5 SL -069-SA6-SB-4.0-5.0 SL -069-SA6-SB-9.0-10.0 SL -076-SA6-SB-2.0-3.0 SL -089-SA6-SB-4.0-5.0 SL -089-SA6-SB-9.0-10.0 SL -117-SA6-SB-2.0-3.0)	FLUORIDE	200	20.00	No Qual, OK by Difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-009-SA6-SS-0.0-0.5DUP (DUP09-SA6-QC-072711 SL -009-SA6-SS-0.0-0.5 SL -017-SA6-SS-0.0-0.5 SL -028-SA6-SS-0.0-0.5 SL -069-SA6-SB-4.0-5.0 SL -069-SA6-SB-9.0-10.0 SL -076-SA6-SB-2.0-3.0 SL -089-SA6-SB-4.0-5.0 SL -089-SA6-SB-9.0-10.0 SL -117-SA6-SB-2.0-3.0 SL -179-SA5DN-SB-4.0-5.0 SL -179-SA5DN-SB-9.0-10.0)	COPPER	26	20.00	J(all detects) UJ(all non-detects)
	LEAD	196	20.00	
	SILVER	24	20.00	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **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
P12106AQ242049A P12106AY242131A (EB-SA6-SB-072711)	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE PETN	110 110 133	- 110 133	76.00-109.00 69.00-107.00 80.00-120.00	- - -	2,4,6-TRINITROTOLUENE 3-NITROTOLUENE PETN	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
P0WALCSQ262148 (EB-SA6-SB-072711)	ACENAPHTHENE FLUORENE	116 116	- -	74.00-109.00 75.00-114.00	- -	ACENAPHTHENE FLUORENE	J(all detects)
P0WALCSQ262148 P0WALCSY262221 (EB-SA6-SB-072711)	Dimethylphthalate	26	30	40.00-119.00	-	Dimethylphthalate	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
P0WBLCSQ260445 P0WBLCSY260510 (EB-SA6-SB-072711)	2,4,5-TRICHLOROPHENOL 4-BROMOPHENYL-PHENYLETH	113 -	- 120	79.00-107.00 75.00-115.00	- -	2,4,5-TRICHLOROPHENOL 4-BROMOPHENYL-PHENYLET	J(all detects)
P0WBLCSY260510 (EB-SA6-SB-072711)	BENZOIC ACID	-	-	10.00-69.00	33 (30.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y49Y211348A (EB-SA6-SB-072711)	2-Chloro-1,1,1-trifluoroethane	-	75	77.00-120.00	-	2-Chloro-1,1,1-trifluoroethane	J(all detects) UJ(all non-detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12186AQ241949A (SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	Nitroglycerin	79	-	80.00-120.00	-	Nitroglycerin	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. 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
P21426AQ220426A (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	ANTIMONY	62	-	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
P21408DQ222155 (DUP09-SA6-QC-072711 SL-009-SA6-SS-0.0-0.5 SL-017-SA6-SS-0.0-0.5 SL-028-SA6-SS-0.0-0.5 SL-069-SA6-SB-4.0-5.0 SL-069-SA6-SB-9.0-10.0 SL-076-SA6-SB-2.0-3.0 SL-089-SA6-SB-4.0-5.0 SL-089-SA6-SB-9.0-10.0 SL-117-SA6-SB-2.0-3.0 SL-179-SA5DN-SB-4.0-5.0 SL-179-SA5DN-SB-9.0-10.0)	ALUMINUM TITANIUM	134 161	- -	80.00-120.00 80.00-120.00	- -	ALUMINUM TITANIUM	No Qual, SRM within QC Limits

Surrogate Outlier Report

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. eQAPP Name: CDM_SSFL_110509

Method: 1625C
Matrix: AQ

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-SA6-SB-072711	N-Nitrosodimethylamine-d6	171	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-017-SA6-SS-0.0 -0.5	n-Triacontane-d62	0	50.00-150.00	All Target Analytes	J(all detects) R(all non-detects)

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
DUP09-SA6-QC-072711	DECACHLOROBIPHENYL	0	20.00-120.00	All Target Analytes	No Qual, Diluted Out
SL-009-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL	135	20.00-120.00	All Target Analytes	No Qual, Diluted Out

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-017-SA6-SS-0.0 -0.5	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	40 49	45.00-120.00 53.00-139.00	All Target Analytes	No Qual, Diluted Out

Method: 8270C SIM
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-028-SA6-SS-0.0 -0.5	Terphenyl-d14	140	45.00-135.00	No Affected Compounds	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
MOISTURE	2.7	2.7	0		No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
ALUMINUM	12100	10700	12	50.00	No Qualifiers Applied
BORON	6.21	5.76	8	50.00	
CALCIUM	3490	4490	25	50.00	
IRON	18400	18400	0	50.00	
LITHIUM	20.9	17.7	17	50.00	
MAGNESIUM	4010	3530	13	50.00	
MANGANESE	298	294	1	50.00	
PHOSPHORUS	464	472	2	50.00	
POTASSIUM	3300	2850	15	50.00	
SODIUM	94.4	98.5	4	50.00	
STRONTIUM	18.9	20.0	6	50.00	
TIN	3.02	3.96	27	50.00	
TITANIUM	1030	884	15	50.00	
Zirconium	3.31	2.79	17	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
BARIUM	97.4	98.8	1	50.00	No Qualifiers Applied
BERYLLIUM	0.419	0.359	15	50.00	
CHROMIUM	18.4	24.5	28	50.00	
COBALT	5.01	6.58	27	50.00	
SELENIUM	0.113	0.0725	44	50.00	
SILVER	0.513	0.506	1	50.00	
THALLIUM	0.222	0.187	17	50.00	
VANADIUM	30.0	34.1	13	50.00	
ZINC	115	172	40	50.00	
ANTIMONY	0.123	0.370	100	50.00	J(all detects)
ARSENIC	3.12	5.52	56	50.00	
CADMIUM	0.613	1.06	53	50.00	
COPPER	12.2	57.7	130	50.00	
LEAD	27.3	59.4	74	50.00	
MOLYBDENUM	0.576	3.89	148	50.00	
NICKEL	13.7	31.5	79	50.00	

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
HEXAVALENT CHROMIUM	0.59	0.46	25	50.00	No Qualifiers Applied

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
MERCURY	0.0573	0.0528	8	50.00	No Qualifiers Applied

Method: 8081A
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
4,4'-DDE	13	4.5 U	200	50.00	J(all detects) UJ(all non-detects)
4,4'-DDT	66	140	72	50.00	
Chlordane	27	17 U	200	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
AROCLOR 1254	1.7 U	4300	200	50.00	J(all detects) UJ(all non-detects)
AROCLOR 1260	14	1700 U	200	50.00	
Aroclor 5460	17	9000	199	50.00	

Method: 8151A
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
2,4-DB	1.2	3.4	96	50.00	J(all detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
BENZO(A)ANTHRACENE	6.3	4.8	27	50.00	No Qualifiers Applied
ANTHRACENE	8.6 U	2.1	200	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	8.6 U	5.5	200	50.00	
BENZO(K)FLUORANTHENE	22	4.3	135	50.00	
FLUORANTHENE	4.6	17	115	50.00	
INDENO(1,2,3-CD)PYRENE	8.6 U	3.6	200	50.00	
PHENANTHRENE	8.6 U	5.6	200	50.00	

Method: 8270C
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
Di-n-butylphthalate	170 U	24	200	50.00	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 9045M
Matrix: SO

Analyte	*Concentration (pH unit)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-009-SA6-SS-0.0-0.5	DUP09-SA6-QC-072711			
PH	7.24	7.33	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE210 Laboratory: LL

EDD Filename: DE210_v2. eQAPP Name: CDM_SSFL_110509

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-072711	BORON	J	0.0035	0.0500	PQL	mg/L	J (all detects)
	SODIUM	J	0.295	1.00	PQL	mg/L	
	STRONTIUM	J	0.00026	0.0050	PQL	mg/L	
	Zirconium	J	0.0049	0.0500	PQL	mg/L	

Method: 7470A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-072711	MERCURY	J	0.000029	0.00020	PQL	mg/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-072711	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.062	1.1	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.080	1.1	PQL	ug/L	
	Di-n-butylphthalate	J	0.50	1.1	PQL	ug/L	

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-179-SA5DN-SB-9.0-10.0	Nitrate-NO3	J	1.1	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	SODIUM	J	98.5	103	PQL	mg/Kg	J (all detects)
	TIN	J	3.96	10.3	PQL	mg/Kg	
	Zirconium	J	2.79	5.14	PQL	mg/Kg	
SL-009-SA6-SS-0.0-0.5	SODIUM	J	94.4	102	PQL	mg/Kg	J (all detects)
	TIN	J	3.02	10.2	PQL	mg/Kg	
	Zirconium	J	3.31	5.09	PQL	mg/Kg	
SL-017-SA6-SS-0.0-0.5	BORON	J	3.83	5.00	PQL	mg/Kg	J (all detects)
	TIN	J	2.97	10.0	PQL	mg/Kg	
	Zirconium	J	2.77	5.00	PQL	mg/Kg	
SL-028-SA6-SS-0.0-0.5	BORON	J	4.35	4.92	PQL	mg/Kg	J (all detects)
	TIN	J	3.31	9.83	PQL	mg/Kg	
	Zirconium	J	2.85	4.92	PQL	mg/Kg	
SL-069-SA6-SB-4.0-5.0	TIN	J	3.02	10.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.37	5.26	PQL	mg/Kg	
SL-069-SA6-SB-9.0-10.0	TIN	J	3.08	11.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-076-SA6-SB-2.0-3.0	TIN	J	3.71	10.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.96	5.26	PQL	mg/Kg	
SL-089-SA6-SB-4.0-5.0	TIN	J	2.87	10.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.86	5.23	PQL	mg/Kg	
SL-089-SA6-SB-9.0-10.0	TIN	J	2.92	11.0	PQL	mg/Kg	J (all detects)
SL-117-SA6-SB-2.0-3.0	BORON	J	3.25	5.07	PQL	mg/Kg	J (all detects)
	TIN	J	2.92	10.1	PQL	mg/Kg	
	Zirconium	J	2.50	5.07	PQL	mg/Kg	
SL-179-SA5DN-SB-4.0-5.0	TIN	J	2.71	9.88	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.92	4.94	PQL	mg/Kg	
SL-179-SA5DN-SB-9.0-10.0	TIN	J	3.29	11.1	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	SELENIUM	J	0.0725	0.411	PQL	mg/Kg	J (all detects)
SL-009-SA6-SS-0.0-0.5	ANTIMONY	J	0.123	0.198	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.113	0.395	PQL	mg/Kg	
SL-017-SA6-SS-0.0-0.5	SELENIUM	J	0.148	0.400	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0768	0.100	PQL	mg/Kg	
SL-028-SA6-SS-0.0-0.5	ANTIMONY	J	0.124	0.204	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.109	0.409	PQL	mg/Kg	
SL-069-SA6-SB-4.0-5.0	SELENIUM	J	0.151	0.429	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0405	0.107	PQL	mg/Kg	
SL-069-SA6-SB-9.0-10.0	ANTIMONY	J	0.101	0.228	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.149	0.455	PQL	mg/Kg	
	SILVER	J	0.0308	0.114	PQL	mg/Kg	
SL-076-SA6-SB-2.0-3.0	SELENIUM	J	0.0901	0.413	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0295	0.103	PQL	mg/Kg	
SL-089-SA6-SB-4.0-5.0	SELENIUM	J	0.113	0.423	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0241	0.106	PQL	mg/Kg	
SL-089-SA6-SB-9.0-10.0	ANTIMONY	J	0.108	0.212	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.166	0.424	PQL	mg/Kg	
	SILVER	J	0.0321	0.106	PQL	mg/Kg	
SL-117-SA6-SB-2.0-3.0	ANTIMONY	J	0.158	0.207	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0626	0.103	PQL	mg/Kg	
	SELENIUM	J	0.107	0.413	PQL	mg/Kg	
SL-179-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.169	0.203	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.191	0.407	PQL	mg/Kg	
	SILVER	J	0.0299	0.102	PQL	mg/Kg	
SL-179-SA5DN-SB-9.0-10.0	SELENIUM	J	0.0951	0.452	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0375	0.113	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	HEXAVALENT CHROMIUM	J	0.46	1.0	PQL	mg/Kg	J (all detects)
SL-009-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.59	1.0	PQL	mg/Kg	J (all detects)
SL-028-SA6-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.72	1.0	PQL	mg/Kg	J (all detects)
SL-069-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.76	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	MERCURY	J	0.0528	0.101	PQL	mg/Kg	J (all detects)
SL-009-SA6-SS-0.0-0.5	MERCURY	J	0.0573	0.100	PQL	mg/Kg	J (all detects)
SL-017-SA6-SS-0.0-0.5	MERCURY	J	0.0930	0.0978	PQL	mg/Kg	J (all detects)
SL-069-SA6-SB-4.0-5.0	MERCURY	J	0.0198	0.108	PQL	mg/Kg	J (all detects)
SL-089-SA6-SB-4.0-5.0	MERCURY	J	0.0189	0.104	PQL	mg/Kg	J (all detects)
SL-179-SA5DN-SB-4.0-5.0	MERCURY	J	0.0594	0.102	PQL	mg/Kg	J (all detects)
SL-179-SA5DN-SB-9.0-10.0	MERCURY	J	0.0085	0.111	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-089-SA6-SB-9.0-10.0	EFH (C15-C20)	J	0.93	2.7	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-009-SA6-SS-0.0-0.5	Chlordane	J	27	35	PQL	ug/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-017-SA6-SS-0.0-0.5	Aroclor 5460	J	33	34	PQL	ug/Kg	J (all detects)
SL-028-SA6-SS-0.0-0.5	Aroclor 5460	J	2.0	3.4	PQL	ug/Kg	J (all detects)
SL-117-SA6-SB-2.0-3.0	Aroclor 5460	J	2.3	3.4	PQL	ug/Kg	J (all detects)
SL-179-SA5DN-SB-4.0-5.0	AROCLOR 1260 Aroclor 5460	J J	1.6 2.6	1.8 3.4	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 8151A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-009-SA6-SS-0.0-0.5	2,4-DB	J	1.2	1.7	PQL	ug/Kg	J (all detects)
SL-028-SA6-SS-0.0-0.5	MCPP	J	150	250	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	BENZO(B)FLUORANTHENE	J	22	170	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	23	170	PQL	ug/Kg	
	CHRYSENE	J	25	170	PQL	ug/Kg	
	Di-n-butylphthalate	J	24	170	PQL	ug/Kg	
	PYRENE	J	17	170	PQL	ug/Kg	
SL-017-SA6-SS-0.0-0.5	BENZO(G,H,I)PERYLENE	J	38	170	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	340	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	19	170	PQL	ug/Kg	
SL-069-SA6-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	29	180	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	24	180	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	27	180	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	27	180	PQL	ug/Kg	
	CHRYSENE	J	35	180	PQL	ug/Kg	
	FLUORANTHENE	J	55	180	PQL	ug/Kg	
	PHENANTHRENE	J	41	180	PQL	ug/Kg	
	PYRENE	J	65	180	PQL	ug/Kg	
SL-069-SA6-SB-9.0-10.0	BENZO(A)PYRENE	J	20	190	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	27	190	PQL	ug/Kg	
	FLUORANTHENE	J	24	190	PQL	ug/Kg	
	PYRENE	J	22	190	PQL	ug/Kg	
SL-089-SA6-SB-9.0-10.0	BENZO(A)PYRENE	J	22	190	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	37	190	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	23	190	PQL	ug/Kg	
	PYRENE	J	30	190	PQL	ug/Kg	
SL-179-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	350	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA6-QC-072711	ANTHRACENE	J	2.1	8.6	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	4.8	8.6	PQL	ug/Kg	
	BENZO(A)PYRENE	J	5.5	8.6	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	4.3	8.6	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.6	8.6	PQL	ug/Kg	
	PHENANTHRENE	J	5.6	8.6	PQL	ug/Kg	
SL-009-SA6-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	6.3	8.6	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	3.6	8.6	PQL	ug/Kg	
	FLUORANTHENE	J	4.6	8.6	PQL	ug/Kg	
	PYRENE	J	6.1	8.6	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE210 **Laboratory: LL**

EDD Filename: DE210_v2. **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-017-SA6-SS-0.0-0.5	ACENAPHTHYLENE	J	3.2	8.6	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	7.1	8.6	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	6.2	8.6	PQL	ug/Kg	
	PHENANTHRENE	J	4.5	8.6	PQL	ug/Kg	
SL-028-SA6-SS-0.0-0.5	ACENAPHTHYLENE	J	0.62	1.7	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.1	18	PQL	ug/Kg	
	Butylbenzylphthalate	J	7.5	18	PQL	ug/Kg	
	Diethylphthalate	J	7.7	18	PQL	ug/Kg	
	Dimethylphthalate	J	8.4	18	PQL	ug/Kg	
	Di-n-butylphthalate	J	9.7	18	PQL	ug/Kg	
	NAPHTHALENE	J	0.76	1.7	PQL	ug/Kg	
SL-069-SA6-SB-4.0-5.0	BENZO(K)FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	0.83	1.8	PQL	ug/Kg	
	NAPHTHALENE	J	0.82	1.8	PQL	ug/Kg	
SL-069-SA6-SB-9.0-10.0	ANTHRACENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	1.2	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	0.79	1.9	PQL	ug/Kg	
SL-076-SA6-SB-2.0-3.0	1-METHYLNAPHTHALENE	J	0.79	1.8	PQL	ug/Kg	J (all detects)
	2-METHYLNAPHTHALENE	J	0.84	1.8	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.4	20	PQL	ug/Kg	
	NAPHTHALENE	J	0.77	1.8	PQL	ug/Kg	
SL-089-SA6-SB-4.0-5.0	ANTHRACENE	J	7.9	9.2	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	7.2	9.2	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	6.1	9.2	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	4.7	9.2	PQL	ug/Kg	
	FLUORENE	J	4.1	9.2	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	4.9	9.2	PQL	ug/Kg	
	PHENANTHRENE	J	8.3	9.2	PQL	ug/Kg	
	PYRENE	J	8.5	9.2	PQL	ug/Kg	
SL-089-SA6-SB-9.0-10.0	ACENAPHTHYLENE	J	0.46	1.9	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	14	20	PQL	ug/Kg	
	FLUORENE	J	0.96	1.9	PQL	ug/Kg	
SL-117-SA6-SB-2.0-3.0	ANTHRACENE	J	1.4	1.7	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	1.2	1.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.2	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.6	1.7	PQL	ug/Kg	
SL-179-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	3.5	8.6	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	4.6	8.6	PQL	ug/Kg	
	CHRYSENE	J	4.9	8.6	PQL	ug/Kg	
	FLUORANTHENE	J	5.3	8.6	PQL	ug/Kg	
	PYRENE	J	5.5	8.6	PQL	ug/Kg	
SL-179-SA5DN-SB-9.0-10.0	BENZO(G,H,I)PERYLENE	J	1.8	1.9	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	15	21	PQL	ug/Kg	
	FLUORENE	J	1.1	1.9	PQL	ug/Kg	

LDC #: 26407H4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-21-11
SDG #: DE210 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: CR
2nd Reviewer: MG

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	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	D
VIII.	Laboratory Control Samples (LCS)	~~A~~	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=13

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-009-SA6-SS-0.0-0.5	11	SL-179-SA5DN-SB-4.0-5.0	21		31	
2	SL-017-SA6-SS-0.0-0.5	12	SL-179-SA5DN-SB-9.0-10.0	22		32	
3	SL-028-SA6-SS-0.0-0.5	13	EB-SA6-SB-072711	23		33	
4	DUP09-SA6-QC-072711	14	SL-009-SA6-SS-0.0-0.5MS	24		34	
5	SL-069-SA6-SB-4.0-5.0	15	SL-009-SA6-SS-0.0-0.5MSD	25		35	
6	SL-069-SA6-SB-9.0-10.0	16	SL-009-SA6-SS-0.0-0.5DUP	26		36	
7	SL-076-SA6-SB-2.0-3.0	17		27		37	
8	SL-089-SA6-SB-4.0-5.0	18		28		38	
9	SL-089-SA6-SB-9.0-10.0	19		29		39	
10	SL-117-SA6-SB-2.0-3.0	20		30		40	

Notes: _____

LDC #: 26407H4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: AC
2nd Reviewer: MG

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 100x x MS:2xdil
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 3-12

Analyte	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Quals													
Sn	1.8	0.9														

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 1-7, 9-12

Analyte	Maximum ICB/CCB[a] (ug/L)	Action Limit	12													
Hg	0.019	0.01	0.0085													

Sample Concentration units, unless otherwise noted: ug/L
Associated Samples: All Water

Analyte	Maximum ICB/CCB[a] (ug/L)	Action Limit	13													
Hg	0.097	0.485	0.029													
Zr	6.7	33.5	4.9													

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 #: 26407H4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: AR
2nd Reviewer: MG

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: ug/L **Associated sample units:** mg/Kg
Sampling date: 7/27/11 Soil factor applied 100x (Hg: 167x)
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification												
	13	Action Level	1	2	3	4	5	8	11	12				
B	3.5	1.75												
Na	295	147.5	94.4	124	110	98.5			108					
Zr	4.9	2.45												
Sr	0.26	0.13												
Hg	0.029	0.024215					0.020	0.019		0.0085				

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.: DE210
Matrix: SOIL Level (low/med): LOW

>4X

Background Lab Sample ID: 6358381BKG Matrix Spike Lab Sample ID: 6358382MS Matrix Spike Duplicate Lab Sample ID: 6358383MSD
% Solids for Sample: 97.3
Batch Id(s): P21408D, P21426A, P21411B

Sb: J/UJ/A (PS=88%)

BRDout

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 -		12073.9023		13168.2944		12807.2172		199.5630	199.5630	MG/KG	548		367		3			20	P
Antimony	121	0.1233	B	0.4607		0.4591		1.1859	1.1746	MG/KG	28	N	29	N	0		75 - 125	20	MS
Arsenic	75	3.1248		5.0360		5.0663		1.9764	1.9576	MG/KG	97		99		1		75 - 125	20	MS
Barium -	137	97.3990		101.0752		126.4229		9.8822	9.7881	MG/KG	37		297		22	*		20	MS
Beryllium	9	0.4194		1.1621		1.1278		0.7906	0.7830	MG/KG	94		90		3		75 - 125	20	MS
Boron		6.2133		200.7045		198.0992		199.5630	199.5630	MG/KG	97		96		1		84 - 115	20	P
Cadmium	111	0.6135		1.6665		1.6276		0.9882	0.9788	MG/KG	107		104		2		75 - 125	20	MS
Calcium -		3494.5570		4265.4427		3818.4177		399.1259	399.1259	MG/KG	193		81		11			20	P
Chromium	52	18.4481		26.9784		26.7606		9.8822	9.7881	MG/KG	86		85		1		75 - 125	20	MS
Cobalt	59	5.0142		53.1663		53.3255		49.4110	48.9404	MG/KG	97		99		0		75 - 125	20	MS
Copper	63	12.2164		22.7291		23.7067		9.8822	9.7881	MG/KG	106		117		4		75 - 125	20	MS
Iron -		18429.1107		16819.9922		16804.3106		99.7815	99.7815	MG/KG	-1613		-1628		0			20	P
Lead -	208	27.2946		34.1331		28.1897		2.9647	2.9364	MG/KG	231		30		19			20	MS
Lithium		20.9162		117.5037		117.4039		99.7815	99.7815	MG/KG	97		97		0		82 - 114	20	P
Magnesium		4009.8308		4095.5497		3872.3316		199.5630	199.5630	MG/KG	43		-69		6			20	P
Manganese		297.8977		293.7377		281.1692		49.8907	49.8907	MG/KG	-8		-34		4			20	P
Mercury		0.0573	B	0.2334		0.2492		0.1679	0.1673	MG/KG	105		115		7		65 - 135	20	CV
Molybdenum	98	0.5759		10.5562		10.4478		9.8822	9.7881	MG/KG	101		101		1		75 - 125	20	MS
Nickel	60	13.7027		23.3220		26.0950		9.8822	9.7881	MG/KG	97		127	N	11		75 - 125	20	MS
Phosphorus -		463.7021		522.3730		493.7966		99.7815	99.7815	MG/KG	59		30		6			20	P
Potassium		3298.9427		4143.2792		3992.5773		997.8148	997.8148	MG/KG	85		70	N	4		75 - 125	20	P
Selenium	78	0.1129	B	2.1444		2.0379		1.9764	1.9576	MG/KG	103		98		5		75 - 125	20	MS
Silver	107	0.5131		10.9119		10.4047		9.8822	9.7881	MG/KG	105		101		5		75 - 125	20	MS
Sodium		94.4237	B	1048.7642		1050.2849		997.8148	997.8148	MG/KG	96		96		0		75 - 125	20	P
Strontium		18.9208		118.8427		115.2227		99.7815	99.7815	MG/KG	100		97		3		75 - 115	20	P
Thallium	203	0.2223		0.5771		0.6012		0.3953	0.3915	MG/KG	90		97		4		75 - 125	20	MS
Tin		3.0212	B	357.4372		375.4238		399.1259	399.1259	MG/KG	89		93		5		80 - 110	20	P
Titanium -		1030.6045		1149.4587		1092.3348		99.7815	99.7815	MG/KG	119		62		5			20	P
Vanadium	51	29.9628		37.7698		40.4052		9.8822	9.7881	MG/KG	79		107		7		75 - 125	20	MS
Zinc -	66	115.2463		123.4683		116.6349		9.8822	9.7881	MG/KG	83		14		6			20	MS
Zirconium		3.3112	B	95.9948		97.5653		99.7815	99.7815	MG/KG	93		94		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.: DE210
Matrix: SOIL Level (low/med): LOW

<57

Background Lab Sample ID: 6358381BKG
% Solids for Duplicate: 97.2
Batch ID(s): P21408D, P21426A, P21411B
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6358384DUP
% Solids for Sample: 97.3

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			12073.9023		11672.4583		3		P
Antimony	121		0.1233	B	0.1137	B	8		MS
Arsenic	75		3.1248		3.0380		3		MS
Barium	137		97.3990		83.3094		16		MS
Beryllium	9	0.1	0.4194		0.3881		8		MS
Boron		5.1	6.2133		6.1856		0		P
Cadmium	111		0.6135		0.5490		11		MS
Calcium			3494.5570		3655.0068		4		P
Chromium	52		18.4481		16.7626		10		MS
Cobalt	59		5.0142		4.4152		13		MS
Copper	63		12.2164		15.8972		26	*	MS
Iron			18429.1107		17322.6125		6		P
Lead	208		27.2946		2990.7503		196	*	MS
Lithium			20.9162		19.7872		6		P
Magnesium			4009.8308		3940.0339		2		P
Manganese			297.8977		257.0572		15		P
Mercury			0.0573	B	0.0636	B	10		CV
Molybdenum	98		0.5759		0.6960		19		MS
Nickel	60		13.7027		12.0822		13		MS
Phosphorus			463.7021		463.3869		0		P
Potassium			3298.9427		3179.7836		4		P
Selenium	78		0.1129	B	0.0966	B	16		MS
Silver	107		0.5131		0.6524		24	*	MS
Sodium			94.4237	B	86.5163	B	9		P
Strontium			18.9208		20.7908		9		P
Thallium	203	0.1	0.2223		0.1877		17		MS
Tin			3.0212	B	3.1326	B	4		P
Titanium			1030.6045		957.9731		7		P
Vanadium	51		29.9628		26.4748		12		MS
Zinc	66		115.2463		113.7718		1		MS
Zirconium			3.3112	B	3.1568	B	5		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.

DE210 5719

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.: DE210
Matrix: SOIL Level (low/med): LOW

5/05

Background Lab Sample ID: 6358381BKG Serial Dilution Lab Sample ID: 6358381L
Batch ID(s): P21408D, P21426A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		118653.8600		121007.1000		2		P
Antimony	121	0.6237	B	1.8500	U	100		MS
Arsenic	75	15.8100		15.6000		1		MS
Barium	137	492.8000		496.8500		1		MS
Beryllium	9	2.1220		2.2560	B	6		MS
Boron		61.0600		78.6000	B	29		P
Cadmium	111	3.1040		2.9760		4		MS
Calcium		34342.0600		35624.9500		4		P
Chromium	52	93.3400		105.5500		13	E	MS
Cobalt	59	25.3700		25.9900		2		MS
Copper	63	61.8100		63.5500		3		MS
Iron		181108.4000		182678.3000		1		P
Lead	208	138.1000		139.7000		1		MS
Lithium		205.5500		228.0500		11		P
Magnesium		39405.8100		40779.5500		3		P
Manganese		2927.5300		2991.0000		2		P
Molybdenum	98	2.9140		3.1365		8		MS
Nickel	60	69.3300		69.7500		1		MS
Phosphorus		4556.9400		4458.1500		2		P
Potassium		32419.7000		32744.6000		1		P
Selenium	78	0.5710	B	1.4500	U	100		MS
Silver	107	2.5960		2.5205		3		MS
Sodium		927.9300	B	941.3000	B	1		P
Strontium		185.9400		186.7500		0		P
Thallium	203	1.1250		0.9660	B	14		MS
Tin		29.6900	B	35.9000	B	21		P
Titanium		10128.0600		10518.5000		4		P
Vanadium	51	151.6000		172.4500		14	E	MS
Zinc	66	583.1000		596.0000		2		MS
Zirconium		32.5400	B	50.0000	B	54		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: DE210 5723
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE211

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
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3050B	6010B	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3050B	6020	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3060A	7199	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3550B	8015B	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3550B	8015M	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3550B	8082	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3550B	8270C	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	3550B	8270C SIM	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	5035	8015M	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	300.0	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	314.0	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	6850	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	7471A	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	8015B	III
28-Jul-2011	SL-068-SA6-SB-4.0-5.0	6359565	N	METHOD	8015M	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3050B	6010B	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3050B	6020	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3060A	7199	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3550B	8015B	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3550B	8015M	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3550B	8082	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3550B	8270C	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	3550B	8270C SIM	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	5035	8015M	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	METHOD	300.0	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	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
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	METHOD	7471A	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	METHOD	8015B	III
28-Jul-2011	SL-068-SA6-SB-19.0-20.0	6359566	N	METHOD	8015M	III
28-Jul-2011	TB-072811	6359570	TB	5030B	8015M	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3050B	6010B	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3050B	6020	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3060A	7199	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3550B	8082	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3550B	8270C	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	3550B	8270C SIM	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	METHOD	300.0	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	METHOD	314.0	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0	6359559	N	METHOD	7471A	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3050B	6010B	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3050B	6020	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3060A	7199	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3550B	8082	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3550B	8270C	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	3550B	8270C SIM	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	METHOD	300.0	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	METHOD	314.0	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0MS	6359560	MS	METHOD	7471A	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	3050B	6010B	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	3050B	6020	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	3060A	7199	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	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
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	METHOD	314.0	III
28-Jul-2011	SL-183-SA5DN-SB-4.0-5.0DU	6359562	DUP	METHOD	7471A	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3050B	6010B	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3050B	6020	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3060A	7199	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3550B	8082	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3550B	8270C	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	3550B	8270C SIM	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	METHOD	300.0	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	METHOD	314.0	III
28-Jul-2011	DUP21-SA5DN-QC-072811	6359564	FD	METHOD	7471A	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3050B	6010B	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3050B	6020	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3060A	7199	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3550B	8015B	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3550B	8015M	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3550B	8082	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3550B	8270C	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	3550B	8270C SIM	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	5035	8015M	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	METHOD	300.0	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	METHOD	314.0	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	METHOD	7471A	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	METHOD	8015B	III
28-Jul-2011	SL-070-SA6-SB-4.0-5.0	6359567	N	METHOD	8015M	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	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
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	3050B	6020	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	3060A	7199	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	3550B	8082	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	3550B	8270C	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	3550B	8270C SIM	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	METHOD	300.0	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	METHOD	314.0	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	METHOD	6850	III
28-Jul-2011	SL-183-SA5DN-SB-9.0-10.0	6359563	N	METHOD	7471A	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3050B	6010B	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3050B	6020	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3060A	7199	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3550B	8015B	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3550B	8015M	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3550B	8082	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3550B	8270C	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	3550B	8270C SIM	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	5035	8015M	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	METHOD	300.0	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	METHOD	314.0	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	METHOD	7471A	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	METHOD	8015B	III
28-Jul-2011	SL-090-SA6-SB-3.0-4.0	6359569	N	METHOD	8015M	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3050B	6010B	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3050B	6020	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	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
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3550B	8015B	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3550B	8015M	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3550B	8082	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3550B	8270C	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	3550B	8270C SIM	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	5035	8015M	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	METHOD	300.0	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	METHOD	314.0	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	METHOD	7471A	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	METHOD	8015B	III
28-Jul-2011	SL-070-SA6-SB-19.0-20.0	6359568	N	METHOD	8015M	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3050B	6010B	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3050B	6020	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3060A	7199	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3550B	8082	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3550B	8270C	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	3550B	8270C SIM	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	METHOD	300.0	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	METHOD	314.0	III
28-Jul-2011	SL-172-SA5DN-SB-4.0-5.0	6359557	N	METHOD	7471A	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	3050B	6010B	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	3050B	6020	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	3060A	7199	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	3550B	8082	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	3550B	8270C	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	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
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	METHOD	300.0	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	N	METHOD	314.0	III
28-Jul-2011	SL-172-SA5DN-SB-9.0-10.0	6359558	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: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP21-SA5DN-QC-072811 **Collected:** 7/28/2011 10:19:00 **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		0.87	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-068-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 7:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.90	U	0.90	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-068-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 7:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 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	1.4		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-070-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 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	2.8		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-090-SA6-SB-3.0-4.0 **Collected:** 7/28/2011 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
FLUORIDE	7.0		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-172-SA5DN-SB-4.0-5.0 **Collected:** 7/28/2011 12:04:00 **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-172-SA5DN-SB-9.0-10.0 **Collected:** 7/28/2011 12:09:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.0		0.95	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory:** LL

EDD Filename: PrepDE211_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.6		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.8		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP21-SA5DN-QC-072811 *Collected:* 7/28/2011 10:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.64	J	0.399	MDL	5.54	PQL	mg/Kg	J	Z
POTASSIUM	3830		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	2.57	J	0.355	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-068-SA6-SB-19.0-20.0 *Collected:* 7/28/2011 7:50:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3040		12.1	MDL	53.7	PQL	mg/Kg	J	Q

Sample ID: SL-068-SA6-SB-19.0-20.0 *Collected:* 7/28/2011 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.622	J	0.387	MDL	5.37	PQL	mg/Kg	U	B
TIN	1.81	J	0.344	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.67	J	0.494	MDL	5.37	PQL	mg/Kg	J	Z

Sample ID: SL-068-SA6-SB-4.0-5.0 *Collected:* 7/28/2011 7:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.72	J	0.387	MDL	5.38	PQL	mg/Kg	U	B
POTASSIUM	3430		12.1	MDL	53.8	PQL	mg/Kg	J	Q
TIN	2.07	J	0.344	MDL	10.8	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-068-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 7:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	3.64	J	0.495	MDL	5.38	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 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
POTASSIUM	3250		13.0	MDL	57.7	PQL	mg/Kg	J	Q
TIN	2.36	J	0.369	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	5.04	J	0.531	MDL	5.77	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 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
BORON	5.09	J	0.399	MDL	5.54	PQL	mg/Kg	J	Z
POTASSIUM	4840		12.5	MDL	55.4	PQL	mg/Kg	J	Q
TIN	2.04	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	5.04	J	0.509	MDL	5.54	PQL	mg/Kg	J	Z

Sample ID: SL-090-SA6-SB-3.0-4.0 **Collected:** 7/28/2011 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
POTASSIUM	1500		12.3	MDL	54.3	PQL	mg/Kg	J	Q
TIN	2.42	J	0.347	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.40	J	0.499	MDL	5.43	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 **Collected:** 7/28/2011 12:04:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.65	J	0.384	MDL	5.33	PQL	mg/Kg	U	B
POTASSIUM	4630		12.1	MDL	53.3	PQL	mg/Kg	J	Q
TIN	2.66	J	0.341	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: SL-172-SA5DN-SB-9.0-10.0 **Collected:** 7/28/2011 12:09:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.51	J	0.426	MDL	5.91	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-172-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2980		13.4	MDL	59.1	PQL	mg/Kg	J	Q
TIN	2.21	J	0.378	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	5.58	J	0.544	MDL	5.91	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.10	J	0.389	MDL	5.40	PQL	mg/Kg	J	Z
POTASSIUM	3800		12.2	MDL	54.0	PQL	mg/Kg	J	Q
TIN	2.68	J	0.345	MDL	10.8	PQL	mg/Kg	U	B

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.18	J	0.409	MDL	5.68	PQL	mg/Kg	U	B
POTASSIUM	2410		12.8	MDL	56.8	PQL	mg/Kg	J	Q
TIN	2.63	J	0.363	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	5.06	J	0.522	MDL	5.68	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP21-SA5DN-QC-072811 *Collected:* 7/28/2011 10:19:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.162	J	0.0630	MDL	0.435	PQL	mg/Kg	J	Z

Sample ID: DUP21-SA5DN-QC-072811 *Collected:* 7/28/2011 10:19:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.0804	MDL	0.217	PQL	mg/Kg	J	Z, Q
CHROMIUM	30.7		0.130	MDL	0.435	PQL	mg/Kg	J	A
SILVER	0.0493	J	0.0154	MDL	0.109	PQL	mg/Kg	J	Z
VANADIUM	59.4		0.0239	MDL	0.109	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-068-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 7:50:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.110	J	0.0623	MDL	0.429	PQL	mg/Kg	J	Z

Sample ID: SL-068-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 7:50:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.103	J	0.0795	MDL	0.215	PQL	mg/Kg	J	Z, Q
CHROMIUM	14.1		0.129	MDL	0.429	PQL	mg/Kg	J	A
SILVER	0.0318	J	0.0152	MDL	0.107	PQL	mg/Kg	J	Z
VANADIUM	39.2		0.0236	MDL	0.107	PQL	mg/Kg	J	A

Sample ID: SL-068-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 7:40:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0930	J	0.0611	MDL	0.422	PQL	mg/Kg	J	Z

Sample ID: SL-068-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 7:40:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0780	U	0.0780	MDL	0.211	PQL	mg/Kg	UJ	Q
CHROMIUM	16.8		0.126	MDL	0.422	PQL	mg/Kg	J	A
SILVER	0.0198	J	0.0150	MDL	0.105	PQL	mg/Kg	J	Z
VANADIUM	39.5		0.0232	MDL	0.105	PQL	mg/Kg	J	A

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 11:30:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.122	J	0.0663	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 11:30:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.206	J	0.0846	MDL	0.229	PQL	mg/Kg	J	Z, Q
CHROMIUM	16.2		0.137	MDL	0.457	PQL	mg/Kg	J	A
SILVER	0.0354	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z
VANADIUM	33.5		0.0252	MDL	0.114	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory:** LL

EDD Filename: PrepDE211_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-070-SA6-SB-4.0-5.0 ***Collected:*** 7/28/2011 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	0.167	J	0.0642	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-4.0-5.0 ***Collected:*** 7/28/2011 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
ANTIMONY	0.0824	J	0.0820	MDL	0.221	PQL	mg/Kg	J	Z, Q
CHROMIUM	23.3		0.133	MDL	0.443	PQL	mg/Kg	J	A
SILVER	0.0215	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	48.7		0.0244	MDL	0.111	PQL	mg/Kg	J	A

Sample ID: SL-090-SA6-SB-3.0-4.0 ***Collected:*** 7/28/2011 11:20:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0819	U	0.0819	MDL	0.221	PQL	mg/Kg	UJ	Q
CHROMIUM	17.7		0.133	MDL	0.443	PQL	mg/Kg	J	A
SILVER	0.0223	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	46.0		0.0244	MDL	0.111	PQL	mg/Kg	J	A

Sample ID: SL-172-SA5DN-SB-4.0-5.0 ***Collected:*** 7/28/2011 12:04:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.121	J	0.0637	MDL	0.439	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 ***Collected:*** 7/28/2011 12:04:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.127	J	0.0812	MDL	0.220	PQL	mg/Kg	J	Z, Q
CHROMIUM	26.0		0.132	MDL	0.439	PQL	mg/Kg	J	A
SILVER	0.0572	J	0.0156	MDL	0.110	PQL	mg/Kg	J	Z
VANADIUM	49.9		0.0242	MDL	0.110	PQL	mg/Kg	J	A

Sample ID: SL-172-SA5DN-SB-9.0-10.0 ***Collected:*** 7/28/2011 12:09:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.110	J	0.0686	MDL	0.473	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-172-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.102	J	0.0875	MDL	0.236	PQL	mg/Kg	J	Z, Q
CHROMIUM	25.8		0.142	MDL	0.473	PQL	mg/Kg	J	A
SILVER	0.0470	J	0.0168	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	49.7		0.0260	MDL	0.118	PQL	mg/Kg	J	A

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.171	J	0.0620	MDL	0.428	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.167	J	0.0791	MDL	0.214	PQL	mg/Kg	J	Z, Q
CHROMIUM	31.9		0.128	MDL	0.428	PQL	mg/Kg	J	A
SILVER	0.0438	J	0.0152	MDL	0.107	PQL	mg/Kg	J	Z
VANADIUM	62.0		0.0235	MDL	0.107	PQL	mg/Kg	J	A

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0798	J	0.0659	MDL	0.454	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0991	J	0.0840	MDL	0.227	PQL	mg/Kg	J	Z, Q
CADMIUM	0.0663	J	0.0500	MDL	0.114	PQL	mg/Kg	J	Z
CHROMIUM	26.0		0.136	MDL	0.454	PQL	mg/Kg	J	A
SILVER	0.0536	J	0.0161	MDL	0.114	PQL	mg/Kg	J	Z
VANADIUM	49.4		0.0250	MDL	0.114	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: DUP21-SA5DN-QC-072811 **Collected:** 7/28/2011 10:19:00 **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-068-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 7:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.27	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-068-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 7:40:00 **Analysis Type:** RES **Dilution:** 1

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

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 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
HEXAVALENT CHROMIUM	0.43	J	0.25	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-4.0-5.0 **Collected:** 7/28/2011 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	0.25	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-090-SA6-SB-3.0-4.0 **Collected:** 7/28/2011 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	0.39	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 **Collected:** 7/28/2011 12:04:00 **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-172-SA5DN-SB-9.0-10.0 **Collected:** 7/28/2011 12:09:00 **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	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *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

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.24	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP21-SA5DN-QC-072811 *Collected:* 7/28/2011 10:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0095	J	0.0076	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-068-SA6-SB-4.0-5.0 *Collected:* 7/28/2011 7:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0366	J	0.0071	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-070-SA6-SB-4.0-5.0 *Collected:* 7/28/2011 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	0.0127	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 12:04:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0159	J	0.0076	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0114	J	0.0082	MDL	0.116	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: PrepDE211_v2 eQAPP Name: CDM_SSFL_110509

Method Category: METALS
Method: 7471A **Matrix:** SO

Sample ID: SL-183-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 10:11:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0120	J	0.0078	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0157	J	0.0075	MDL	0.107	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-090-SA6-SB-3.0-4.0 *Collected:* 7/28/2011 11:20:00 *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)	0.66	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8082 **Matrix:** SO

Sample ID: SL-068-SA6-SB-4.0-5.0 *Collected:* 7/28/2011 7:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.6	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 *Collected:* 7/28/2011 12:04:00 *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	1.1	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 12:09:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.2	J	0.39	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: PrepDE211_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-068-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 7:50:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	29	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	75	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	61	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	89	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	43	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	28	J	19	MDL	190	PQL	ug/Kg	J	Z
CHRYSENE	80	J	19	MDL	190	PQL	ug/Kg	J	Z
FLUORANTHENE	150	J	19	MDL	190	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	47	J	19	MDL	190	PQL	ug/Kg	J	Z
PHENANTHRENE	80	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	150	J	19	MDL	190	PQL	ug/Kg	J	Z

Sample ID: SL-070-SA6-SB-19.0-20.0 **Collected:** 7/28/2011 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
BENZO(A)ANTHRACENE	50	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	58	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	73	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	55	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	36	J	20	MDL	200	PQL	ug/Kg	J	Z
CHRYSENE	60	J	20	MDL	200	PQL	ug/Kg	J	Z
FLUORANTHENE	59	J	20	MDL	200	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	37	J	20	MDL	200	PQL	ug/Kg	J	Z
PYRENE	58	J	20	MDL	200	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 **Collected:** 7/28/2011 12:04:00 **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	28	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-4.0-5.0 **Collected:** 7/28/2011 10:11:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
3,5-Dimethylphenol	37	U	37	MDL	190	PQL	ug/Kg	R	Q
BENZIDINE	1300	U	1300	MDL	3700	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: PrepDE211_v2 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-183-SA5DN-SB-9.0-10.0 *Collected:* 7/28/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	19	MDL	380	PQL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: DUP21-SA5DN-QC-072811 *Collected:* 7/28/2011 10:19:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.8	J	0.37	MDL	1.8	PQL	ug/Kg	J	FD

Sample ID: SL-068-SA6-SB-19.0-20.0 *Collected:* 7/28/2011 7:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	1.6	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
ACENAPHTHYLENE	1.8	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	6.8	MDL	20	PQL	ug/Kg	J	Z
FLUORENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	0.98	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-068-SA6-SB-4.0-5.0 *Collected:* 7/28/2011 7:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.43	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-070-SA6-SB-19.0-20.0 *Collected:* 7/28/2011 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
1-METHYLNAPHTHALENE	1.6	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	1.8	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.9	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
NAPHTHALENE	1.7	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory:** LL

EDD Filename: PrepDE211_v2 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-070-SA6-SB-4.0-5.0 ***Collected:*** 7/28/2011 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	0.93	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.78	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	9.1	J	6.7	MDL	20	PQL	ug/Kg	J	Z
FLUORANTHENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.2	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-4.0-5.0 ***Collected:*** 7/28/2011 12:04:00 ***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	0.80	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.83	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.4	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.7	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.7	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SB-9.0-10.0 ***Collected:*** 7/28/2011 12:09:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	15	J	7.1	MDL	21	PQL	ug/Kg	J	Z
Di-n-butylphthalate	8.3	J	7.1	MDL	21	PQL	ug/Kg	J	Z
FLUORENE	1.8	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-183-SA5DN-SB-4.0-5.0 ***Collected:*** 7/28/2011 10:11:00 ***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	0.37	U	0.37	MDL	1.9	PQL	ug/Kg	UJ	FD

Sample ID: SL-183-SA5DN-SB-9.0-10.0 ***Collected:*** 7/28/2011 10:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.44	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: PrepDE211_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
*#	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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: PrepDE211_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: PrepDE211_v2 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE211

Method Blank Outlier Report

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21408FB222012	8/3/2011 8:12:00 PM	ALUMINUM	6.17 mg/Kg	DUP21-SA5DN-QC-072811
		BORON	0.739 mg/Kg	SL-068-SA6-SB-19.0-20.0
		CALCIUM	11.0 mg/Kg	SL-068-SA6-SB-4.0-5.0
		IRON	4.51 mg/Kg	SL-070-SA6-SB-19.0-20.0
		MAGNESIUM	0.694 mg/Kg	SL-070-SA6-SB-4.0-5.0
		MANGANESE	0.0420 mg/Kg	SL-090-SA6-SB-3.0-4.0
		PHOSPHORUS	1.27 mg/Kg	SL-172-SA5DN-SB-4.0-5.0
		STRONTIUM	0.0620 mg/Kg	SL-172-SA5DN-SB-9.0-10.0
		TIN	1.55 mg/Kg	SL-183-SA5DN-SB-4.0-5.0
				SL-183-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
DUP21-SA5DN-QC-072811(RES)	TIN	2.57 mg/Kg	2.57U mg/Kg
SL-068-SA6-SB-19.0-20.0(RES)	BORON	0.622 mg/Kg	0.622U mg/Kg
SL-068-SA6-SB-19.0-20.0(RES)	TIN	1.81 mg/Kg	1.81U mg/Kg
SL-068-SA6-SB-4.0-5.0(RES)	BORON	1.72 mg/Kg	1.72U mg/Kg
SL-068-SA6-SB-4.0-5.0(RES)	TIN	2.07 mg/Kg	2.07U mg/Kg
SL-070-SA6-SB-19.0-20.0(RES)	TIN	2.36 mg/Kg	2.36U mg/Kg
SL-070-SA6-SB-4.0-5.0(RES)	TIN	2.04 mg/Kg	2.04U mg/Kg
SL-090-SA6-SB-3.0-4.0(RES)	TIN	2.42 mg/Kg	2.42U mg/Kg
SL-172-SA5DN-SB-4.0-5.0(RES)	BORON	3.65 mg/Kg	3.65U mg/Kg
SL-172-SA5DN-SB-4.0-5.0(RES)	TIN	2.66 mg/Kg	2.66U mg/Kg
SL-172-SA5DN-SB-9.0-10.0(RES)	TIN	2.21 mg/Kg	2.21U mg/Kg
SL-183-SA5DN-SB-4.0-5.0(RES)	TIN	2.68 mg/Kg	2.68U mg/Kg
SL-183-SA5DN-SB-9.0-10.0(RES)	BORON	1.18 mg/Kg	1.18U mg/Kg
SL-183-SA5DN-SB-9.0-10.0(RES)	TIN	2.63 mg/Kg	2.63U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: DE211_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-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	ANTIMONY	30	28	75.00-125.00	-	ANTIMONY	J (all detects) UJ (all non-detects) Post Spike = 97%
SL-183-SA5DN-SB-4.0-5.0MS (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	BARIUM	129	-	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-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	ALUMINUM IRON MAGNESIUM POTASSIUM TITANIUM	2654 2551 377 145 252	2424 914 294 142 253	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM IRON MAGNESIUM POTASSIUM TITANIUM	J(all detects) Al, Fe, Mg, K, Ti No qual, >4x
SL-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	CALCIUM	-187	-37	75.00-125.00	-	CALCIUM	No qual, >4x

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_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-183-SA5DN-SB-4.0-5.0MSD (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	MANGANESE	-	67	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-183-SA5DN-SB-4.0-5.0MS (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	FLUORIDE	64	-	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-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (SL-183-SA5DN-SB-4.0-5.0)	2,4-DINITROPHENOL	-	-	20.00-143.00	100 (30.00)	2,4-DINITROPHENOL	J(all detects)
	4,6-DINITRO-2-METHYLPHENOL	-	-	24.00-116.00	66 (30.00)	4,6-DINITRO-2-METHYLPHEN	
	ACENAPHTHYLENE	112	-	81.00-110.00	-	ACENAPHTHYLENE	
	ANTHRACENE	118	-	75.00-115.00	-	ANTHRACENE	
	FLUORANTHENE	113	-	73.00-112.00	-	FLUORANTHENE	
	HEXACHLOROCYCLOPENTADI	-	-	10.00-153.00	44 (30.00)	HEXACHLOROCYCLOPENTAD	
	ISOPHORONE	103	-	73.00-102.00	-	ISOPHORONE	
	PENTACHLOROPHENOL	-	-	28.00-127.00	33 (30.00)	PENTACHLOROPHENOL	
SL-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (SL-183-SA5DN-SB-4.0-5.0)	3,5-Dimethylphenol	0	0	70.00-130.00	-	3,5-Dimethylphenol	J(all detects) R(all non-detects)
SL-183-SA5DN-SB-4.0-5.0MS SL-183-SA5DN-SB-4.0-5.0MSD (SL-183-SA5DN-SB-4.0-5.0)	BENZIDINE	26	28	35.00-141.00	-	BENZIDINE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: DE211_v2. eQAPP Name: CDM_SSFL_110509

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-183-SA5DN-SB-4.0-5.0DUP (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	ANTIMONY	23	20.00	No qual, OK by Difference
	MOLYBDENUM	23	20.00	

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-183-SA5DN-SB-4.0-5.0DUP (DUP21-SA5DN-QC-072811 SL-068-SA6-SB-19.0-20.0 SL-068-SA6-SB-4.0-5.0 SL-070-SA6-SB-19.0-20.0 SL-070-SA6-SB-4.0-5.0 SL-090-SA6-SB-3.0-4.0 SL-172-SA5DN-SB-4.0-5.0 SL-172-SA5DN-SB-9.0-10.0 SL-183-SA5DN-SB-4.0-5.0 SL-183-SA5DN-SB-9.0-10.0)	HEXAVALENT CHROMIUM	70	20.00	No qual, OK by Difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE211 Laboratory: LL

EDD Filename: DE211_v2. 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
P21426BQ222053A (DUP21 -SA5DN -QC-072811 SL -068-SA6-SB-19.0-20.0 SL -068-SA6-SB-4.0-5.0 SL -070-SA6-SB-19.0-20.0 SL -070-SA6-SB-4.0-5.0 SL -090-SA6-SB-3.0-4.0 SL -172-SA5DN -SB-4.0-5.0 SL -172-SA5DN -SB-9.0-10.0 SL -183-SA5DN -SB-4.0-5.0 SL -183-SA5DN -SB-9.0-10.0)	ANTIMONY	66	-	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
P21408FQ222016 (DUP21 -SA5DN -QC-072811 SL -068-SA6-SB-19.0-20.0 SL -068-SA6-SB-4.0-5.0 SL -070-SA6-SB-19.0-20.0 SL -070-SA6-SB-4.0-5.0 SL -090-SA6-SB-3.0-4.0 SL -172-SA5DN -SB-4.0-5.0 SL -172-SA5DN -SB-9.0-10.0 SL -183-SA5DN -SB-4.0-5.0 SL -183-SA5DN -SB-9.0-10.0)	ALUMINUM IRON MAGNESIUM TITANIUM	146 123 121 177	- - - -	80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00	- - - -	ALUMINUM IRON MAGNESIUM TITANIUM	No qual, SRM within QC limits

Field Duplicate RPD Report

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
MOISTURE	10.9	9.8	11		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
FLUORIDE	6.6	6.9	4	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
ALUMINUM	33000	32700	1	50.00	No Qualifiers Applied
BORON	5.10	4.64	9	50.00	
CALCIUM	16500	16400	1	50.00	
IRON	32600	33900	4	50.00	
LITHIUM	30.7	31.1	1	50.00	
MAGNESIUM	7770	7840	1	50.00	
MANGANESE	387	381	2	50.00	
PHOSPHORUS	281	283	1	50.00	
POTASSIUM	3800	3830	1	50.00	
SODIUM	144	144	0	50.00	
STRONTIUM	36.1	36.1	0	50.00	
TIN	2.68	2.57	4	50.00	
TITANIUM	1330	1330	0	50.00	
Zirconium	6.14	6.20	1	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
ANTIMONY	0.167	0.116	36	50.00	No Qualifiers Applied
ARSENIC	8.65	8.25	5	50.00	
BARIUM	134	129	4	50.00	
BERYLLIUM	0.841	0.790	6	50.00	
CADMIUM	0.272	0.250	8	50.00	
CHROMIUM	31.9	30.7	4	50.00	
COBALT	10.3	10.3	0	50.00	
COPPER	15.6	14.9	5	50.00	
LEAD	9.43	9.37	1	50.00	
MOLYBDENUM	0.557	0.499	11	50.00	
NICKEL	23.6	22.2	6	50.00	
SELENIUM	0.171	0.162	5	50.00	
SILVER	0.0438	0.0493	12	50.00	
THALLIUM	0.358	0.342	5	50.00	
VANADIUM	62.0	59.4	4	50.00	
ZINC	70.1	80.1	13	50.00	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
HEXAVALENT CHROMIUM	0.24	0.27	12	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
MERCURY	0.0120	0.0095	23	50.00	No Qualifiers Applied

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
CHRYSENE	1.9 U	1.8	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-183-SA5DN-SB-4.0-5.0	DUP21-SA5DN-QC-072811			
PH	8.20	8.14	1	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP21-SA5DN-QC-072811	BORON	J	4.64	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	2.57	11.1	PQL	mg/Kg	
SL-068-SA6-SB-19.0-20.0	BORON	J	0.622	5.37	PQL	mg/Kg	J (all detects)
	TIN	J	1.81	10.7	PQL	mg/Kg	
	Zirconium	J	2.67	5.37	PQL	mg/Kg	
SL-068-SA6-SB-4.0-5.0	BORON	J	1.72	5.38	PQL	mg/Kg	J (all detects)
	TIN	J	2.07	10.8	PQL	mg/Kg	
	Zirconium	J	3.64	5.38	PQL	mg/Kg	
SL-070-SA6-SB-19.0-20.0	TIN	J	2.36	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.04	5.77	PQL	mg/Kg	
SL-070-SA6-SB-4.0-5.0	BORON	J	5.09	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	2.04	11.1	PQL	mg/Kg	
	Zirconium	J	5.04	5.54	PQL	mg/Kg	
SL-090-SA6-SB-3.0-4.0	TIN	J	2.42	10.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.40	5.43	PQL	mg/Kg	
SL-172-SA5DN-SB-4.0-5.0	BORON	J	3.65	5.33	PQL	mg/Kg	J (all detects)
	TIN	J	2.66	10.7	PQL	mg/Kg	
SL-172-SA5DN-SB-9.0-10.0	BORON	J	4.51	5.91	PQL	mg/Kg	J (all detects)
	TIN	J	2.21	11.8	PQL	mg/Kg	
	Zirconium	J	5.58	5.91	PQL	mg/Kg	
SL-183-SA5DN-SB-4.0-5.0	BORON	J	5.10	5.40	PQL	mg/Kg	J (all detects)
	TIN	J	2.68	10.8	PQL	mg/Kg	
SL-183-SA5DN-SB-9.0-10.0	BORON	J	1.18	5.68	PQL	mg/Kg	J (all detects)
	TIN	J	2.63	11.4	PQL	mg/Kg	
	Zirconium	J	5.06	5.68	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP21-SA5DN-QC-072811	ANTIMONY	J	0.116	0.217	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.162	0.435	PQL	mg/Kg	
	SILVER	J	0.0493	0.109	PQL	mg/Kg	
SL-068-SA6-SB-19.0-20.0	ANTIMONY	J	0.103	0.215	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.110	0.429	PQL	mg/Kg	
	SILVER	J	0.0318	0.107	PQL	mg/Kg	
SL-068-SA6-SB-4.0-5.0	SELENIUM	J	0.0930	0.422	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0198	0.105	PQL	mg/Kg	
SL-070-SA6-SB-19.0-20.0	ANTIMONY	J	0.206	0.229	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.122	0.457	PQL	mg/Kg	
	SILVER	J	0.0354	0.114	PQL	mg/Kg	
SL-070-SA6-SB-4.0-5.0	ANTIMONY	J	0.0824	0.221	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.167	0.443	PQL	mg/Kg	
	SILVER	J	0.0215	0.111	PQL	mg/Kg	
SL-090-SA6-SB-3.0-4.0	SILVER	J	0.0223	0.111	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-172-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.127	0.220	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.121	0.439	PQL	mg/Kg	
	SILVER	J	0.0572	0.110	PQL	mg/Kg	
SL-172-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.102	0.236	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.110	0.473	PQL	mg/Kg	
	SILVER	J	0.0470	0.118	PQL	mg/Kg	
SL-183-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.167	0.214	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.171	0.428	PQL	mg/Kg	
	SILVER	J	0.0438	0.107	PQL	mg/Kg	
SL-183-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.0991	0.227	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0663	0.114	PQL	mg/Kg	
	SELENIUM	J	0.0798	0.454	PQL	mg/Kg	
	SILVER	J	0.0536	0.114	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP21-SA5DN-QC-072811	HEXAVALENT CHROMIUM	J	0.27	1.1	PQL	mg/Kg	J (all detects)
SL-068-SA6-SB-19.0-20.0	HEXAVALENT CHROMIUM	J	0.27	1.1	PQL	mg/Kg	J (all detects)
SL-068-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.33	1.1	PQL	mg/Kg	J (all detects)
SL-070-SA6-SB-19.0-20.0	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)
SL-070-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.25	1.1	PQL	mg/Kg	J (all detects)
SL-090-SA6-SB-3.0-4.0	HEXAVALENT CHROMIUM	J	0.39	1.1	PQL	mg/Kg	J (all detects)
SL-172-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)
SL-172-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.29	1.2	PQL	mg/Kg	J (all detects)
SL-183-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.24	1.1	PQL	mg/Kg	J (all detects)
SL-183-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.24	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP21-SA5DN-QC-072811	MERCURY	J	0.0095	0.107	PQL	mg/Kg	J (all detects)
SL-068-SA6-SB-4.0-5.0	MERCURY	J	0.0366	0.101	PQL	mg/Kg	J (all detects)
SL-070-SA6-SB-4.0-5.0	MERCURY	J	0.0127	0.111	PQL	mg/Kg	J (all detects)
SL-172-SA5DN-SB-4.0-5.0	MERCURY	J	0.0159	0.108	PQL	mg/Kg	J (all detects)
SL-172-SA5DN-SB-9.0-10.0	MERCURY	J	0.0114	0.116	PQL	mg/Kg	J (all detects)
SL-183-SA5DN-SB-4.0-5.0	MERCURY	J	0.0120	0.111	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-183-SA5DN-SB-9.0-10.0	MERCURY	J	0.0157	0.107	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-090-SA6-SB-3.0-4.0	EFH (C30-C40)	J	0.66	1.3	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-068-SA6-SB-4.0-5.0	AROCLOR 1254	J	1.6	1.8	PQL	ug/Kg	J (all detects)
SL-172-SA5DN-SB-4.0-5.0	AROCLOR 1248	J	1.1	1.9	PQL	ug/Kg	J (all detects)
SL-172-SA5DN-SB-9.0-10.0	AROCLOR 1254	J	1.2	2.0	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-068-SA6-SB-19.0-20.0	ANTHRACENE	J	29	190	PQL	ug/Kg	J (all detects)
	BENZO(A)ANTHRACENE	J	75	190	PQL	ug/Kg	
	BENZO(A)PYRENE	J	61	190	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	89	190	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	43	190	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	28	190	PQL	ug/Kg	
	CHRYSENE	J	80	190	PQL	ug/Kg	
	FLUORANTHENE	J	150	190	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	47	190	PQL	ug/Kg	
	PHENANTHRENE	J	80	190	PQL	ug/Kg	
	PYRENE	J	150	190	PQL	ug/Kg	
SL-070-SA6-SB-19.0-20.0	BENZO(A)ANTHRACENE	J	50	200	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	58	200	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	73	200	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	55	200	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	36	200	PQL	ug/Kg	
	CHRYSENE	J	60	200	PQL	ug/Kg	
	FLUORANTHENE	J	59	200	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	37	200	PQL	ug/Kg	
	PYRENE	J	58	200	PQL	ug/Kg	
SL-172-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	370	PQL	ug/Kg	J (all detects)
SL-183-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	380	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE211 **Laboratory: LL**

EDD Filename: DE211_v2. **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-068-SA6-SB-19.0-20.0	ACENAPHTHENE	J	1.6	1.9	PQL	ug/Kg	
	ACENAPHTHYLENE	J	1.8	1.9	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	13	20	PQL	ug/Kg	J (all detects)
	FLUORENE	J	1.2	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	0.98	1.9	PQL	ug/Kg	
SL-068-SA6-SB-4.0-5.0	CHRYSENE	J	0.43	1.8	PQL	ug/Kg	J (all detects)
SL-070-SA6-SB-19.0-20.0	1-METHYLNAPHTHALENE	J	1.6	2.0	PQL	ug/Kg	
	2-METHYLNAPHTHALENE	J	1.8	2.0	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	1.9	2.0	PQL	ug/Kg	
	NAPHTHALENE	J	1.7	2.0	PQL	ug/Kg	
SL-070-SA6-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	0.93	1.9	PQL	ug/Kg	
	BENZO(A)PYRENE	J	0.78	1.9	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.2	1.9	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	9.1	20	PQL	ug/Kg	
	FLUORANTHENE	J	1.2	1.9	PQL	ug/Kg	
	PYRENE	J	1.2	1.9	PQL	ug/Kg	
SL-172-SA5DN-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	0.80	1.9	PQL	ug/Kg	
	BENZO(A)PYRENE	J	0.83	1.9	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.4	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.7	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.7	1.9	PQL	ug/Kg	
SL-172-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	15	21	PQL	ug/Kg	
	Di-n-butylphthalate	J	8.3	21	PQL	ug/Kg	J (all detects)
	FLUORENE	J	1.8	2.0	PQL	ug/Kg	
SL-183-SA5DN-SB-9.0-10.0	CHRYSENE	J	0.44	1.9	PQL	ug/Kg	J (all detects)

LDC #: 26407I4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-2H)

SDG #: DE211 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: CL

2nd Reviewer: MG

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	—	
III.	Calibration	—	
IV.	Blanks	A	No Quals
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

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-172-SA5DN-SB-4.0-5.0	11	SL-183-SA5DN-SB-4.0-5.0MS	21		31	
2	SL-172-SA5DN-SB-9.0-10.0	12	SL-183-SA5DN-SB-4.0-5.0MSD	22		32	
3	SL-183-SA5DN-SB-4.0-5.0	13	SL-183-SA5DN-SB-4.0-5.0DUP	23		33	
4	SL-183-SA5DN-SB-9.0-10.0	14		24		34	
5	DUP21-SA5DN-QC-072811	15		25		35	
6	SL-068-SA6-SB-4.0-5.0	16		26		36	
7	SL-068-SA6-SB-19.0-20.0	17		27		37	
8	SL-070-SA6-SB-4.0-5.0	18		28		38	
9	SL-070-SA6-SB-19.0-20.0	19		29		39	
10	SL-090-SA6-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.: DE211
Matrix: SOIL Level (low/med): LOW

>4X

Background Lab Sample ID: 6359559BKG Matrix Spike Lab Sample ID: 6359560MS Matrix Spike Duplicate Lab Sample ID: 6359561MSD
% Solids for Sample: 89.1
Batch Id(s): P21408F, P21426B, P21411C

Sb: J/UJ/A (PS=97%

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		32974.9309		38647.9590		38361.8562		213.7780	222.2444	MG/KG	2654		2424		1			20	P
Antimony	121	0.1675	B	0.5623		0.5301		1.3335	1.2950	MG/KG	30	N	28	N	6		75 - 125	20	MS
Arsenic	75	8.6452		10.6277		10.4463		2.2224	2.1583	MG/KG	89		83		2		75 - 125		MS
Barium	137	133.7181		148.0593		143.0761		11.1122	10.7917	MG/KG	129		87		3			20	MS
Beryllium	9	0.8406		1.5653		1.5464		0.8890	0.8633	MG/KG	82		82		1		75 - 125	20	MS
Boron		5.0958	B	206.0243		212.9724		213.7780	222.2444	MG/KG	94		94		3		84 - 115	20	P
Cadmium	111	0.2719		1.4157		1.3423		1.1112	1.0792	MG/KG	103		99		5		75 - 125	20	MS
Calcium		16534.4924		15735.4412		16367.9179		427.5560	444.4889	MG/KG	-187		-37		4			20	P
Chromium	52	31.8529		41.9153		40.9005		11.1122	10.7917	MG/KG	91		84		2		75 - 125	20	MS
Cobalt	59	10.2613		64.1397		61.6421		55.5611	53.9584	MG/KG	97		95		4		75 - 125	20	MS
Copper	63	15.5673		26.1804		25.4036		11.1122	10.7917	MG/KG	96		91		3		75 - 125	20	MS
Iron		32629.1246		35355.8271		33644.3733		106.8890	111.1222	MG/KG	2551		914		5			20	P
Lead	208	9.4340		13.0435		12.4644		3.3337	3.2375	MG/KG	108		94		5		75 - 125	20	MS
Lithium		30.7315		140.8979		142.2909		106.8890	111.1222	MG/KG	103		100		1		82 - 114	20	P
Magnesium		7774.6968		8580.4628		8427.4216		213.7780	222.2444	MG/KG	377		294		2			20	P
Manganese		387.4439		448.0872		424.8603		53.4445	55.5611	MG/KG	113		67		5			20	P
Mercury		0.0120	B	0.1888		0.1883		0.1781	0.1744	MG/KG	99		101		0		65 - 135	20	CV
Molybdenum	98	0.5571		10.5411		10.5327		11.1122	10.7917	MG/KG	90		92		0		75 - 125	20	MS
Nickel	60	23.5797		34.8479		33.5190		11.1122	10.7917	MG/KG	101		92		4		75 - 125	20	MS
Phosphorus		280.5642		375.0585		379.5557		106.8890	111.1222	MG/KG	88		89		1		75 - 125	20	P
Potassium		3801.7828		5346.4358		5379.9302		1068.8900	1111.2222	MG/KG	145	N	142	N	1		75 - 125	20	P
Selenium	78	0.1709	B	2.2380		2.0886		2.2224	2.1583	MG/KG	93		89		7		75 - 125	20	MS
Silver	107	0.0438	B	10.9233		10.8737		11.1122	10.7917	MG/KG	98		100		0		75 - 125	20	MS
Sodium		143.8520		1171.8080		1192.3703		1068.8900	1111.2222	MG/KG	96		94		2		75 - 125	20	P
Strontium		36.1165		137.2615		139.8162		106.8890	111.1222	MG/KG	95		93		2		75 - 115	20	P
Thallium	203	0.3577		0.8021		0.7401		0.4445	0.4317	MG/KG	100		89		8		75 - 125	20	MS
Tin		2.6850	B	345.3851		351.7218		427.5560	444.4889	MG/KG	80		79	N	2		80 - 110	20	P
Titanium		1329.5778		1598.9493		1610.7255		106.8890	111.1222	MG/KG	252		253		1			20	P
Vanadium	51	61.9956		75.1186		72.1963		11.1122	10.7917	MG/KG	118		95		4			20	MS
Zinc	66	70.0764		81.9193		78.2828		11.1122	10.7917	MG/KG	107		76		5			20	MS
Zirconium		6.1405		103.6973		105.9150		106.8890	111.1222	MG/KG	91		90		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

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE211
Matrix: SOIL Level (low/med): LOW

< 5xRL

Background Lab Sample ID: 6359559BKG
% Solids for Duplicate: 89.1
Batch ID(s): P21408F, P21426B, P21411C
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6359562DUP
% Solids for Sample: 89.1

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			32974.9309		34227.1405		4		P
Antimony	121		0.1675	B	0.1326	B	23		MS
Arsenic	75		8.6452		8.2789		4		MS
Barium	137		133.7181		137.4750		3		MS
Beryllium	9		0.8406		0.8409		0		MS
Boron			5.0958	B	4.7060	B	8		P
Cadmium	111	0.1	0.2719		0.2577		5		MS
Calcium			16534.4924		18069.6303		9		P
Chromium	52		31.8529		31.9315		0		MS
Cobalt	59		10.2613		10.3365		1		MS
Copper	63		15.5673		15.7391		1		MS
Iron			32629.1246		35460.7683		8		P
Lead	208		9.4340		9.4166		0		MS
Lithium			30.7315		31.9210		4		P
Magnesium			7774.6968		8158.2292		5		P
Manganese			387.4439		415.8760		7		P
Mercury			0.0120	B	0.0115	B	4		CV
Molybdenum	98	0.1	0.5571		0.4426		23	*	MS
Nickel	60		23.5797		23.0409		2		MS
Phosphorus			280.5642		284.2640		1		P
Potassium			3801.7828		3914.2614		3		P
Selenium	78		0.1709	B	0.1814	B	6		MS
Silver	107		0.0438	B	0.0432	B	1		MS
Sodium		107.9	143.8520		149.7916		4		P
Strontium			36.1165		40.2885		11		P
Thallium	203	0.1	0.3577		0.3435		4		MS
Tin			2.6850	B	2.9903	B	11		P
Titanium			1329.5778		1282.2516		4		P
Vanadium	51		61.9956		61.7064		0		MS
Zinc	66		70.0764		70.7731		1		MS
Zirconium		5.4	6.1405		6.6429		8		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.

DE211 2329

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

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE211
Matrix: SOIL Level (low/med): LOW

5/05

Background Lab Sample ID: 6359559BKG Serial Dilution Lab Sample ID: 6359559L
Batch ID(s): P21408F, P21426B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		305558.9000		297442.1000		3		P
Antimony	121	0.7835	B	1.8500	U	100		MS
Arsenic	75	40.4400		39.6350		2		MS
Barium	137	625.5000		602.0000		4		MS
Beryllium	9	3.9320		4.4885		14		MS
Boron		47.2200	B	64.3000	B	36		P
Cadmium	111	1.2720		1.1825	B	7		MS
Calcium		153215.2200		157904.7000		3		P
Chromium	52	149.0000		169.7000		14	E	MS
Cobalt	59	48.0000		49.1850		2		MS
Copper	63	72.8200		76.7500		5		MS
Iron		151177.2600		150052.0500		1		P
Lead	208	44.1300		43.6200		1		MS
Lithium		284.7700		276.3000		3		P
Magnesium		72043.4500		74795.9000		4		P
Manganese		3590.2100		3849.0500		7		P
Molybdenum	98	2.6060		2.8775		10		MS
Nickel	60	110.3000		114.2500		4		MS
Phosphorus		2599.8200		2643.9000		2		P
Potassium		35228.8400		34880.3000		1		P
Selenium	78	0.7992	B	1.4500	U	100		MS
Silver	107	0.2047	B	0.3550	U	100		MS
Sodium		1332.9900		1271.4500	B	5		P
Strontium		334.6700		346.7000		4		P
Thallium	203	1.6730		1.9715	B	18		MS
Tin		24.8800	B	21.1000	B	15		P
Titanium		12320.4000		13295.5000		8		P
Vanadium	51	290.0000		323.1500		11	E	MS
Zinc	66	327.8000		346.0000		6		MS
Zirconium		56.9000		100.4500	B	77		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:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

DE211 2331

SAMPLE DELIVERY GROUP

DE212

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
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3050B	6010B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3050B	6020	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3060A	7199	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3550B	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3550B	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3550B	8082	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3550B	8270C	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	3550B	8270C SIM	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	5035	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	METHOD	300.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	METHOD	314.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	METHOD	7471A	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	METHOD	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0	6360506	N	METHOD	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3050B	6010B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3050B	6020	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3060A	7199	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3550B	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3550B	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3550B	8082	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3550B	8270C	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	3550B	8270C SIM	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	5035	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	METHOD	300.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	METHOD	314.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	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
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	METHOD	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MS	6360507	MS	METHOD	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3050B	6010B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3050B	6020	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3550B	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3550B	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3550B	8082	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3550B	8270C	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	3550B	8270C SIM	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	5035	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	METHOD	7471A	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	METHOD	8015B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0MSD	6360508	MSD	METHOD	8015M	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	3050B	6010B	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	3050B	6020	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	3060A	7199	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	METHOD	300.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	METHOD	314.0	III
29-Jul-2011	SL-125-SA6-SB-4.0-5.0DUP	6360509	DUP	METHOD	7471A	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3050B	6010B	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3050B	6020	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3060A	7199	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3550B	8015B	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3550B	8015M	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3550B	8082	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	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
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	3550B	8270C SIM	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	5035	8015M	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	METHOD	300.0	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	METHOD	314.0	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	METHOD	7471A	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	METHOD	8015B	III
29-Jul-2011	DUP10-SA6-QC-072911	6360513	FD	METHOD	8015M	III
29-Jul-2011	TB-072911	6360514	TB	5030B	8015M	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3050B	6010B	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3050B	6020	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3060A	7199	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3550B	8015B	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3550B	8015M	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3550B	8082	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3550B	8270C	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	3550B	8270C SIM	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	5035	8015M	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	METHOD	300.0	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	METHOD	314.0	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	METHOD	7471A	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	METHOD	8015B	III
29-Jul-2011	SL-125-SA6-SB-20.0-21.0	6360510	N	METHOD	8015M	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	3050B	6010B	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	3050B	6020	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	3060A	7199	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	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
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	3550B	8270C	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	3550B	8270C SIM	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	METHOD	300.0	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	METHOD	314.0	III
29-Jul-2011	SL-180-SA5DN-SB-4.0-5.0	6360499	N	METHOD	7471A	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3050B	6010B	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3050B	6020	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3060A	7199	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3550B	8082	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3550B	8270C	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	3550B	8270C SIM	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	METHOD	300.0	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	METHOD	314.0	III
29-Jul-2011	SL-180-SA5DN-SB-9.0-10.0	6360500	N	METHOD	7471A	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3050B	6010B	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3050B	6020	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3060A	7199	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3550B	8015B	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3550B	8015M	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3550B	8082	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3550B	8270C	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	3550B	8270C SIM	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	5035	8015M	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	METHOD	300.0	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	METHOD	314.0	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	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
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	METHOD	8015B	III
29-Jul-2011	SL-123-SA6-SB-4.0-5.0	6360504	N	METHOD	8015M	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3050B	6010B	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3050B	6020	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3060A	7199	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3550B	8015B	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3550B	8015M	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3550B	8082	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3550B	8270C	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	3550B	8270C SIM	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	5035	8015M	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	METHOD	300.0	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	METHOD	314.0	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	METHOD	7471A	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	METHOD	8015B	III
29-Jul-2011	SL-123-SA6-SB-7.0-8.0	6360505	N	METHOD	8015M	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3050B	6010B	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3050B	6020	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3060A	7199	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3550B	8015B	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3550B	8015M	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3550B	8082	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3550B	8270C	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	3550B	8270C SIM	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	5035	8015M	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	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
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	METHOD	314.0	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	METHOD	7471A	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	METHOD	8015B	III
29-Jul-2011	SL-126-SA6-SB-4.0-5.0	6360511	N	METHOD	8015M	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3050B	6010B	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3050B	6020	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3060A	7199	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3550B	8015B	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3550B	8015M	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3550B	8082	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3550B	8270C	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	3550B	8270C SIM	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	5035	8015M	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	METHOD	300.0	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	METHOD	314.0	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	METHOD	7471A	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	METHOD	8015B	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0	6360512	N	METHOD	8015M	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0DUP	P360512D270509B	DUP	METHOD	314.0	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0DUP	P360512D271924B	DUP	METHOD	300.0	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0MS	P360512R270555B	MS	METHOD	314.0	III
29-Jul-2011	SL-126-SA6-SB-9.0-10.0MS	P360512R272007B	MS	METHOD	300.0	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3050B	6010B	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3050B	6020	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3060A	7199	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	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
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3550B	8015M	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3550B	8082	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3550B	8270C	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	3550B	8270C SIM	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	5035	8015M	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	METHOD	300.0	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	METHOD	314.0	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	METHOD	7471A	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	METHOD	8015B	III
29-Jul-2011	SL-122-SA6-SB-0.0-0.5	6360503	N	METHOD	8015M	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3050B	6010B	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3050B	6020	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3060A	7199	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3550B	8082	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3550B	8270C	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	3550B	8270C SIM	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	METHOD	300.0	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	METHOD	314.0	III
29-Jul-2011	SL-174-SA5DN-SB-4.0-5.0	6360501	N	METHOD	7471A	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3050B	6010B	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3050B	6020	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3060A	7199	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3550B	8082	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3550B	8270C	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	3550B	8270C SIM	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	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
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	METHOD	314.0	III
29-Jul-2011	SL-174-SA5DN-SB-9.0-10.0	6360502	N	METHOD	7471A	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE212
EDD Filename: DE212_v1

Laboratory: LL
eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM
Method: 300.0 **Matrix:** SO

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.92	U	0.92	MDL	1.2	PQL	mg/Kg	UJ	Q, FD

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.88	MDL	1.1	PQL	mg/Kg	J	FD

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected:** 7/29/2011 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	5.8		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS
Method: 6010B **Matrix:** SO

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	10900		2.76	MDL	22.1	PQL	mg/Kg	J	E, FD

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12400		6.67	MDL	22.1	PQL	mg/Kg	J	E
BORON	1.30	J	0.397	MDL	5.52	PQL	mg/Kg	J	Z, FD
IRON	26700		2.88	MDL	22.1	PQL	mg/Kg	J	E
MAGNESIUM	4650		0.485	MDL	11.0	PQL	mg/Kg	J	E
MANGANESE	251		0.0397	MDL	0.552	PQL	mg/Kg	J	E
PHOSPHORUS	479		0.386	MDL	11.0	PQL	mg/Kg	J	E
POTASSIUM	2310		12.5	MDL	55.2	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	34.7		0.0276	MDL	0.552	PQL	mg/Kg	J	E
TIN	2.95	J	0.353	MDL	11.0	PQL	mg/Kg	U	B
TITANIUM	1000		0.0783	MDL	1.10	PQL	mg/Kg	J	E
Zirconium	4.91	J	0.508	MDL	5.52	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-122-SA6-SB-0.0-0.5** ***Collected:*** **7/29/2011 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	12700		2.47	MDL	19.7	PQL	mg/Kg	J	E

Sample ID: **SL-122-SA6-SB-0.0-0.5** ***Collected:*** **7/29/2011 2:30:00** ***Analysis Type:*** **REA2** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	46000		12.9	MDL	98.7	PQL	mg/Kg	J	E

Sample ID: **SL-122-SA6-SB-0.0-0.5** ***Collected:*** **7/29/2011 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
ALUMINUM	11300		5.97	MDL	19.7	PQL	mg/Kg	J	E
MAGNESIUM	6240		0.434	MDL	9.87	PQL	mg/Kg	J	E
MANGANESE	293		0.0355	MDL	0.493	PQL	mg/Kg	J	E
PHOSPHORUS	499		0.345	MDL	9.87	PQL	mg/Kg	J	E
POTASSIUM	2580		11.2	MDL	49.3	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	32.1		0.0247	MDL	0.493	PQL	mg/Kg	J	E
TIN	3.22	J	0.316	MDL	9.87	PQL	mg/Kg	U	B
TITANIUM	1040		0.0701	MDL	0.987	PQL	mg/Kg	J	E
Zirconium	6.52		0.454	MDL	4.93	PQL	mg/Kg	U	B

Sample ID: **SL-123-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 9:40:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4340		2.63	MDL	21.0	PQL	mg/Kg	J	E

Sample ID: **SL-123-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 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
ALUMINUM	15800		6.36	MDL	21.0	PQL	mg/Kg	J	E
BORON	2.18	J	0.379	MDL	5.26	PQL	mg/Kg	J	Z
IRON	18000		2.75	MDL	21.0	PQL	mg/Kg	J	E
MAGNESIUM	4520		0.463	MDL	10.5	PQL	mg/Kg	J	E
MANGANESE	123		0.0379	MDL	0.526	PQL	mg/Kg	J	E
PHOSPHORUS	316		0.368	MDL	10.5	PQL	mg/Kg	J	E
POTASSIUM	1980		11.9	MDL	52.6	PQL	mg/Kg	J	Q, Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

Laboratory: LL

EDD Filename: DE212_v1

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-123-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 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
STRONTIUM	28.6		0.0263	MDL	0.526	PQL	mg/Kg	J	E
TIN	2.52	J	0.337	MDL	10.5	PQL	mg/Kg	U	B
TITANIUM	347		0.0747	MDL	1.05	PQL	mg/Kg	J	E
Zirconium	3.49	J	0.484	MDL	5.26	PQL	mg/Kg	U	B

Sample ID: **SL-123-SA6-SB-7.0-8.0** ***Collected:*** **7/29/2011 9:50:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	13400		2.69	MDL	21.5	PQL	mg/Kg	J	E

Sample ID: **SL-123-SA6-SB-7.0-8.0** ***Collected:*** **7/29/2011 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
ALUMINUM	11800		6.52	MDL	21.5	PQL	mg/Kg	J	E
BORON	1.44	J	0.388	MDL	5.39	PQL	mg/Kg	J	Z
IRON	27400		2.81	MDL	21.5	PQL	mg/Kg	J	E
MAGNESIUM	4610		0.474	MDL	10.8	PQL	mg/Kg	J	E
MANGANESE	255		0.0388	MDL	0.539	PQL	mg/Kg	J	E
PHOSPHORUS	532		0.377	MDL	10.8	PQL	mg/Kg	J	E
POTASSIUM	2250		12.2	MDL	53.9	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	38.9		0.0269	MDL	0.539	PQL	mg/Kg	J	E
TIN	2.88	J	0.345	MDL	10.8	PQL	mg/Kg	U	B
TITANIUM	963		0.0765	MDL	1.08	PQL	mg/Kg	J	E
Zirconium	4.70	J	0.496	MDL	5.39	PQL	mg/Kg	U	B

Sample ID: **SL-125-SA6-SB-20.0-21.0** ***Collected:*** **7/29/2011 8:15:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5510		2.85	MDL	22.8	PQL	mg/Kg	J	E

Sample ID: **SL-125-SA6-SB-20.0-21.0** ***Collected:*** **7/29/2011 8:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	17200		6.89	MDL	22.8	PQL	mg/Kg	J	E
BORON	1.81	J	0.410	MDL	5.70	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-125-SA6-SB-20.0-21.0** ***Collected:*** **7/29/2011 8:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	29200		2.97	MDL	22.8	PQL	mg/Kg	J	E
MAGNESIUM	4960		0.501	MDL	11.4	PQL	mg/Kg	J	E
MANGANESE	320		0.0410	MDL	0.570	PQL	mg/Kg	J	E
PHOSPHORUS	336		0.399	MDL	11.4	PQL	mg/Kg	J	E
POTASSIUM	2450		12.9	MDL	57.0	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	27.5		0.0285	MDL	0.570	PQL	mg/Kg	J	E
TIN	3.18	J	0.365	MDL	11.4	PQL	mg/Kg	U	B
TITANIUM	1140		0.0809	MDL	1.14	PQL	mg/Kg	J	E
Zirconium	5.77		0.524	MDL	5.70	PQL	mg/Kg	U	B

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	26400		2.71	MDL	21.7	PQL	mg/Kg	J	E, FD

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	17500		6.55	MDL	21.7	PQL	mg/Kg	J	E
BORON	5.81		0.390	MDL	5.42	PQL	mg/Kg	J	FD
IRON	23800		2.83	MDL	21.7	PQL	mg/Kg	J	E
MAGNESIUM	5990		0.477	MDL	10.8	PQL	mg/Kg	J	E
MANGANESE	272		0.0390	MDL	0.542	PQL	mg/Kg	J	E
PHOSPHORUS	527		0.379	MDL	10.8	PQL	mg/Kg	J	E
POTASSIUM	3610		12.2	MDL	54.2	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	58.0		0.0271	MDL	0.542	PQL	mg/Kg	J	E
TIN	2.96	J	0.347	MDL	10.8	PQL	mg/Kg	U	B
TITANIUM	1130		0.0769	MDL	1.08	PQL	mg/Kg	J	E
Zirconium	5.55		0.498	MDL	5.42	PQL	mg/Kg	U	B

Sample ID: **SL-126-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 11:35:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	1660		2.64	MDL	21.1	PQL	mg/Kg	J	E
SODIUM	80.2	J	6.27	MDL	105	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-126-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 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	14400		6.38	MDL	21.1	PQL	mg/Kg	J	E
BORON	1.43	J	0.380	MDL	5.27	PQL	mg/Kg	J	Z
IRON	15400		2.75	MDL	21.1	PQL	mg/Kg	J	E
MAGNESIUM	2870		0.464	MDL	10.5	PQL	mg/Kg	J	E
MANGANESE	133		0.0380	MDL	0.527	PQL	mg/Kg	J	E
PHOSPHORUS	77.8		0.369	MDL	10.5	PQL	mg/Kg	J	E
POTASSIUM	1170		11.9	MDL	52.7	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	14.9		0.0264	MDL	0.527	PQL	mg/Kg	J	E
TIN	2.86	J	0.337	MDL	10.5	PQL	mg/Kg	U	B
TITANIUM	880		0.0749	MDL	1.05	PQL	mg/Kg	J	E
Zirconium	3.66	J	0.485	MDL	5.27	PQL	mg/Kg	U	B

Sample ID: **SL-126-SA6-SB-9.0-10.0** ***Collected:*** **7/29/2011 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
CALCIUM	1160		2.74	MDL	21.9	PQL	mg/Kg	J	E

Sample ID: **SL-126-SA6-SB-9.0-10.0** ***Collected:*** **7/29/2011 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	15400		6.63	MDL	21.9	PQL	mg/Kg	J	E
BORON	1.98	J	0.394	MDL	5.48	PQL	mg/Kg	J	Z
IRON	17600		2.86	MDL	21.9	PQL	mg/Kg	J	E
MAGNESIUM	3870		0.482	MDL	11.0	PQL	mg/Kg	J	E
MANGANESE	114		0.0394	MDL	0.548	PQL	mg/Kg	J	E
PHOSPHORUS	59.5		0.383	MDL	11.0	PQL	mg/Kg	J	E
POTASSIUM	1460		12.4	MDL	54.8	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	10.5		0.0274	MDL	0.548	PQL	mg/Kg	J	E
TIN	3.11	J	0.350	MDL	11.0	PQL	mg/Kg	U	B
TITANIUM	997		0.0778	MDL	1.10	PQL	mg/Kg	J	E
Zirconium	3.36	J	0.504	MDL	5.48	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: **SL-174-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 2:49:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	24300		2.83	MDL	22.6	PQL	mg/Kg	J	E

Sample ID: **SL-174-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 2:49:00** ***Analysis Type:*** **REA2** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	29400		14.8	MDL	113	PQL	mg/Kg	J	E

Sample ID: **SL-174-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 2:49:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	26900		6.85	MDL	22.6	PQL	mg/Kg	J	E
MAGNESIUM	6520		0.498	MDL	11.3	PQL	mg/Kg	J	E
MANGANESE	398		0.0407	MDL	0.566	PQL	mg/Kg	J	E
PHOSPHORUS	293		0.396	MDL	11.3	PQL	mg/Kg	J	E
POTASSIUM	3570		12.8	MDL	56.6	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	44.6		0.0283	MDL	0.566	PQL	mg/Kg	J	E
TIN	3.41	J	0.362	MDL	11.3	PQL	mg/Kg	U	B
TITANIUM	1410		0.0803	MDL	1.13	PQL	mg/Kg	J	E

Sample ID: **SL-174-SA5DN-SB-9.0-10.0** ***Collected:*** **7/29/2011 2:51:00** ***Analysis Type:*** **REA** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	7310		2.77	MDL	22.1	PQL	mg/Kg	J	E

Sample ID: **SL-174-SA5DN-SB-9.0-10.0** ***Collected:*** **7/29/2011 2:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	29000		6.69	MDL	22.1	PQL	mg/Kg	J	E
BORON	4.55	J	0.398	MDL	5.53	PQL	mg/Kg	J	Z
IRON	29800		2.89	MDL	22.1	PQL	mg/Kg	J	E
MAGNESIUM	5780		0.487	MDL	11.1	PQL	mg/Kg	J	E
MANGANESE	553		0.0398	MDL	0.553	PQL	mg/Kg	J	E
PHOSPHORUS	209		0.387	MDL	11.1	PQL	mg/Kg	J	E
POTASSIUM	2550		12.5	MDL	55.3	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	33.3		0.0277	MDL	0.553	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory:** LL

EDD Filename: DE212_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 6010B **Matrix:** SO

Sample ID: SL-174-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 2:51:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.43	J	0.354	MDL	11.1	PQL	mg/Kg	U	B
TITANIUM	1290		0.0786	MDL	1.11	PQL	mg/Kg	J	E
Zirconium	6.72		0.509	MDL	5.53	PQL	mg/Kg	U	B

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 9:10:00 **Analysis Type:** REA **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	122000		13.7	MDL	110	PQL	mg/Kg	J	E

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 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
ALUMINUM	20900		6.63	MDL	21.9	PQL	mg/Kg	J	E
IRON	22500		2.86	MDL	21.9	PQL	mg/Kg	J	E
MAGNESIUM	6240		0.482	MDL	11.0	PQL	mg/Kg	J	E
MANGANESE	294		0.0395	MDL	0.548	PQL	mg/Kg	J	E
PHOSPHORUS	358		0.384	MDL	11.0	PQL	mg/Kg	J	E
POTASSIUM	2870		12.4	MDL	54.8	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	147		0.0274	MDL	0.548	PQL	mg/Kg	J	E
TIN	3.05	J	0.351	MDL	11.0	PQL	mg/Kg	U	B
TITANIUM	1070		0.0778	MDL	1.10	PQL	mg/Kg	J	E
Zirconium	6.75		0.504	MDL	5.48	PQL	mg/Kg	U	B

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 9:12:00 **Analysis Type:** REA2 **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	66100		14.4	MDL	115	PQL	mg/Kg	J	E

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 9:12:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	24500		6.97	MDL	23.0	PQL	mg/Kg	J	E
IRON	26300		3.01	MDL	23.0	PQL	mg/Kg	J	E
MAGNESIUM	6780		0.507	MDL	11.5	PQL	mg/Kg	J	E
MANGANESE	335		0.0415	MDL	0.576	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212
Laboratory: LL
EDD Filename: DE212_v1
eQAPP Name: CDM_SSFL_110509

Method Category: METALS
Method: 6010B **Matrix:** SO

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 9:12:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	408		0.403	MDL	11.5	PQL	mg/Kg	J	E
POTASSIUM	3270		13.0	MDL	57.6	PQL	mg/Kg	J	Q, Q, E
STRONTIUM	104		0.0288	MDL	0.576	PQL	mg/Kg	J	E
TIN	3.23	J	0.368	MDL	11.5	PQL	mg/Kg	U	B
TITANIUM	1350		0.0818	MDL	1.15	PQL	mg/Kg	J	E
Zirconium	6.66		0.530	MDL	5.76	PQL	mg/Kg	U	B

Method Category: METALS
Method: 6020 **Matrix:** SO

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.117	J	0.0634	MDL	0.437	PQL	mg/Kg	J	Z

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	2.05		0.0546	MDL	0.109	PQL	mg/Kg	J	FD

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.110	J	0.0809	MDL	0.219	PQL	mg/Kg	J	Z, Q
ARSENIC	9.88		0.0874	MDL	0.437	PQL	mg/Kg	J	Q, FD
CADMIUM	0.216		0.0481	MDL	0.109	PQL	mg/Kg	J	E
CHROMIUM	16.1		0.131	MDL	0.437	PQL	mg/Kg	J	Q, E, Q, A
COBALT	13.9		0.0219	MDL	0.109	PQL	mg/Kg	J	FD
COPPER	22.1		0.0874	MDL	0.437	PQL	mg/Kg	J	FD
LEAD	10.2		0.0111	MDL	0.219	PQL	mg/Kg	J	Q, E
NICKEL	9.96		0.109	MDL	0.437	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0386	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-122-SA6-SB-0.0-0.5 **Collected: 7/29/2011 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	0.0903	J	0.0578	MDL	0.399	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA6-SB-0.0-0.5 **Collected: 7/29/2011 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	0.161	J	0.0737	MDL	0.199	PQL	mg/Kg	J	Z, Q
ARSENIC	14.0		0.0797	MDL	0.399	PQL	mg/Kg	J	Q
CADMIUM	0.103		0.0438	MDL	0.0997	PQL	mg/Kg	J	E
CHROMIUM	18.0		0.120	MDL	0.399	PQL	mg/Kg	J	Q, E, Q, A
LEAD	6.79		0.0102	MDL	0.199	PQL	mg/Kg	J	Q, E
NICKEL	14.0		0.0997	MDL	0.399	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0322	J	0.0142	MDL	0.0997	PQL	mg/Kg	J	Z

Sample ID: SL-123-SA6-SB-4.0-5.0 **Collected: 7/29/2011 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
SELENIUM	0.166	J	0.0628	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-123-SA6-SB-4.0-5.0 **Collected: 7/29/2011 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	0.0849	J	0.0802	MDL	0.217	PQL	mg/Kg	J	Z, Q
ARSENIC	3.75		0.0867	MDL	0.433	PQL	mg/Kg	J	Q
CADMIUM	0.0839	J	0.0477	MDL	0.108	PQL	mg/Kg	J	Z, E
CHROMIUM	11.6		0.130	MDL	0.433	PQL	mg/Kg	J	Q, E, Q, A
LEAD	7.31		0.0110	MDL	0.217	PQL	mg/Kg	J	Q, E
NICKEL	8.21		0.108	MDL	0.433	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0304	J	0.0154	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-123-SA6-SB-7.0-8.0 **Collected: 7/29/2011 9:50:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0999	J	0.0613	MDL	0.423	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-123-SA6-SB-7.0-8.0** ***Collected:*** **7/29/2011 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	0.318		0.0782	MDL	0.211	PQL	mg/Kg	J	Q
ARSENIC	10.0		0.0845	MDL	0.423	PQL	mg/Kg	J	Q
CADMIUM	1.12		0.0465	MDL	0.106	PQL	mg/Kg	J	E
CHROMIUM	13.5		0.127	MDL	0.423	PQL	mg/Kg	J	Q, E, Q, A
LEAD	11.1		0.0108	MDL	0.211	PQL	mg/Kg	J	Q, E
NICKEL	15.1		0.106	MDL	0.423	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0289	J	0.0150	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: **SL-125-SA6-SB-20.0-21.0** ***Collected:*** **7/29/2011 8:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0843	U	0.0843	MDL	0.228	PQL	mg/Kg	UJ	Q
ARSENIC	5.71		0.0911	MDL	0.456	PQL	mg/Kg	J	Q
CADMIUM	0.125		0.0501	MDL	0.114	PQL	mg/Kg	J	E
CHROMIUM	16.7		0.137	MDL	0.456	PQL	mg/Kg	J	Q, E, Q, A
LEAD	6.23		0.0116	MDL	0.228	PQL	mg/Kg	J	Q, E
NICKEL	12.2		0.114	MDL	0.456	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0420	J	0.0162	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.166	J	0.0616	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.346		0.0531	MDL	0.106	PQL	mg/Kg	J	FD

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0786	MDL	0.212	PQL	mg/Kg	J	Z, Q
ARSENIC	4.45		0.0850	MDL	0.425	PQL	mg/Kg	J	Q, FD
CADMIUM	0.202		0.0467	MDL	0.106	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

Laboratory: LL

EDD Filename: DE212_v1

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected: 7/29/2011 7:55:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	21.2		0.127	MDL	0.425	PQL	mg/Kg	J	Q, E, Q, A
COBALT	7.17		0.0212	MDL	0.106	PQL	mg/Kg	J	FD
COPPER	11.1		0.0850	MDL	0.425	PQL	mg/Kg	J	FD
LEAD	6.78		0.0108	MDL	0.212	PQL	mg/Kg	J	Q, E
NICKEL	13.7		0.106	MDL	0.425	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0238	J	0.0151	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-4.0-5.0 **Collected: 7/29/2011 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	0.0953	J	0.0600	MDL	0.414	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-4.0-5.0 **Collected: 7/29/2011 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	0.0765	U	0.0765	MDL	0.207	PQL	mg/Kg	UJ	Q
ARSENIC	3.58		0.0827	MDL	0.414	PQL	mg/Kg	J	Q
CADMIUM	0.0455	U	0.0455	MDL	0.103	PQL	mg/Kg	UJ	E
CHROMIUM	12.0		0.124	MDL	0.414	PQL	mg/Kg	J	Q, E, Q, A
LEAD	4.01		0.0105	MDL	0.207	PQL	mg/Kg	J	Q, E
NICKEL	6.05		0.103	MDL	0.414	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0347	J	0.0147	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected: 7/29/2011 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
SELENIUM	0.193	J	0.0611	MDL	0.421	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected: 7/29/2011 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	0.0779	U	0.0779	MDL	0.211	PQL	mg/Kg	UJ	Q
ARSENIC	4.38		0.0843	MDL	0.421	PQL	mg/Kg	J	Q
CADMIUM	0.0463	U	0.0463	MDL	0.105	PQL	mg/Kg	UJ	E
CHROMIUM	15.3		0.126	MDL	0.421	PQL	mg/Kg	J	Q, E, Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

Laboratory: LL

EDD Filename: DE212_v1

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-126-SA6-SB-9.0-10.0** ***Collected:*** **7/29/2011 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
LEAD	5.81		0.0107	MDL	0.211	PQL	mg/Kg	J	Q, E
NICKEL	7.57		0.105	MDL	0.421	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0720	J	0.0150	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: **SL-174-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 2:49:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0869	J	0.0656	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: **SL-174-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 2:49:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0837	U	0.0837	MDL	0.226	PQL	mg/Kg	UJ	Q
ARSENIC	6.31		0.0905	MDL	0.453	PQL	mg/Kg	J	Q
CADMIUM	0.275		0.0498	MDL	0.113	PQL	mg/Kg	J	E
CHROMIUM	28.0		0.136	MDL	0.453	PQL	mg/Kg	J	Q, E, Q, A
LEAD	8.44		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, E
NICKEL	20.1		0.113	MDL	0.453	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0429	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z

Sample ID: **SL-174-SA5DN-SB-9.0-10.0** ***Collected:*** **7/29/2011 2:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.100	J	0.0827	MDL	0.223	PQL	mg/Kg	J	Z, Q
ARSENIC	6.67		0.0894	MDL	0.447	PQL	mg/Kg	J	Q
CADMIUM	0.0902	J	0.0492	MDL	0.112	PQL	mg/Kg	J	Z, E
CHROMIUM	26.7		0.134	MDL	0.447	PQL	mg/Kg	J	Q, E, Q, A
LEAD	8.06		0.0114	MDL	0.223	PQL	mg/Kg	J	Q, E
NICKEL	18.9		0.112	MDL	0.447	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0683	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: **SL-180-SA5DN-SB-4.0-5.0** ***Collected:*** **7/29/2011 9:10:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.115	J	0.0648	MDL	0.447	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected: 7/29/2011 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	0.0855	J	0.0827	MDL	0.224	PQL	mg/Kg	J	Z, Q
ARSENIC	4.84		0.0894	MDL	0.447	PQL	mg/Kg	J	Q
CADMIUM	0.280		0.0492	MDL	0.112	PQL	mg/Kg	J	E
CHROMIUM	24.4		0.134	MDL	0.447	PQL	mg/Kg	J	Q, E, Q, A
LEAD	6.42		0.0114	MDL	0.224	PQL	mg/Kg	J	Q, E
NICKEL	15.9		0.112	MDL	0.447	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0477	J	0.0159	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected: 7/29/2011 9:12:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0863	J	0.0695	MDL	0.479	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected: 7/29/2011 9:12:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0886	U	0.0886	MDL	0.240	PQL	mg/Kg	UJ	Q
ARSENIC	5.94		0.0958	MDL	0.479	PQL	mg/Kg	J	Q
CADMIUM	0.394		0.0527	MDL	0.120	PQL	mg/Kg	J	E
CHROMIUM	26.9		0.144	MDL	0.479	PQL	mg/Kg	J	Q, E, Q, A
LEAD	7.21		0.0122	MDL	0.240	PQL	mg/Kg	J	Q, E
NICKEL	17.4		0.120	MDL	0.479	PQL	mg/Kg	J	Q, Q, E
SILVER	0.0467	J	0.0170	MDL	0.120	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP10-SA6-QC-072911 **Collected: 7/29/2011 8:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.33	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE212
EDD Filename: DE212_v1
Laboratory: LL
eQAPP Name: CDM_SSFL_110509

Method Category: METALS
Method: 7199 **Matrix:** SO

Sample ID: SL-122-SA6-SB-0.0-0.5 **Collected:** 7/29/2011 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	0.28	J	0.20	MDL	0.99	PQL	mg/Kg	J	Z

Sample ID: SL-123-SA6-SB-7.0-8.0 **Collected:** 7/29/2011 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	0.39	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA6-SB-20.0-21.0 **Collected:** 7/29/2011 8:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.31	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.26	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 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	0.27	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected:** 7/29/2011 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	0.31	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-174-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 2:49:00 **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

Sample ID: SL-174-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 2:51:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.66	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected: 7/29/2011 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	0.28	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected: 7/29/2011 9:12:00** **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	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: DUP10-SA6-QC-072911 **Collected: 7/29/2011 8:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.509		0.0080	MDL	0.113	PQL	mg/Kg	J	Q, FD

Sample ID: SL-122-SA6-SB-0.0-0.5 **Collected: 7/29/2011 2:30:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0136	J	0.0069	MDL	0.0986	PQL	mg/Kg	J	Z, Q

Sample ID: SL-123-SA6-SB-4.0-5.0 **Collected: 7/29/2011 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	0.0700	J	0.0077	MDL	0.109	PQL	mg/Kg	J	Z, Q

Sample ID: SL-123-SA6-SB-7.0-8.0 **Collected: 7/29/2011 9:50:00** **Analysis Type: RES** **Dilution: 10**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	3.22		0.0734	MDL	1.04	PQL	mg/Kg	J	Q

Sample ID: SL-125-SA6-SB-20.0-21.0 **Collected: 7/29/2011 8:15:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.233		0.0075	MDL	0.107	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

Laboratory: LL

EDD Filename: DE212_v1

eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0790	J	0.0074	MDL	0.105	PQL	mg/Kg	J	Z, Q, FD

Sample ID: SL-126-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 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	0.0189	J	0.0071	MDL	0.101	PQL	mg/Kg	J	Z, Q

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected:** 7/29/2011 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	0.0075	U	0.0075	MDL	0.106	PQL	mg/Kg	UJ	Q

Sample ID: SL-174-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 2:49:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0095	J	0.0081	MDL	0.116	PQL	mg/Kg	J	Z, Q

Sample ID: SL-174-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 2:51:00 **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	0.0077	MDL	0.110	PQL	mg/Kg	J	Z, Q

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 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
MERCURY	0.0076	U	0.0076	MDL	0.109	PQL	mg/Kg	UJ	Q

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 9:12:00 **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	0.0081	MDL	0.116	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **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)	9.2	J	4.5	MDL	14	PQL	mg/Kg	J	Z, FD
EFH (C21-C30)	63		4.5	MDL	14	PQL	mg/Kg	J	FD
EFH (C30-C40)	130		4.5	MDL	14	PQL	mg/Kg	J	FD

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C12-C14)	0.88	U	0.88	MDL	2.6	PQL	mg/Kg	R	Q
EFH (C15-C20)	0.88	U	0.88	MDL	2.6	PQL	mg/Kg	UJ	FD
EFH (C21-C30)	7.7		0.88	MDL	2.6	PQL	mg/Kg	J	Q, Q, FD
EFH (C30-C40)	19		0.88	MDL	2.6	PQL	mg/Kg	J	FD
EFH (C8-C11)	0.88	U	0.88	MDL	2.6	PQL	mg/Kg	R	Q

Sample ID: SL-126-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 11:35:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.71	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP10-SA6-QC-072911 **Collected:** 7/29/2011 8:00:00 **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 1254	6.9		0.38	MDL	1.9	PQL	ug/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected: 7/29/2011 7:55:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	3.9		0.36	MDL	1.9	PQL	ug/Kg	J	FD

Sample ID: SL-174-SA5DN-SB-9.0-10.0 **Collected: 7/29/2011 2:51:00** **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	0.82	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP10-SA6-QC-072911 **Collected: 7/29/2011 8:00:00** **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(A)ANTHRACENE	50	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	57	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	85	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	65	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	28	J	19	MDL	190	PQL	ug/Kg	J	Z
CHRYSENE	54	J	19	MDL	190	PQL	ug/Kg	J	Z
FLUORANTHENE	89	J	19	MDL	190	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	36	J	19	MDL	190	PQL	ug/Kg	J	Z
PHENANTHRENE	21	J	19	MDL	190	PQL	ug/Kg	J	Z, L
PYRENE	95	J	19	MDL	190	PQL	ug/Kg	J	Z

Sample ID: SL-123-SA6-SB-7.0-8.0 **Collected: 7/29/2011 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
BENZO(G,H,I)PERYLENE	28	J	18	MDL	180	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	130	J	18	MDL	360	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	19	J	18	MDL	180	PQL	ug/Kg	J	Z, L

Sample ID: SL-180-SA5DN-SB-4.0-5.0 **Collected: 7/29/2011 9:10:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	59	J	19	MDL	380	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212
EDD Filename: DE212_v1

Laboratory: LL
eQAPP Name: CDM_SSFL_110509

Method Category: SVOA
Method: 8270C **Matrix:** SO

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

Sample ID: DUP10-SA6-QC-072911 ***Collected:*** 7/29/2011 8:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	0.76	U	0.76	MDL	1.9	PQL	ug/Kg	UJ	FD
ACENAPHTHYLENE	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	FD
ANTHRACENE	0.38	U	0.38	MDL	1.9	PQL	ug/Kg	UJ	FD
Butylbenzylphthalate	8.2	J	6.8	MDL	20	PQL	ug/Kg	J	Z, L
DIBENZO(A,H)ANTHRACENE	0.76	U	0.76	MDL	1.9	PQL	ug/Kg	UJ	FD
Di-n-butylphthalate	14	J	6.8	MDL	20	PQL	ug/Kg	J	Z, FD
FLUORENE	0.76	U	0.76	MDL	1.9	PQL	ug/Kg	UJ	FD

Sample ID: SL-122-SA6-SB-0.0-0.5 ***Collected:*** 7/29/2011 2:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.7	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	5.4	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
Butylbenzylphthalate	36	J	30	MDL	91	PQL	ug/Kg	J	Z, L
CHRYSENE	4.2	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z
Di-n-butylphthalate	59	J	30	MDL	91	PQL	ug/Kg	J	Z
FLUORANTHENE	4.4	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z
PYRENE	4.3	J	3.4	MDL	8.4	PQL	ug/Kg	J	Z

Sample ID: SL-123-SA6-SB-4.0-5.0 ***Collected:*** 7/29/2011 9:40:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	3.3	J	1.8	MDL	9.1	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	45	J	33	MDL	98	PQL	ug/Kg	J	Z
Butylbenzylphthalate	38	J	33	MDL	98	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	55	J	33	MDL	98	PQL	ug/Kg	J	Z

Sample ID: SL-123-SA6-SB-7.0-8.0 ***Collected:*** 7/29/2011 9:50:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	4.1	J	3.6	MDL	9.1	PQL	ug/Kg	J	Z
Butylbenzylphthalate	58	J	33	MDL	98	PQL	ug/Kg	J	Z, L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: **SL-123-SA6-SB-7.0-8.0** ***Collected:*** **7/29/2011 9:50:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	70	J	33	MDL	98	PQL	ug/Kg	J	Z
Di-n-octylphthalate	41	J	33	MDL	98	PQL	ug/Kg	J	Z

Sample ID: **SL-125-SA6-SB-20.0-21.0** ***Collected:*** **7/29/2011 8:15:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	6.1	J	3.8	MDL	9.6	PQL	ug/Kg	J	Z
ACENAPHTHYLENE	2.4	J	1.9	MDL	9.6	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	46	J	35	MDL	100	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	4.9	J	3.8	MDL	9.6	PQL	ug/Kg	J	Z
Di-n-butylphthalate	56	J	35	MDL	100	PQL	ug/Kg	J	Z

Sample ID: **SL-125-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 7:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	97		3.6	MDL	9.1	PQL	ug/Kg	J	FD
ACENAPHTHYLENE	3.7	J	1.8	MDL	9.1	PQL	ug/Kg	J	Z, FD
ANTHRACENE	730		1.8	MDL	9.1	PQL	ug/Kg	J	FD
BIS(2-ETHYLHEXYL)PHTHALATE	84	J	33	MDL	98	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	69		3.6	MDL	9.1	PQL	ug/Kg	J	FD
Di-n-butylphthalate	57	J	33	MDL	98	PQL	ug/Kg	J	Z, FD
FLUORENE	110		3.6	MDL	9.1	PQL	ug/Kg	J	FD

Sample ID: **SL-126-SA6-SB-4.0-5.0** ***Collected:*** **7/29/2011 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
ACENAPHTHYLENE	0.69	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.93	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	12	J	6.4	MDL	19	PQL	ug/Kg	J	Z
Butylbenzylphthalate	8.6	J	6.4	MDL	19	PQL	ug/Kg	J	Z
Di-n-butylphthalate	13	J	6.4	MDL	19	PQL	ug/Kg	J	Z, L

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212
EDD Filename: DE212_v1
Laboratory: LL
eQAPP Name: CDM_SSFL_110509

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

Sample ID: SL-126-SA6-SB-9.0-10.0 **Collected:** 7/29/2011 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	9.8	J	6.6	MDL	20	PQL	ug/Kg	J	Z
Butylbenzylphthalate	7.5	J	6.6	MDL	20	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	13	J	6.6	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-174-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 2:49:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	7.0	J	1.9	MDL	9.7	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	56	J	35	MDL	100	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	6.4	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	5.7	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z

Sample ID: SL-174-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 2:51:00 **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	0.39	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	6.9	MDL	21	PQL	ug/Kg	J	Z
Butylbenzylphthalate	7.9	J	6.9	MDL	21	PQL	ug/Kg	J	Z
CHRYSENE	0.42	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	13	J	6.9	MDL	21	PQL	ug/Kg	J	Z
PHENANTHRENE	0.85	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-180-SA5DN-SB-4.0-5.0 **Collected:** 7/29/2011 9:10:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.3	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
Butylbenzylphthalate	10	J	6.8	MDL	21	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	1.2	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z, L
Di-n-butylphthalate	15	J	6.8	MDL	21	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-180-SA5DN-SB-9.0-10.0 **Collected:** 7/29/2011 9:12:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	39	J	36	MDL	110	PQL	ug/Kg	J	Z
Di-n-butylphthalate	56	J	36	MDL	110	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-125-SA6-SB-4.0-5.0 **Collected:** 7/29/2011 7:55:00 **Analysis Type:** REA3 **Dilution:** 1

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

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

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

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE212

Method Blank Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21408GB220201	8/4/2011 2:01:00 AM	ALUMINUM IRON PHOSPHORUS POTASSIUM TIN Zirconium	10.4 mg/Kg 6.50 mg/Kg 1.69 mg/Kg 14.9 mg/Kg 1.59 mg/Kg 1.38 mg/Kg	DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0
P21408GB220953	8/4/2011 9:53:00 AM	CALCIUM	5.04 mg/Kg	DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-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
DUP10-SA6-QC-072911(RES)	TIN	2.95 mg/Kg	2.95U mg/Kg
DUP10-SA6-QC-072911(RES)	Zirconium	4.91 mg/Kg	4.91U mg/Kg
SL-122-SA6-SB-0.0-0.5(RES)	TIN	3.22 mg/Kg	3.22U mg/Kg
SL-122-SA6-SB-0.0-0.5(RES)	Zirconium	6.52 mg/Kg	6.52U mg/Kg
SL-123-SA6-SB-4.0-5.0(RES)	TIN	2.52 mg/Kg	2.52U mg/Kg
SL-123-SA6-SB-4.0-5.0(RES)	Zirconium	3.49 mg/Kg	3.49U mg/Kg
SL-123-SA6-SB-7.0-8.0(RES)	TIN	2.88 mg/Kg	2.88U mg/Kg
SL-123-SA6-SB-7.0-8.0(RES)	Zirconium	4.70 mg/Kg	4.70U mg/Kg
SL-125-SA6-SB-20.0-21.0(RES)	TIN	3.18 mg/Kg	3.18U mg/Kg
SL-125-SA6-SB-20.0-21.0(RES)	Zirconium	5.77 mg/Kg	5.77U mg/Kg
SL-125-SA6-SB-4.0-5.0(RES)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-125-SA6-SB-4.0-5.0(RES)	Zirconium	5.55 mg/Kg	5.55U mg/Kg
SL-126-SA6-SB-4.0-5.0(RES)	TIN	2.86 mg/Kg	2.86U mg/Kg
SL-126-SA6-SB-4.0-5.0(RES)	Zirconium	3.66 mg/Kg	3.66U mg/Kg
SL-126-SA6-SB-9.0-10.0(RES)	TIN	3.11 mg/Kg	3.11U mg/Kg
SL-126-SA6-SB-9.0-10.0(RES)	Zirconium	3.36 mg/Kg	3.36U mg/Kg
SL-174-SA5DN-SB-4.0-5.0(RES)	TIN	3.41 mg/Kg	3.41U mg/Kg
SL-174-SA5DN-SB-9.0-10.0(RES)	TIN	3.43 mg/Kg	3.43U mg/Kg
SL-174-SA5DN-SB-9.0-10.0(RES)	Zirconium	6.72 mg/Kg	6.72U mg/Kg
SL-180-SA5DN-SB-4.0-5.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-180-SA5DN-SB-4.0-5.0(RES)	Zirconium	6.75 mg/Kg	6.75U mg/Kg
SL-180-SA5DN-SB-9.0-10.0(RES)	TIN	3.23 mg/Kg	3.23U mg/Kg
SL-180-SA5DN-SB-9.0-10.0(RES)	Zirconium	6.66 mg/Kg	6.66U mg/Kg

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLD22B260750	8/18/2011 7:50:00 AM	Diethylphthalate	15 ug/Kg	DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (SL-125-SA6-SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL	34 -	32 61	59.00-109.00 63.00-107.00	- -	DIETHYLENE GLYCOL ETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (SL-125-SA6-SB-4.0-5.0)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	- 177 132	179 301 164	49.00-123.00 49.00-123.00 49.00-123.00	39 (20.00) 22 (20.00) -	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	J(all detects) EFH (C30-C40), No Qual, >4x
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (SL-125-SA6-SB-4.0-5.0)	EFH (C12-C14) EFH (C8-C11)	0 0	0 0	49.00-123.00 49.00-123.00	- -	EFH (C12-C14) EFH (C8-C11)	J(all detects) R(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-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (SL-125-SA6-SB-4.0-5.0)	m-Terphenyl p-Terphenyl	72 69	68 66	75.00-125.00 75.00-125.00	- -	m-Terphenyl p-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-125-SA6-SB-4.0-5.0MSD (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	ARSENIC	-	163	75.00-125.00	-	ARSENIC	J(all detects)
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	CHROMIUM VANADIUM ZINC	141 - 69	24 -6 -5	75.00-125.00 75.00-125.00 75.00-125.00	43 (20.00) - -	CHROMIUM VANADIUM ZINC	J(all detects) R(all non-detects) V, Zn, No Qual, >4x Cr post spike = 136%

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	ANTIMONY LEAD NICKEL	30 - 130	37 174 60	75.00-125.00 75.00-125.00 75.00-125.00	- 21 (20.00) 32 (20.00)	ANTIMONY LEAD NICKEL	J(all detects) UJ(all non-detects)
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	BARIUM	217	166	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-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	ALUMINUM CALCIUM IRON MAGNESIUM MANGANESE PHOSPHORUS TITANIUM	-708 -1906 -5104 -506 28 -39 -8	2535 376 1909 484 157 65 359	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) 42 (20.00) 34 (20.00) 36 (20.00) 22 (20.00) 21 (20.00) 30 (20.00)	ALUMINUM CALCIUM IRON MAGNESIUM MANGANESE PHOSPHORUS TITANIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	POTASSIUM	44	181	75.00-125.00	31 (20.00)	POTASSIUM	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 7471A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-125-SA6-SB-4.0-5.0MSD (DUP10-SA6-QC-072911 SL-122-SA6-SB-0.0-0.5 SL-123-SA6-SB-4.0-5.0 SL-123-SA6-SB-7.0-8.0 SL-125-SA6-SB-20.0-21.0 SL-125-SA6-SB-4.0-5.0 SL-126-SA6-SB-4.0-5.0 SL-126-SA6-SB-9.0-10.0 SL-174-SA5DN-SB-4.0-5.0 SL-174-SA5DN-SB-9.0-10.0 SL-180-SA5DN-SB-4.0-5.0 SL-180-SA5DN-SB-9.0-10.0)	MERCURY	-	62	65.00-135.00	-	MERCURY	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-126-SA6-SB-9.0-10.0MS (DUP10-SA6-QC-072911 SL-126-SA6-SB-9.0-10.0)	FLUORIDE	72	-	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-125-SA6-SB-4.0-5.0MSD (SL-125-SA6-SB-4.0-5.0)	PENTACHLOROPHENOL	-	-	28.00-127.00	50 (30.00)	PENTACHLOROPHENOL	J(all detects)

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-125-SA6-SB-4.0-5.0MS **SL-125-SA6-SB-4.0-5.0MSD** (SL-125-SA6-SB-4.0-5.0)	Butylbenzylphthalate	227	229	57.00-173.00	-	Butylbenzylphthalate	No Qual, Diluted Out

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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-125-SA6-SB-4.0-5.0MS SL-125-SA6-SB-4.0-5.0MSD (SL-125-SA6-SB-4.0-5.0)	ACENAPHTHENE	-165	-174	63.00-105.00	-	ACENAPHTHENE	No Qual, Diluted Out
	ANTHRACENE	-1832	-1897	73.00-115.00	48 (30.00)	ANTHRACENE	
	BENZO(A)ANTHRACENE	-2403	-2499	59.00-128.00	55 (30.00)	BENZO(A)ANTHRACENE	
	BENZO(A)PYRENE	-1331	-1392	45.00-138.00	46 (30.00)	BENZO(A)PYRENE	
	BENZO(B)FLUORANTHENE	-2337	-2425	43.00-155.00	57 (30.00)	BENZO(B)FLUORANTHENE	
	BENZO(G,H,I)PERYLENE	-701	-736	33.00-141.00	32 (30.00)	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	-995	-1035	57.00-153.00	32 (30.00)	BENZO(K)FLUORANTHENE	
	BIS(2-ETHYLHEXYL)PHTHALAT	-9	1	39.00-167.00	-	BIS(2-ETHYLHEXYL)PHTHALA	
	CHRYSENE	-1855	-1939	48.00-134.00	57 (30.00)	CHRYSENE	
	DIBENZO(A,H)ANTHRACENE	-111	-116	22.00-133.00	-	DIBENZO(A,H)ANTHRACENE	
	FLUORANTHENE	-8183	-8456	26.00-166.00	102 (30.00)	FLUORANTHENE	
	FLUORENE	-190	-200	66.00-122.00	-	FLUORENE	
	INDENO(1,2,3-CD)PYRENE	-651	-681	21.00-143.00	32 (30.00)	INDENO(1,2,3-CD)PYRENE	
	PHENANTHRENE	-6778	-7003	12.00-165.00	101 (30.00)	PHENANTHRENE	
	PYRENE	-4973	-5162	15.00-153.00	87 (30.00)	PYRENE	

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-125-SA6-SB-4.0-5.0DUP	STRONTIUM	21	20.00	J (all detects) UJ (all non-detects)
(DUP10 -SA6-QC-072911	Zirconium	29	20.00	Zr, No Qual, OK by Difference
SL -122-SA6-SB-0.0-0.5				
SL -123-SA6-SB-4.0-5.0				
SL -123-SA6-SB-7.0-8.0				
SL -125-SA6-SB-20.0-21.0				
SL -125-SA6-SB-4.0-5.0				
SL -126-SA6-SB-4.0-5.0				
SL -126-SA6-SB-9.0-10.0				
SL -174-SA5DN-SB-4.0-5.0				
SL -174-SA5DN-SB-9.0-10.0				
SL -180-SA5DN-SB-4.0-5.0				
SL -180-SA5DN-SB-9.0-10.0)				

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-125-SA6-SB-4.0-5.0DUP	ANTIMONY	31	20.00	J(all detects) UJ(all non-detects)
(DUP10 -SA6-QC-072911	CADMIUM	0.2506	0.212	Sb, Se, Ag, No Qual, OK by Difference
SL -122-SA6-SB-0.0-0.5	SELENIUM	22	20.00	
SL -123-SA6-SB-4.0-5.0	SILVER	47	20.00	
SL -123-SA6-SB-7.0-8.0				
SL -125-SA6-SB-20.0-21.0				
SL -125-SA6-SB-4.0-5.0				
SL -126-SA6-SB-4.0-5.0				
SL -126-SA6-SB-9.0-10.0				
SL -174-SA5DN-SB-4.0-5.0				
SL -174-SA5DN-SB-9.0-10.0				
SL -180-SA5DN-SB-4.0-5.0				
SL -180-SA5DN-SB-9.0-10.0)				

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-125-SA6-SB-4.0-5.0DUP	MERCURY	21	20.00	No Qual, OK by Difference
(DUP10 -SA6-QC-072911				
SL -122-SA6-SB-0.0-0.5				
SL -123-SA6-SB-4.0-5.0				
SL -123-SA6-SB-7.0-8.0				
SL -125-SA6-SB-20.0-21.0				
SL -125-SA6-SB-4.0-5.0				
SL -126-SA6-SB-4.0-5.0				
SL -126-SA6-SB-9.0-10.0				
SL -174-SA5DN-SB-4.0-5.0				
SL -174-SA5DN-SB-9.0-10.0				
SL -180-SA5DN-SB-4.0-5.0				
SL -180-SA5DN-SB-9.0-10.0)				

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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
P21426CQ222340A (DUP10 -SA6-QC-072911 SL -122-SA6-SB-0.0-0.5 SL -123-SA6-SB-4.0-5.0 SL -123-SA6-SB-7.0-8.0 SL -125-SA6-SB-20.0-21.0 SL -125-SA6-SB-4.0-5.0 SL -126-SA6-SB-4.0-5.0 SL -126-SA6-SB-9.0-10.0 SL -174-SA5DN -SB-4.0-5.0 SL -174-SA5DN -SB-9.0-10.0 SL -180-SA5DN -SB-4.0-5.0 SL -180-SA5DN -SB-9.0-10.0)	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
P21408GQ220205 (DUP10 -SA6-QC-072911 SL -122-SA6-SB-0.0-0.5 SL -123-SA6-SB-4.0-5.0 SL -123-SA6-SB-7.0-8.0 SL -125-SA6-SB-20.0-21.0 SL -125-SA6-SB-4.0-5.0 SL -126-SA6-SB-4.0-5.0 SL -126-SA6-SB-9.0-10.0 SL -174-SA5DN -SB-4.0-5.0 SL -174-SA5DN -SB-9.0-10.0 SL -180-SA5DN -SB-4.0-5.0 SL -180-SA5DN -SB-9.0-10.0)	ALUMINUM TITANIUM	137 170	- -	80.00-120.00 80.00-120.00	- -	ALUMINUM TITANIUM	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
P1LELCSQ262114 (DUP10 -SA6-QC-072911 SL -122-SA6-SB-0.0-0.5 SL -123-SA6-SB-4.0-5.0 SL -123-SA6-SB-7.0-8.0 SL -125-SA6-SB-20.0-21.0 SL -125-SA6-SB-4.0-5.0 SL -126-SA6-SB-4.0-5.0 SL -126-SA6-SB-9.0-10.0 SL -174-SA5DN -SB-4.0-5.0 SL -174-SA5DN -SB-9.0-10.0 SL -180-SA5DN -SB-4.0-5.0 SL -180-SA5DN -SB-9.0-10.0)	INDENO(1,2,3-CD)PYRENE	121	-	64.00-119.00	-	INDENO(1,2,3-CD)PYRENE	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

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
P2LDLCSQ260823 (DUP10 -SA6-QC-072911 SL -122-SA6-SB-0.0-0.5 SL -123-SA6-SB-4.0-5.0 SL -123-SA6-SB-7.0-8.0 SL -125-SA6-SB-20.0-21.0 SL -125-SA6-SB-4.0-5.0 SL -126-SA6-SB-4.0-5.0 SL -126-SA6-SB-9.0-10.0 SL -174-SA5DN -SB-4.0-5.0 SL -174-SA5DN -SB-9.0-10.0 SL -180-SA5DN -SB-4.0-5.0 SL -180-SA5DN -SB-9.0-10.0)	Butylbenzylphthalate	133	-	65.00-131.00	-	Butylbenzylphthalate	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-123-SA6-SB-4.0 -5.0	DECACHLOROBIPHENYL	0	45.00-120.00	All Target Analytes	No Qual, Diluted Out

Method: 8270C SIM
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-123-SA6-SB-7.0 -8.0	Terphenyl-d14	347	45.00-135.00	No Affected Compounds	No Qual, Diluted Out
SL-174-SA5DN-SB -4.0-5.0	Terphenyl-d14	153	45.00-135.00	No Affected Compounds	No Qual, Diluted Out
SL-180-SA5DN-SB -9.0-10.0	2-FLUOROBIPHENYL Nitrobenzene-d5	19 34	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	No Qual, Diluted Out

Field Duplicate RPD Report

Lab Reporting Batch ID: DE212

Laboratory: LL

EDD Filename: DE212_v1

eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
MOISTURE	8.6	12.0	33		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
FLUORIDE	1.9	1.2 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
ALUMINUM	17500	12400	34	50.00	No Qualifiers Applied
IRON	23800	26700	11	50.00	
LITHIUM	24.2	16.7	37	50.00	
MAGNESIUM	5990	4650	25	50.00	
MANGANESE	272	251	8	50.00	
PHOSPHORUS	527	479	10	50.00	
POTASSIUM	3610	2310	44	50.00	
SODIUM	227	283	22	50.00	
STRONTIUM	58.0	34.7	50	50.00	
TIN	2.96	2.95	0	50.00	
TITANIUM	1130	1000	12	50.00	
Zirconium	5.55	4.91	12	50.00	
BORON	5.81	1.30	127	50.00	J(all detects)
CALCIUM	26400	10900	83	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
ANTIMONY	0.129	0.110	16	50.00	No Qualifiers Applied
BARIUM	75.9	101	28	50.00	
BERYLLIUM	0.518	0.382	30	50.00	
CADMIUM	0.202	0.216	7	50.00	
CHROMIUM	21.2	16.1	27	50.00	
LEAD	6.78	10.2	40	50.00	
NICKEL	13.7	9.96	32	50.00	
SELENIUM	0.166	0.117	35	50.00	
SILVER	0.0238	0.0386	47	50.00	
THALLIUM	0.263	0.171	42	50.00	
VANADIUM	44.7	38.0	16	50.00	
ZINC	55.3	50.6	9	50.00	
ARSENIC	4.45	9.88	76	50.00	J(all detects)
COBALT	7.17	13.9	64	50.00	
COPPER	11.1	22.1	66	50.00	
MOLYBDENUM	0.346	2.05	142	50.00	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
HEXAVALENT CHROMIUM	0.26	0.33	24	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
MERCURY	0.0790	0.509	146	50.00	J(all detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
EFH (C15-C20)	2.6 U	9.2	200	50.00	J(all detects)
EFH (C21-C30)	7.7	63	156	50.00	UJ(all non-detects)
EFH (C30-C40)	19	130	149	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
Aroclor 5460	6.5	7.8	18	50.00	No Qualifiers Applied
AROCLOR 1254	3.9	6.9	56	50.00	J(all detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
ACENAPHTHENE	97	1.9 U	200	50.00	J(all detects)
ACENAPHTHYLENE	3.7	1.9 U	200	50.00	UJ(all non-detects)
ANTHRACENE	730	1.9 U	200	50.00	
DIBENZO(A,H)ANTHRACENE	69	1.9 U	200	50.00	
Di-n-butylphthalate	57	14	121	50.00	
FLUORENE	110	1.9 U	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-125-SA6-SB-4.0-5.0	DUP10-SA6-QC-072911			
PH	8.25	10.1	20	50.00	No Qualifiers Applied

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE212

EDD Filename: DE212_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_110509

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	BORON	J	1.30	5.52	PQL	mg/Kg	J (all detects)
	TIN	J	2.95	11.0	PQL	mg/Kg	
	Zirconium	J	4.91	5.52	PQL	mg/Kg	
SL-122-SA6-SB-0.0-0.5	TIN	J	3.22	9.87	PQL	mg/Kg	J (all detects)
SL-123-SA6-SB-4.0-5.0	BORON	J	2.18	5.26	PQL	mg/Kg	J (all detects)
	TIN	J	2.52	10.5	PQL	mg/Kg	
	Zirconium	J	3.49	5.26	PQL	mg/Kg	
SL-123-SA6-SB-7.0-8.0	BORON	J	1.44	5.39	PQL	mg/Kg	J (all detects)
	TIN	J	2.88	10.8	PQL	mg/Kg	
	Zirconium	J	4.70	5.39	PQL	mg/Kg	
SL-125-SA6-SB-20.0-21.0	BORON	J	1.81	5.70	PQL	mg/Kg	J (all detects)
	TIN	J	3.18	11.4	PQL	mg/Kg	
SL-125-SA6-SB-4.0-5.0	TIN	J	2.96	10.8	PQL	mg/Kg	J (all detects)
SL-126-SA6-SB-4.0-5.0	BORON	J	1.43	5.27	PQL	mg/Kg	J (all detects)
	SODIUM	J	80.2	105	PQL	mg/Kg	
	TIN	J	2.86	10.5	PQL	mg/Kg	
	Zirconium	J	3.66	5.27	PQL	mg/Kg	
SL-126-SA6-SB-9.0-10.0	BORON	J	1.98	5.48	PQL	mg/Kg	J (all detects)
	TIN	J	3.11	11.0	PQL	mg/Kg	
	Zirconium	J	3.36	5.48	PQL	mg/Kg	
SL-174-SA5DN-SB-4.0-5.0	TIN	J	3.41	11.3	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SB-9.0-10.0	BORON	J	4.55	5.53	PQL	mg/Kg	J (all detects)
	TIN	J	3.43	11.1	PQL	mg/Kg	
SL-180-SA5DN-SB-4.0-5.0	TIN	J	3.05	11.0	PQL	mg/Kg	J (all detects)
SL-180-SA5DN-SB-9.0-10.0	TIN	J	3.23	11.5	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	ANTIMONY	J	0.110	0.219	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.117	0.437	PQL	mg/Kg	
	SILVER	J	0.0386	0.109	PQL	mg/Kg	
SL-122-SA6-SB-0.0-0.5	ANTIMONY	J	0.161	0.199	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0903	0.399	PQL	mg/Kg	
	SILVER	J	0.0322	0.0997	PQL	mg/Kg	
SL-123-SA6-SB-4.0-5.0	ANTIMONY	J	0.0849	0.217	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0839	0.108	PQL	mg/Kg	
	SELENIUM	J	0.166	0.433	PQL	mg/Kg	
	SILVER	J	0.0304	0.108	PQL	mg/Kg	
SL-123-SA6-SB-7.0-8.0	SELENIUM	J	0.0999	0.423	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0289	0.106	PQL	mg/Kg	
SL-125-SA6-SB-20.0-21.0	SILVER	J	0.0420	0.114	PQL	mg/Kg	J (all detects)
SL-125-SA6-SB-4.0-5.0	ANTIMONY	J	0.129	0.212	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.166	0.425	PQL	mg/Kg	
	SILVER	J	0.0238	0.106	PQL	mg/Kg	
SL-126-SA6-SB-4.0-5.0	SELENIUM	J	0.0953	0.414	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0347	0.103	PQL	mg/Kg	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-126-SA6-SB-9.0-10.0	SELENIUM	J	0.193	0.421	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0720	0.105	PQL	mg/Kg	
SL-174-SA5DN-SB-4.0-5.0	SELENIUM	J	0.0869	0.453	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0429	0.113	PQL	mg/Kg	
SL-174-SA5DN-SB-9.0-10.0	ANTIMONY	J	0.100	0.223	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0902	0.112	PQL	mg/Kg	
	SILVER	J	0.0683	0.112	PQL	mg/Kg	
SL-180-SA5DN-SB-4.0-5.0	ANTIMONY	J	0.0855	0.224	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.115	0.447	PQL	mg/Kg	
	SILVER	J	0.0477	0.112	PQL	mg/Kg	
SL-180-SA5DN-SB-9.0-10.0	SELENIUM	J	0.0863	0.479	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0467	0.120	PQL	mg/Kg	

Method: 7199
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	HEXAVALENT CHROMIUM	J	0.33	1.1	PQL	mg/Kg	J (all detects)
SL-122-SA6-SB-0.0-0.5	HEXAVALENT CHROMIUM	J	0.28	0.99	PQL	mg/Kg	J (all detects)
SL-123-SA6-SB-7.0-8.0	HEXAVALENT CHROMIUM	J	0.39	1.1	PQL	mg/Kg	J (all detects)
SL-125-SA6-SB-20.0-21.0	HEXAVALENT CHROMIUM	J	0.31	1.2	PQL	mg/Kg	J (all detects)
SL-125-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.26	1.1	PQL	mg/Kg	J (all detects)
SL-126-SA6-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.27	1.1	PQL	mg/Kg	J (all detects)
SL-126-SA6-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.31	1.1	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.24	1.2	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.66	1.1	PQL	mg/Kg	J (all detects)
SL-180-SA5DN-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.28	1.2	PQL	mg/Kg	J (all detects)
SL-180-SA5DN-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.27	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-122-SA6-SB-0.0-0.5	MERCURY	J	0.0136	0.0986	PQL	mg/Kg	J (all detects)
SL-123-SA6-SB-4.0-5.0	MERCURY	J	0.0700	0.109	PQL	mg/Kg	J (all detects)
SL-125-SA6-SB-4.0-5.0	MERCURY	J	0.0790	0.105	PQL	mg/Kg	J (all detects)
SL-126-SA6-SB-4.0-5.0	MERCURY	J	0.0189	0.101	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SB-4.0-5.0	MERCURY	J	0.0095	0.116	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SB-9.0-10.0	MERCURY	J	0.0175	0.110	PQL	mg/Kg	J (all detects)
SL-180-SA5DN-SB-9.0-10.0	MERCURY	J	0.0096	0.116	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	EFH (C15-C20)	J	9.2	14	PQL	mg/Kg	J (all detects)
SL-126-SA6-SB-4.0-5.0	EFH (C30-C40)	J	0.71	1.3	PQL	mg/Kg	J (all detects)

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-174-SA5DN-SB-9.0-10.0	AROCLOR 1254	J	0.82	2.0	PQL	ug/Kg	J (all detects)

Method: 8270C
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	BENZO(A)ANTHRACENE	J	50	190	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	57	190	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	85	190	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	65	190	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	28	190	PQL	ug/Kg	
	CHRYSENE	J	54	190	PQL	ug/Kg	
	FLUORANTHENE	J	89	190	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	36	190	PQL	ug/Kg	
	PHENANTHRENE	J	21	190	PQL	ug/Kg	
	PYRENE	J	95	190	PQL	ug/Kg	
SL-123-SA6-SB-7.0-8.0	BENZO(G,H,I)PERYLENE	J	28	180	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	130	360	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	19	180	PQL	ug/Kg	
SL-180-SA5DN-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	59	380	PQL	ug/Kg	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP10-SA6-QC-072911	Butylbenzylphthalate	J	8.2	20	PQL	ug/Kg	J (all detects)
	Di-n-butylphthalate	J	14	20	PQL	ug/Kg	
SL-122-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.7	8.4	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	5.4	8.4	PQL	ug/Kg	
	Butylbenzylphthalate	J	36	91	PQL	ug/Kg	
	CHRYSENE	J	4.2	8.4	PQL	ug/Kg	
	Di-n-butylphthalate	J	59	91	PQL	ug/Kg	
	FLUORANTHENE	J	4.4	8.4	PQL	ug/Kg	
	PYRENE	J	4.3	8.4	PQL	ug/Kg	
SL-123-SA6-SB-4.0-5.0	ANTHRACENE	J	3.3	9.1	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	45	98	PQL	ug/Kg	
	Butylbenzylphthalate	J	38	98	PQL	ug/Kg	
	Di-n-butylphthalate	J	55	98	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE212 **Laboratory: LL**

EDD Filename: DE212_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-123-SA6-SB-7.0-8.0	ACENAPHTHENE	J	4.1	9.1	PQL	ug/Kg	J (all detects)
	Butylbenzylphthalate	J	58	98	PQL	ug/Kg	
	Di-n-butylphthalate	J	70	98	PQL	ug/Kg	
	Di-n-octylphthalate	J	41	98	PQL	ug/Kg	
SL-125-SA6-SB-20.0-21.0	ACENAPHTHENE	J	6.1	9.6	PQL	ug/Kg	J (all detects)
	ACENAPHTHYLENE	J	2.4	9.6	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	46	100	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	4.9	9.6	PQL	ug/Kg	
	Di-n-butylphthalate	J	56	100	PQL	ug/Kg	
SL-125-SA6-SB-4.0-5.0	ACENAPHTHYLENE	J	3.7	9.1	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	84	98	PQL	ug/Kg	
	Di-n-butylphthalate	J	57	98	PQL	ug/Kg	
SL-126-SA6-SB-4.0-5.0	ACENAPHTHYLENE	J	0.69	1.8	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.93	1.8	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	12	19	PQL	ug/Kg	
	Butylbenzylphthalate	J	8.6	19	PQL	ug/Kg	
	Di-n-butylphthalate	J	13	19	PQL	ug/Kg	
SL-126-SA6-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	9.8	20	PQL	ug/Kg	J (all detects)
	Butylbenzylphthalate	J	7.5	20	PQL	ug/Kg	
	Di-n-butylphthalate	J	13	20	PQL	ug/Kg	
SL-174-SA5DN-SB-4.0-5.0	ACENAPHTHYLENE	J	7.0	9.7	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	56	100	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	6.4	9.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	5.7	9.7	PQL	ug/Kg	
SL-174-SA5DN-SB-9.0-10.0	ANTHRACENE	J	0.39	1.9	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	13	21	PQL	ug/Kg	
	Butylbenzylphthalate	J	7.9	21	PQL	ug/Kg	
	CHRYSENE	J	0.42	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	13	21	PQL	ug/Kg	
	PHENANTHRENE	J	0.85	1.9	PQL	ug/Kg	
	PYRENE	J	0.91	1.9	PQL	ug/Kg	
SL-180-SA5DN-SB-4.0-5.0	ANTHRACENE	J	1.3	1.9	PQL	ug/Kg	J (all detects)
	Butylbenzylphthalate	J	10	21	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	1.2	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	15	21	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.6	1.9	PQL	ug/Kg	
SL-180-SA5DN-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	39	110	PQL	ug/Kg	J (all detects)
	Di-n-butylphthalate	J	56	110	PQL	ug/Kg	

LDC #: 26533C4 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/7/11

SDG #: DE212 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: ~

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: 7/19/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW	No qual by EB/TB
V.	ICP Interference Check Sample (ICS) Analysis	N	✓ ✓ ✓ ✓ ✓ ✓ ✓
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Mg, Mn, P, Ti, V, Zn >4X (No qual for all)
VII.	Duplicate Sample Analysis	SW	Sb, Hg, Se, Ag, Zr <5X, Cd: 0.506 (V RPD out J/UJ)
VIII.	Laboratory Control Samples (LCS)	N A	(difference) ≤0, >1>) J/UJ.
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, J/UJ
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: Soil

1	SL-180-SA5DN-SB-4.0-5.0	11	SL-126-SA6-SB-9.0-10.0	21	MB	31	
2	SL-180-SA5DN-SB-9.0-10.0	12	DUP10-SA6-QC-072911	22		32	
3	SL-174-SA5DN-SB-4.0-5.0	13	SL-125-SA6-SB-4.0-5.0MS	23		33	
4	SL-174-SA5DN-SB-9.0-10.0	14	SL-125-SA6-SB-4.0-5.0MSD	24		34	
5	SL-122-SA6-SB-0.0-0.5	15	SL-125-SA6-SB-4.0-5.0DUP	25		35	
6	SL-123-SA6-SB-4.0-5.0	16		26		36	
7	SL-123-SA6-SB-7.0-5.0	17		27		37	
8	SL-125-SA6-SB-4.0-5.0	18		28		38	
9	SL-125-SA6-SB-20.0-21.0	19		29		39	
10	SL-126-SA6-SB-4.0-5.0	20		30		40	

Notes: _____

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE212
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6360506BKG Matrix Spike Lab Sample ID: 6360507MS Matrix Spike Duplicate Lab Sample ID: 6360508MSD
% Solids for Sample: 91.4
Batch Id(s): P21408G, P21426C, P21411D

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		17450.8103		15931.8520		22996.9322		214.5278	218.8184	MG/KG	-708		2535		36	*		20	P
Antimony	121	0.1294	B	0.5245		0.6093		1.3129	1.2872	MG/KG	30	N	37	N	15		75 - 125	20	MS
Arsenic	75	4.4528		6.6280		7.9397		2.1882	2.1453	MG/KG	99		163	N	18		75 - 125	20	MS
Barium	137	75.8641		99.5842		93.6628		10.9409	10.7264	MG/KG	217		166		6			20	MS
Beryllium	9	0.5184		1.2560		1.1799		0.8753	0.8581	MG/KG	84		77		6		75 - 125	20	MS
Boron		5.8128		211.3603		216.7768		214.5278	218.8184	MG/KG	96		96		3		84 - 115	20	P
Cadmium	111	0.2018		1.2597		1.2548		1.0941	1.0726	MG/KG	97		98		0		75 - 125	20	MS
Calcium		26421.0618		18242.1805		28068.6258		429.0556	437.6368	MG/KG	-1906		376		42	*		20	P
Chromium	52	21.1914		36.6083		23.7482		10.9409	10.7264	MG/KG	141	N	24	N	43	*	75 - 125	20	MS
Cobalt	59	7.1721		58.2276		60.6256		54.7046	53.6320	MG/KG	93		100		4		75 - 125	20	MS
Copper	63	11.1470		21.9912		23.7268		10.9409	10.7264	MG/KG	99		117		8		75 - 125	20	MS
Iron		23757.9609		18283.3001		25846.8370		107.2639	109.4092	MG/KG	-5104		1909		34	*		20	P
Lead	208	6.7834		10.0066		12.3675		3.2823	3.2179	MG/KG	98		174	N	21	*	75 - 125	20	MS
Lithium		24.2412		133.7667		145.2702		107.2639	109.4092	MG/KG	102		111		8		82 - 114	20	P
Magnesium		5991.5592		4905.4801		7050.1477		214.5278	218.8184	MG/KG	-506		484		36	*		20	P
Manganese		272.1440		287.2667		357.9300		53.6320	54.7046	MG/KG	28		157		22	*		20	P
Mercury		0.0790	B	0.2041		0.1836		0.1744	0.1700	MG/KG	72		62	N	11		65 - 135	20	CV
Molybdenum	98	0.3459		10.8337		10.8744		10.9409	10.7264	MG/KG	96		98		0		75 - 125	20	MS
Nickel	60	13.6538		27.8337		20.0584		10.9409	10.7264	MG/KG	130	N	60	N	32	*	75 - 125	20	MS
Phosphorus		527.3198		485.2748		597.9847		107.2639	109.4092	MG/KG	-39		65		21	*		20	P
Potassium		3605.4910		4078.3413		5589.6039		1072.6391	1094.0919	MG/KG	44	N	181	N	31	*	75 - 125	20	P
Selenium	78	0.1659	B	2.2560		2.2161		2.1882	2.1453	MG/KG	96		96		2		75 - 125	20	MS
Silver	107	0.0238	B	10.9322		10.7886		10.9409	10.7264	MG/KG	100		100		1		75 - 125	20	MS
Sodium		226.7023		1233.7989		1305.7144		1072.6391	1094.0919	MG/KG	94		99		6		75 - 125	20	P
Strontium		57.9825		144.9586		162.2429		107.2639	109.4092	MG/KG	81		95		11		75 - 115	20	P
Thallium	203	0.2626		0.6786		0.6389		0.4376	0.4291	MG/KG	95		88		6		75 - 125	20	MS
Tin		2.9638	B	394.3214		390.8042		429.0556	437.6368	MG/KG	91		89		1		80 - 110	20	P
Titanium		1131.9962		1123.2076		1524.6488		107.2639	109.4092	MG/KG	-8		359		30	*		20	P
Vanadium	51	44.7409		53.2604		44.0855		10.9409	10.7264	MG/KG	78		-6		19			20	MS
Zinc	66	55.2782		62.7790		54.7260		10.9409	10.7264	MG/KG	69		-5		14			20	MS
Zirconium		5.5495		115.1553		113.0700		107.2639	109.4092	MG/KG	102		98		2		75 - 125	20	P

22-JUL-22

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.: DE212
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6360506BKG
% Solids for Duplicate: 92.4
Batch ID(s): P21408G, P21426C, P21411D
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6360509DUP
% Solids for Sample: 91.4

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			17450.8103		17299.9292		1		P
Antimony	121		0.1294	B	0.0944	B	31		MS
Arsenic	75		4.4528		4.7593		7		MS
Barium	137		75.8641		78.3538		3		MS
Beryllium	9	0.1	0.5184		0.6034		15		MS
Boron		5.4	5.8128		5.8384		0		P
Cadmium	111	0.1	0.2018		0.4524		77	*	MS
Calcium			26421.0618		21653.7703		20		P
Chromium	52		21.1914		24.9327		16		MS
Cobalt	59		7.1721		7.8690		9		MS
Copper	63		11.1470		12.6010		12		MS
Iron			23757.9609		22331.5785		6		P
Lead	208		6.7834		7.0422		4		MS
Lithium			24.2412		24.2963		0		P
Magnesium			5991.5592		5753.8079		4		P
Manganese			272.1440		265.1017		3		P
Mercury			0.0790	B	0.0641	B	21		CV
Molybdenum	98	0.1	0.3459		0.3909		12		MS
Nickel	60		13.6538		15.7844		14		MS
Phosphorus			527.3198		465.1317		13		P
Potassium			3605.4910		3541.0950		2		P
Selenium	78		0.1659	B	0.2059	B	22		MS
Silver	107		0.0238	B	0.0382	B	46		MS
Sodium		108.3	226.7023		197.0084		14		P
Strontium			57.9825		46.8100		21	*	P
Thallium	203	0.1	0.2626		0.2851		8		MS
Tin			2.9638	B	2.7878	B	6		P
Titanium			1131.9962		1105.6324		2		P
Vanadium	51		44.7409		51.1488		13		MS
Zinc	66		55.2782		58.9337		6		MS
Zirconium		5.4	5.5495		7.3958		29		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.

cd difference 0.2506 mg/kg (≤ 0.212)

DE212 2938

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

DE213

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
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3050B	6010B	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3050B	6020	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3060A	7199	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3550B	8082	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3550B	8270C	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	3550B	8270C SIM	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	METHOD	300.0	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	METHOD	314.0	III
01-Aug-2011	SL-176-SA5DN-SB-4.0-5.0	6361777	N	METHOD	7471A	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3050B	6010B	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3050B	6020	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3060A	7199	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3550B	8082	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3550B	8270C	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	3550B	8270C SIM	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	METHOD	300.0	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	METHOD	314.0	III
01-Aug-2011	SL-176-SA5DN-SB-9.0-10.0	6361778	N	METHOD	7471A	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3050B	6010B	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3050B	6020	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3060A	7199	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3550B	8082	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3550B	8270C	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	3550B	8270C SIM	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	METHOD	300.0	III
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	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
01-Aug-2011	SL-173-SA5DN-SB-4.0-5.0	6361770	N	METHOD	7471A	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3050B	6010B	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3050B	6020	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3060A	7199	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3550B	8082	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3550B	8270C	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	3550B	8270C SIM	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	METHOD	300.0	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	METHOD	314.0	III
01-Aug-2011	SL-173-SA5DN-SB-9.0-10.0	6361771	N	METHOD	7471A	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3050B	6010B	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3050B	6020	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3060A	7199	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3550B	8015B	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3550B	8015M	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3550B	8082	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3550B	8270C	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	3550B	8270C SIM	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	5035	8015M	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	METHOD	300.0	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	METHOD	314.0	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	METHOD	7471A	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	METHOD	8015B	III
01-Aug-2011	SL-127-SA6-SB-2.0-3.0	6361779	N	METHOD	8015M	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	3050B	6010B	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	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
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	3060A	7199	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	3550B	8082	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	3550B	8270C	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	3550B	8270C SIM	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	METHOD	300.0	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	METHOD	314.0	III
01-Aug-2011	SL-170-SA5DN-SB-4.0-5.0	6361768	N	METHOD	7471A	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3050B	6010B	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3050B	6020	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3060A	7199	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3550B	8082	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3550B	8270C	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	3550B	8270C SIM	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	METHOD	300.0	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	METHOD	314.0	III
01-Aug-2011	SL-170-SA5DN-SB-9.0-10.0	6361769	N	METHOD	7471A	III
01-Aug-2011	TB-080111	6361780	TB	5030B	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3050B	6010B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3050B	6020	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3060A	7199	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3546	1625C	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3550B	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3550B	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3550B	8082	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	3550B	8270C	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	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
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	5035	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	8330	8330A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	300.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	314.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	7471A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	8315A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0	6361772	N	METHOD	9012B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3050B	6010B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3050B	6020	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3060A	7199	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3546	1625C	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3550B	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3550B	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3550B	8082	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3550B	8270C	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	3550B	8270C SIM	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	5035	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	8330	8330A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	300.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	314.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	7471A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	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
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0MS	6361773	MS	METHOD	9012B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	3050B	6010B	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	3050B	6020	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	3060A	7199	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	METHOD	300.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	METHOD	314.0	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	METHOD	7471A	III
01-Aug-2011	SL-175-SA5DN-SB-4.0-5.0DU	6361775	DUP	METHOD	9012B	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3050B	6010B	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3050B	6020	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3060A	7199	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3546	1625C	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3550B	8015B	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3550B	8015M	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3550B	8082	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3550B	8270C	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	3550B	8270C SIM	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	5035	8015M	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	8330	8330A	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	300.0	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	314.0	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	7471A	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	8015B	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	8015M	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	METHOD	8315A	III
01-Aug-2011	DUP22-SA5DN-QC-080111	6361781	FD	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
01-Aug-2011	DUP22-SA5DN-QC-080111	P361781	FD	METHOD	8015B	III
01-Aug-2011	DUP22-SA5DN-QC-080111MSD	P361781M240123A	MSD	METHOD	8315A	III
01-Aug-2011	DUP22-SA5DN-QC-080111MSD	P361781M322139A	MSD	METHOD	8015B	III
01-Aug-2011	DUP22-SA5DN-QC-080111MS	P361781R240104A	MS	METHOD	8315A	III
01-Aug-2011	DUP22-SA5DN-QC-080111MS	P361781R322124A	MS	METHOD	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3050B	6010B	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3050B	6020	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3060A	7199	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3546	1625C	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3550B	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3550B	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3550B	8082	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3550B	8270C	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	3550B	8270C SIM	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	5035	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	8330	8330A	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	300.0	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	314.0	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	7471A	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	8015B	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	8015M	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	N	METHOD	8315A	III
01-Aug-2011	SL-175-SA5DN-SB-9.0-10.0	6361776	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: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 ***Collected:*** 8/1/2011 2:52:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.4		0.88	MDL	1.1	PQL	mg/Kg	J	FD
Nitrate-NO3	1.5	J	0.88	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 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	2.5		0.87	MDL	1.1	PQL	mg/Kg	J	FD

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 ***Collected:*** 8/1/2011 2:52:00 PM ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	19500		2.73	MDL	21.8	PQL	mg/Kg	J	E, A
MAGNESIUM	5670		0.480	MDL	10.9	PQL	mg/Kg	J	A
POTASSIUM	3240		12.3	MDL	54.5	PQL	mg/Kg	J	Q, A

Sample ID: DUP22-SA5DN-QC-080111 ***Collected:*** 8/1/2011 2:52:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	323		0.382	MDL	10.9	PQL	mg/Kg	J	Q
TIN	2.59	J	0.349	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.69	J	0.502	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA6-SB-2.0-3.0 ***Collected:*** 8/1/2011 10:15:00 ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	2660		2.52	MDL	20.2	PQL	mg/Kg	J	E, A
MAGNESIUM	4500		0.443	MDL	10.1	PQL	mg/Kg	J	A
POTASSIUM	2880		11.4	MDL	50.4	PQL	mg/Kg	J	Q, A
SODIUM	94.1	J	6.00	MDL	101	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-127-SA6-SB-2.0-3.0 **Collected:** 8/1/2011 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
PHOSPHORUS	319		0.353	MDL	10.1	PQL	mg/Kg	J	Q
TIN	2.53	J	0.322	MDL	10.1	PQL	mg/Kg	U	B
Zirconium	1.25	J	0.463	MDL	5.04	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 12:01:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5740		2.65	MDL	21.2	PQL	mg/Kg	J	E, A
MAGNESIUM	5100		0.466	MDL	10.6	PQL	mg/Kg	J	A
POTASSIUM	3370		12.0	MDL	53.0	PQL	mg/Kg	J	Q, A

Sample ID: SL-170-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 12:01:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	416		0.371	MDL	10.6	PQL	mg/Kg	J	Q
TIN	2.59	J	0.339	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	1.55	J	0.488	MDL	5.30	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 12:02:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	34200		2.84	MDL	22.7	PQL	mg/Kg	J	E, A
MAGNESIUM	6560		0.499	MDL	11.3	PQL	mg/Kg	J	A
POTASSIUM	3690		12.8	MDL	56.7	PQL	mg/Kg	J	Q, A

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 12:02:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	292		0.397	MDL	11.3	PQL	mg/Kg	J	Q
TIN	2.83	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.66	J	0.522	MDL	5.67	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 10:03:00 **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	38600		2.78	MDL	22.2	PQL	mg/Kg	J	E, A
MAGNESIUM	6220		0.489	MDL	11.1	PQL	mg/Kg	J	A
POTASSIUM	3170		12.5	MDL	55.5	PQL	mg/Kg	J	Q, A

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 10:03:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	283		0.389	MDL	11.1	PQL	mg/Kg	J	Q
TIN	2.54	J	0.355	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	2.87	J	0.511	MDL	5.55	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 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	22100		2.83	MDL	22.7	PQL	mg/Kg	J	E, A
MAGNESIUM	5670		0.498	MDL	11.3	PQL	mg/Kg	J	A
POTASSIUM	2470		12.8	MDL	56.6	PQL	mg/Kg	J	Q, A

Sample ID: SL-173-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 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
PHOSPHORUS	201		0.396	MDL	11.3	PQL	mg/Kg	J	Q
TIN	2.78	J	0.363	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.38	J	0.521	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 2:45:00 PM **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	18700		2.73	MDL	21.8	PQL	mg/Kg	J	E, A
MAGNESIUM	4810		0.480	MDL	10.9	PQL	mg/Kg	J	A
POTASSIUM	2960		12.3	MDL	54.5	PQL	mg/Kg	J	Q, A
SODIUM	98.8	J	6.49	MDL	109	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 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
PHOSPHORUS	334		0.382	MDL	10.9	PQL	mg/Kg	J	Q
TIN	2.85	J	0.349	MDL	10.9	PQL	mg/Kg	U	B
Zirconium	2.03	J	0.502	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	16300		2.79	MDL	22.3	PQL	mg/Kg	J	E, A
MAGNESIUM	5930		0.491	MDL	11.2	PQL	mg/Kg	J	A
POTASSIUM	2540		12.6	MDL	55.8	PQL	mg/Kg	J	Q, A

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	183		0.391	MDL	11.2	PQL	mg/Kg	J	Q
TIN	2.63	J	0.357	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.62	J	0.513	MDL	5.58	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 AM ***Analysis Type:*** REA ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	15100		2.68	MDL	21.4	PQL	mg/Kg	J	E, A
MAGNESIUM	5320		0.471	MDL	10.7	PQL	mg/Kg	J	A
POTASSIUM	3350		12.1	MDL	53.5	PQL	mg/Kg	J	Q, A

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	422		0.375	MDL	10.7	PQL	mg/Kg	J	Q
TIN	2.37	J	0.343	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	1.81	J	0.492	MDL	5.35	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-176-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 8:23:00 AM **Analysis Type:** REA **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	13400		2.75	MDL	22.0	PQL	mg/Kg	J	E, A
MAGNESIUM	5750		0.484	MDL	11.0	PQL	mg/Kg	J	A
POTASSIUM	2850		12.4	MDL	54.9	PQL	mg/Kg	J	Q, A

Sample ID: SL-176-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 8:23:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	186		0.385	MDL	11.0	PQL	mg/Kg	J	Q
TIN	3.01	J	0.352	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	2.01	J	0.505	MDL	5.49	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 **Collected:** 8/1/2011 2:52:00 PM **Analysis Type:** REA **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.127	J	0.0620	MDL	0.428	PQL	mg/Kg	J	Z

Sample ID: DUP22-SA5DN-QC-080111 **Collected:** 8/1/2011 2:52:00 PM **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.563		0.0535	MDL	0.107	PQL	mg/Kg	J	Q, E

Sample ID: DUP22-SA5DN-QC-080111 **Collected:** 8/1/2011 2:52:00 PM **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.184	J	0.0791	MDL	0.214	PQL	mg/Kg	J	Z, Q
ARSENIC	7.30		0.0855	MDL	0.428	PQL	mg/Kg	J	Q
CADMIUM	0.504		0.0470	MDL	0.107	PQL	mg/Kg	J	Q
COPPER	17.1		0.0855	MDL	0.428	PQL	mg/Kg	J	Q
LEAD	10.9		0.0109	MDL	0.214	PQL	mg/Kg	J	Q, E
NICKEL	23.0		0.107	MDL	0.428	PQL	mg/Kg	J	Q
SILVER	0.126		0.0152	MDL	0.107	PQL	mg/Kg	J	Q, FD
THALLIUM	0.394		0.0321	MDL	0.107	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-127-SA6-SB-2.0-3.0 ***Collected:*** 8/1/2011 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
SELENIUM	0.132	J	0.0590	MDL	0.407	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA6-SB-2.0-3.0 ***Collected:*** 8/1/2011 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
MOLYBDENUM	0.667		0.0509	MDL	0.102	PQL	mg/Kg	J	Q, E

Sample ID: SL-127-SA6-SB-2.0-3.0 ***Collected:*** 8/1/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0954	J	0.0753	MDL	0.204	PQL	mg/Kg	J	Z, Q
ARSENIC	10.1		0.0814	MDL	0.407	PQL	mg/Kg	J	Q
CADMIUM	0.772		0.0448	MDL	0.102	PQL	mg/Kg	J	Q
COPPER	9.48		0.0814	MDL	0.407	PQL	mg/Kg	J	Q
LEAD	17.0		0.0104	MDL	0.204	PQL	mg/Kg	J	Q, E
NICKEL	11.8		0.102	MDL	0.407	PQL	mg/Kg	J	Q
SILVER	0.0639	J	0.0144	MDL	0.102	PQL	mg/Kg	J	Z, Q
THALLIUM	0.241		0.0305	MDL	0.102	PQL	mg/Kg	J	Q

Sample ID: SL-170-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 12:01:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.132	J	0.0633	MDL	0.437	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 12:01:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.572		0.0546	MDL	0.109	PQL	mg/Kg	J	Q, E

Sample ID: SL-170-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 12:01:00 ***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	J	0.0808	MDL	0.218	PQL	mg/Kg	J	Z, Q
ARSENIC	5.60		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
CADMIUM	0.319		0.0480	MDL	0.109	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-170-SA5DN-SB-4.0-5.0 **Collected: 8/1/2011 12:01:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	14.1		0.0873	MDL	0.437	PQL	mg/Kg	J	Q
LEAD	8.64		0.0111	MDL	0.218	PQL	mg/Kg	J	Q, E
NICKEL	15.2		0.109	MDL	0.437	PQL	mg/Kg	J	Q
SILVER	0.0484	J	0.0155	MDL	0.109	PQL	mg/Kg	J	Z, Q
THALLIUM	0.250		0.0327	MDL	0.109	PQL	mg/Kg	J	Q

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 12:02:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.109	J	0.0658	MDL	0.454	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 12:02:00** **Analysis Type: REA2** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.529		0.0567	MDL	0.113	PQL	mg/Kg	J	Q, E

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 12:02:00** **Analysis Type: RES** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.202	J	0.0840	MDL	0.227	PQL	mg/Kg	J	Z, Q
ARSENIC	7.70		0.0908	MDL	0.454	PQL	mg/Kg	J	Q
CADMIUM	0.393		0.0499	MDL	0.113	PQL	mg/Kg	J	Q
COPPER	17.0		0.0908	MDL	0.454	PQL	mg/Kg	J	Q
LEAD	10.6		0.0116	MDL	0.227	PQL	mg/Kg	J	Q, E
NICKEL	27.1		0.113	MDL	0.454	PQL	mg/Kg	J	Q
SILVER	0.0559	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.388		0.0340	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected: 8/1/2011 10:03:00** **Analysis Type: REA** **Dilution: 2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0963	J	0.0644	MDL	0.444	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-173-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 10:03:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.494		0.0555	MDL	0.111	PQL	mg/Kg	J	Q, E

Sample ID: SL-173-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 10:03:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.154	J	0.0822	MDL	0.222	PQL	mg/Kg	J	Z, Q
ARSENIC	8.38		0.0888	MDL	0.444	PQL	mg/Kg	J	Q
CADMIUM	0.408		0.0489	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	16.4		0.0888	MDL	0.444	PQL	mg/Kg	J	Q
LEAD	9.81		0.0113	MDL	0.222	PQL	mg/Kg	J	Q, E
NICKEL	22.8		0.111	MDL	0.444	PQL	mg/Kg	J	Q
SILVER	0.0398	J	0.0158	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.323		0.0333	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-173-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 10:05:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0869	J	0.0657	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 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	0.562		0.0566	MDL	0.113	PQL	mg/Kg	J	Q, E

Sample ID: SL-173-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 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	0.140	J	0.0838	MDL	0.227	PQL	mg/Kg	J	Z, Q
ARSENIC	9.02		0.0906	MDL	0.453	PQL	mg/Kg	J	Q
CADMIUM	0.122		0.0498	MDL	0.113	PQL	mg/Kg	J	Q
COPPER	31.2		0.0906	MDL	0.453	PQL	mg/Kg	J	Q
LEAD	9.66		0.0116	MDL	0.227	PQL	mg/Kg	J	Q, E
NICKEL	22.8		0.113	MDL	0.453	PQL	mg/Kg	J	Q
SILVER	0.0429	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.398		0.0340	MDL	0.113	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 2:45:00 PM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.132	J	0.0614	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 2:45:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.561		0.0529	MDL	0.106	PQL	mg/Kg	J	Q, E

Sample ID: SL-175-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 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	0.163	J	0.0784	MDL	0.212	PQL	mg/Kg	J	Z, Q
ARSENIC	5.66		0.0847	MDL	0.424	PQL	mg/Kg	J	Q
CADMIUM	0.311		0.0466	MDL	0.106	PQL	mg/Kg	J	Q
COPPER	13.7		0.0847	MDL	0.424	PQL	mg/Kg	J	Q
LEAD	9.31		0.0108	MDL	0.212	PQL	mg/Kg	J	Q, E
NICKEL	19.2		0.106	MDL	0.424	PQL	mg/Kg	J	Q
SILVER	0.0517	J	0.0150	MDL	0.106	PQL	mg/Kg	J	Z, Q, FD
THALLIUM	0.341		0.0318	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.102	J	0.0641	MDL	0.442	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.646		0.0553	MDL	0.111	PQL	mg/Kg	J	Q, E

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.223		0.0818	MDL	0.221	PQL	mg/Kg	J	Q
ARSENIC	9.80		0.0884	MDL	0.442	PQL	mg/Kg	J	Q
CADMIUM	0.190		0.0486	MDL	0.111	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 2:53:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	19.8		0.0884	MDL	0.442	PQL	mg/Kg	J	Q
LEAD	11.6		0.0113	MDL	0.221	PQL	mg/Kg	J	Q, E
NICKEL	26.6		0.111	MDL	0.442	PQL	mg/Kg	J	Q
SILVER	0.0771	J	0.0157	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.412		0.0332	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 AM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.113	J	0.0627	MDL	0.432	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 AM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.590		0.0540	MDL	0.108	PQL	mg/Kg	J	Q, E

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.170	J	0.0800	MDL	0.216	PQL	mg/Kg	J	Z, Q
ARSENIC	5.94		0.0865	MDL	0.432	PQL	mg/Kg	J	Q
CADMIUM	0.251		0.0476	MDL	0.108	PQL	mg/Kg	J	Q
COPPER	15.5		0.0865	MDL	0.432	PQL	mg/Kg	J	Q
LEAD	9.16		0.0110	MDL	0.216	PQL	mg/Kg	J	Q, E
NICKEL	17.8		0.108	MDL	0.432	PQL	mg/Kg	J	Q
SILVER	0.0576	J	0.0153	MDL	0.108	PQL	mg/Kg	J	Z, Q
THALLIUM	0.318		0.0324	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-176-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 8:23:00 AM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.105	J	0.0656	MDL	0.453	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-176-SA5DN-SB-9.0-10.0** ***Collected:*** **8/1/2011 8:23:00 AM** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.575		0.0566	MDL	0.113	PQL	mg/Kg	J	Q, E

Sample ID: **SL-176-SA5DN-SB-9.0-10.0** ***Collected:*** **8/1/2011 8:23:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.155	J	0.0837	MDL	0.226	PQL	mg/Kg	J	Z, Q
ARSENIC	8.96		0.0905	MDL	0.453	PQL	mg/Kg	J	Q
CADMIUM	0.121		0.0498	MDL	0.113	PQL	mg/Kg	J	Q
COPPER	17.6		0.0905	MDL	0.453	PQL	mg/Kg	J	Q
LEAD	11.6		0.0115	MDL	0.226	PQL	mg/Kg	J	Q, E
NICKEL	22.8		0.113	MDL	0.453	PQL	mg/Kg	J	Q
SILVER	0.0638	J	0.0161	MDL	0.113	PQL	mg/Kg	J	Z, Q
THALLIUM	0.404		0.0339	MDL	0.113	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: **DUP22-SA5DN-QC-080111** ***Collected:*** **8/1/2011 2:52:00 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	0.50	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: **SL-127-SA6-SB-2.0-3.0** ***Collected:*** **8/1/2011 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	0.64	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: **SL-170-SA5DN-SB-4.0-5.0** ***Collected:*** **8/1/2011 12:01:00** ***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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: DE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 12:02:00 **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-175-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 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
HEXAVALENT CHROMIUM	0.60	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 2:53:00 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	0.61	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 8:23:00 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	0.52	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 **Collected:** 8/1/2011 2:52:00 PM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0074	U	0.0074	MDL	0.105	PQL	mg/Kg	UJ	FD

Sample ID: SL-127-SA6-SB-2.0-3.0 **Collected:** 8/1/2011 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	0.0375	J	0.0072	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 10:03:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0113	J	0.0077	MDL	0.110	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: PrepDE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 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
MERCURY	0.0142	J	0.0073	MDL	0.104	PQL	mg/Kg	J	Z, FD

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 *Collected:* 8/1/2011 2:52:00 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	156		18.4	MDL	36.7	PQL	ng/Kg	J	FD

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 2:45:00 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	370		184	MDL	367	PQL	ng/Kg	J	FD

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 *Collected:* 8/1/2011 2:52:00 PM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	6.0		0.88	MDL	2.6	PQL	mg/Kg	J	FD
EFH (C30-C40)	22		0.88	MDL	2.6	PQL	mg/Kg	J	FD

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 2:45:00 PM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q
Propylene glycol	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 2:45:00 PM *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)	17		2.2	MDL	6.6	PQL	mg/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: PrepDE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 2:45:00 PM **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)	76		2.2	MDL	6.6	PQL	mg/Kg	J	FD

Method Category: SVOA **Method:** 8082 **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 **Collected:** 8/1/2011 2:52:00 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	0.92	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z, FD
Aroclor 5460	1.7	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z, FD

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 12:02:00 **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	0.89	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 10:03:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.65	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-9.0-10.0 **Collected:** 8/1/2011 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 1254	0.67	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 **Collected:** 8/1/2011 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
AROCLOR 1260	2.7		0.43	MDL	1.9	PQL	ug/Kg	J	FD
Aroclor 5460	3.7		1.1	MDL	3.6	PQL	ug/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: PrepDE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-176-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 8:21:00 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 1260	1.3	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	1.3	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-176-SA5DN-SB-9.0-10.0 ***Collected:*** 8/1/2011 8:23:00 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 1254	0.91	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 ***Collected:*** 8/1/2011 2:52:00 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	30	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-127-SA6-SB-2.0-3.0 ***Collected:*** 8/1/2011 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
BENZO(A)ANTHRACENE	66	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	68	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	88	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	58	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	39	J	17	MDL	170	PQL	ug/Kg	J	Z
CHRYSENE	77	J	17	MDL	170	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	17	J	17	MDL	170	PQL	ug/Kg	J	Z
FLUORANTHENE	93	J	17	MDL	170	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	45	J	17	MDL	170	PQL	ug/Kg	J	Z
PHENANTHRENE	32	J	17	MDL	170	PQL	ug/Kg	J	Z
PYRENE	96	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-4.0-5.0 ***Collected:*** 8/1/2011 12:01:00 ***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	25	J	18	MDL	180	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: PrepDE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-170-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 12:01:00 *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	42	J	18	MDL	370	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	20	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 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
1,3-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	Q
BENZIDINE	1300	U	1300	MDL	3700	PQL	ug/Kg	UJ	Q

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

Sample ID: DUP22-SA5DN-QC-080111 *Collected:* 8/1/2011 2:52:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.90	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(G,H,I)PERYLENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
CHRYSENE	3.6		0.37	MDL	1.8	PQL	ug/Kg	J	FD
FLUORANTHENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	2.8		0.73	MDL	1.8	PQL	ug/Kg	J	FD
PYRENE	1.3	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-127-SA6-SB-2.0-3.0 *Collected:* 8/1/2011 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.2	J	1.7	MDL	8.6	PQL	ug/Kg	J	Z

Sample ID: SL-170-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 12:01:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.81	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: PrepDE213_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

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

Sample ID: SL-170-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 12:02:00** **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	0.77	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	0.75	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-4.0-5.0 **Collected: 8/1/2011 10:03:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.84	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.8	J	6.9	MDL	21	PQL	ug/Kg	J	Z
CHRYSENE	0.78	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 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	13	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-4.0-5.0 **Collected: 8/1/2011 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
2-METHYLNAPHTHALENE	0.81	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.83	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
BENZO(G,H,I)PERYLENE	1.4	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	6.6	MDL	20	PQL	ug/Kg	J	Z
CHRYSENE	1.0	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	0.86	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
PYRENE	0.87	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-175-SA5DN-SB-9.0-10.0 **Collected: 8/1/2011 2:53:00 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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory:** LL

EDD Filename: PrepDE213_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

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

Sample ID: SL-176-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 8:21:00 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
NAPHTHALENE	1.4	J	0.74	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-176-SA5DN-SB-9.0-10.0 *Collected:* 8/1/2011 8:23:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.83	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	8.2	J	6.9	MDL	21	PQL	ug/Kg	J	Z
CHRYSENE	0.47	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8330A **Matrix:** SO

Sample ID: DUP22-SA5DN-QC-080111 *Collected:* 8/1/2011 2:52:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitroglycerin	880	U	880	MDL	2600	PQL	ug/Kg	UJ	L

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 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
Nitroglycerin	880	U	880	MDL	2600	PQL	ug/Kg	UJ	L

Sample ID: SL-175-SA5DN-SB-9.0-10.0 *Collected:* 8/1/2011 2:53:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitroglycerin	920	U	920	MDL	2800	PQL	ug/Kg	UJ	L

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-175-SA5DN-SB-4.0-5.0 *Collected:* 8/1/2011 2:45:00 PM *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	3.9	PQL	mg/Kg	UJ	Q
p-Terphenyl	1.7	U	1.7	MDL	3.9	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: PrepDE213_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category:	VOA		
Method:	8015B	*Matrix:*	SO

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_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
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

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

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE213

Method Blank Outlier Report

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_v1 **eQAPP Name: CDM_SSFL_110509**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P21708BB220925	8/12/2011 9:25:00 AM	BORON	0.499 mg/Kg	DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0
P21708BB221518	8/11/2011 3:18:00 PM	CALCIUM	7.85 mg/Kg	DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0
P21708BB221539	8/8/2011 3:39:00 PM	IRON PHOSPHORUS STRONTIUM TIN	3.78 mg/Kg 0.944 mg/Kg 0.0480 mg/Kg 1.71 mg/Kg	DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-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
DUP22-SA5DN-QC-080111(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-127-SA6-SB-2.0-3.0(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-170-SA5DN-SB-4.0-5.0(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-170-SA5DN-SB-9.0-10.0(RES)	TIN	2.83 mg/Kg	2.83U mg/Kg
SL-173-SA5DN-SB-4.0-5.0(RES)	TIN	2.54 mg/Kg	2.54U mg/Kg
SL-173-SA5DN-SB-9.0-10.0(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-175-SA5DN-SB-4.0-5.0(RES)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-175-SA5DN-SB-9.0-10.0(RES)	TIN	2.63 mg/Kg	2.63U mg/Kg
SL-176-SA5DN-SB-4.0-5.0(RES)	TIN	2.37 mg/Kg	2.37U mg/Kg
SL-176-SA5DN-SB-9.0-10.0(RES)	TIN	3.01 mg/Kg	3.01U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_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-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	36 55 57	49 - -	59.00-109.00 63.00-107.00 63.00-107.00	31 (20.00) 28 (20.00) 26 (20.00)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects) UJ (all non-detects)
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	EFH (C21-C30)	578	601	49.00-123.00	-	EFH (C21-C30)	No Qual, Diluted Out
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	EFH (C12-C14) EFH (C15-C20) EFH (C30-C40) EFH (C8-C11)	0 0 -325 0	0 0 -314 0	49.00-123.00 49.00-123.00 49.00-123.00 49.00-123.00	- - - -	EFH (C12-C14) EFH (C15-C20) EFH (C30-C40) EFH (C8-C11)	No Qual, Diluted Out

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	m-Terphenyl p-Terphenyl	70 74	73 -	75.00-125.00 75.00-125.00	- -	m-Terphenyl p-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-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	ARSENIC CADMIUM COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	139 130 128 159 - - - - 174	143 138 137 165 134 131 132 130 180	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 CADMIUM COPPER LEAD NICKEL SILVER THALLIUM VANADIUM ZINC	J(all detects) V, Zn, No Qual, >4x
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	ANTIMONY	42	44	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_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-175-SA5DN-SB-4.0-5.0MSD (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	MOLYBDENUM	-	127	75.00-125.00	-	MOLYBDENUM	J(all detects)
SL-175-SA5DN-SB-4.0-5.0MS **SL-175-SA5DN-SB-4.0-5.0MSD** (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	BARIUM	218	304	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-175-SA5DN-SB-4.0-5.0MS **SL-175-SA5DN-SB-4.0-5.0MSD** (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	ALUMINUM	831	950	75.00-125.00	-	ALUMINUM	J(all detects) Al, Mg, Ti No Qual, >4x
	MAGNESIUM	171	256	75.00-125.00	-	MAGNESIUM	
	POTASSIUM	-	163	75.00-125.00	-	POTASSIUM	
	TITANIUM	132	194	75.00-125.00	-	TITANIUM	
SL-175-SA5DN-SB-4.0-5.0MS **SL-175-SA5DN-SB-4.0-5.0MSD** (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	CALCIUM	-790	139	75.00-125.00	23 (20.00)	CALCIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x
	IRON	-1590	-1481	75.00-125.00	-	IRON	

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE213 **Laboratory: LL**

EDD Filename: DE213_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-175-SA5DN-SB-4.0-5.0MS (DUP22-SA5DN-QC-080111 SL-127-SA6-SB-2.0-3.0 SL-170-SA5DN-SB-4.0-5.0 SL-170-SA5DN-SB-9.0-10.0 SL-173-SA5DN-SB-4.0-5.0 SL-173-SA5DN-SB-9.0-10.0 SL-175-SA5DN-SB-4.0-5.0 SL-175-SA5DN-SB-9.0-10.0 SL-176-SA5DN-SB-4.0-5.0 SL-176-SA5DN-SB-9.0-10.0)	PHOSPHORUS	65	-	75.00-125.00	-	PHOSPHORUS	J(all detects) UJ(all non-detects)

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	N-NITROSODIMETHYLAMINE	54	53	70.00-130.00	-	N-NITROSODIMETHYLAMINE	No Qual, Diluted Out

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	1,2-Diphenylhydrazine/Azobenzen 2-METHYLPHENOL BENZOIC ACID Di-n-octylphthalate	- 118 - 130	133 - - -	71.00-129.00 75.00-111.00 10.00-173.00 56.00-126.00	- - 91 (30.00) -	1,2-Diphenylhydrazine/Azobenz 2-METHYLPHENOL BENZOIC ACID Di-n-octylphthalate	J(all detects)
SL-175-SA5DN-SB-4.0-5.0MS SL-175-SA5DN-SB-4.0-5.0MSD (SL-175-SA5DN-SB-4.0-5.0)	1,3-DICHLOROBENZENE BENZIDINE	60 22	- 23	63.00-109.00 35.00-141.00	- -	1,3-DICHLOROBENZENE BENZIDINE	J(all detects) UJ(all non-detects)