LDC #: 26850I2

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard ≥ 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 26850I2

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the ~~25-150%~~ ac limits criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks > 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?		✓		
Was an acceptable lock mass recorded and monitored?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:

LDC #: 26850I21

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: JZ
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

Y N N/A Were all samples associated with a method blank?

Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed? *EMPC

Y N N/A Was the method blank contaminated?

(B)

Blank extraction date: 9/13/11 **Blank analysis date:** 9/14/11 **Associated samples:** ALL WATER

Conc. units: pg/L

Compound	Blank ID	Sample Identification								
	BLK256001	5X	13							
A	0.680*	3.4								
I	0.426*	2.13	0.309*U							
J	0.637	3.185	0.344*U							
K	0.529*	2.645	0.297*U							
M	0.833*	4.165	0.684*U							
C	0.441*	2.205	0.618*U							
D	0.617*	3.085								
E	0.652	3.26	0.436*U							
N	0.522	2.61	0.324*U							
O	2.13	10.65	2.98*U							
F	2.87	14.35	2.78U							
P	0.770*	3.85	0.355*U							
G	4.54	22.7	6.01*U							
Q	1.21*	6.05	2.71U							

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 #: 26850C21 (I)

VALIDATION FINDINGS WORKSHEET
Blanks

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

Y N N/A Were all samples associated with a method blank?

Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed? *EMPC

Y N N/A Was the method blank contaminated?

(B)

Blank extraction date: 9/15/11 **Blank analysis date:** 9/16/11 **Associated samples:** ALL SOILS

Conc. units: ng/kg

Compound	Blank ID	Sample Identification								
	BLK257002	5X	1	2	3	4	5	6	7	8
I	0.0181*	0.0905		0.0147*U	0.0720*U	0.0300*U	0.0296*U			
J	0.0560*	0.28		0.0569U	0.121U	0.0564*U	0.0657*U	0.208U		
B	0.0158	0.079			0.0749*U	0.0224*U				
K	0.0509	0.2545		0.0458*U	0.117U	0.0604U	0.0602U	0.157*U		
L	0.0471	0.2355		0.0320U	0.0869U	0.0335*U	0.0267U	0.114*U		0.185U
M	0.0795*	0.3975		0.0625*U	0.110*U	0.0548U	0.0523*U	0.125U	0.296U	0.165U
D	0.0140	0.07		0.0451*U		0.0679*U	0.0375*U	0.0670*U		
E	0.0192*	0.096		0.0762*U			0.0327*U	0.0649U		
N	0.0275*	0.1375				0.110*U	0.0345U	0.0860U		
O	0.214	1.07		0.166U	0.654U	0.380U	0.187U	0.299U		0.245U
F	0.215	1.075		0.353U		1.01U	0.297U	0.704U		0.334U
P	0.0353*	0.1765		0.0351*U	0.105*U	0.0775*U	0.0361U	0.0812*U	~~0.184U~~	0.0780U
G	0.396	1.98					0.818U			0.621U
Q	0.179	0.895		0.343U		0.769U	0.168U	0.535U		0.251U

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 #: 26850C21 (I)

VALIDATION FINDINGS WORKSHEET
Blanks

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

Y N N/A Were all samples associated with a method blank?

Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed? *EMPC

Y N N/A Was the method blank contaminated?

(B)

Blank extraction date: 9/15/11 **Blank analysis date:** 9/16/11 **Associated samples:** ALL SOILS

Conc. units: ng/kg

Compound	Blank ID	Sample Identification								
	BLK257002	5X	9	10	12	11				
I	0.0181*	0.0905		0.0175*	0.0742*					
J	0.0560*	0.28	0.163	0.0485	0.178*	0.206*				
B	0.0158	0.079			0.0246	0.0162*				
K	0.0509	0.2545	0.135	0.0565	0.147	0.148				
L	0.0471	0.2355	0.106	0.0287*	0.131	0.113*				
M	0.0795*	0.3975	0.0906	0.0616*	0.118	0.0869				
D	0.0140	0.07	0.0493*	0.0205*		0.0407				
E	0.0192*	0.096	0.0762*	0.0196*		0.0520				
N	0.0275*	0.1375	0.101	0.0262	0.0717*	0.0328*				
O	0.214	1.07	0.230*	0.196	0.666	0.447				
F	0.215	1.075	0.363	0.250		0.991				
P	0.0353*	0.1765	0.0567	0.0360*	0.0913	0.0831*				
G	0.396	1.98	1.37	0.522						
Q	0.179	0.895	0.258	0.205	0.786					

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 #: 26850I21

VALIDATION FINDINGS WORKSHEET
Field Blank

Reviewer: RJ
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were field blank identified in this SDG?
Y N N/A Were target compounds detected in the field blank?

*EMPC (F)

Blank unit: pg/L **Associated sample unit:** ng/Kg **Associated samples:** 11,12 >5X

Sampling date : 09/07/11

Compound	Blank ID	Sample Identification								
	13	5X								
I	0.309*	1.545								
J	0.344*	1.72								
K	0.297*	1.485								
M	0.684*	3.42								
C	0.618*	3.09								
E	0.436*	2.18								
N	0.324*	1.62								
O	2.98*	14.9								
F	2.78	13.9								
P	0.355*	1.775								
G	6.01*	30.05								
Q	2.71	13.55								

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#: 26850I21 **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

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

METHOD: 1613B

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

* empc (fd)

Compound	Concentration (ng/kg)		≤ 50 RPD	
	2	5		
H	0.0164U	0.0186	200	J/w/A
I	0.0147*	0.0296*	67	J/Adv
J	0.0569*	0.0657*	14	
K	0.0458*	0.0602	27	
L	0.0320	0.0267	18	
M	0.0625*	0.0523*	18	
D	0.0451*	0.0375*	18	
E	0.0762*	0.0327*	80	J/Adv
N	0.0112U	0.0345	200	J/w/A
O	0.166	0.187	12	
F	0.353	0.297	17	
P	0.0351*	0.0361	3	
G	2.08	0.818	87	J/Adv
Q	0.343	0.168	68	↓

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LDC #: 26850I21

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: C

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
%RSD = 100 * (S/X) — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	8/01/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.864	0.864	0.890	0.890	3.68	3.68
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.017	1.017	1.003	1.003	2.98	2.98
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.896	0.896	0.854	0.854	4.82	4.82
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.964	0.964	0.946	0.946	2.49	2.49
			OCDF (^{13}C-OCDF)	0.911	0.911	0.880	0.880	3.43	3.43
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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

LDC #: 26810C2/

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
$\%RSD = 100 * (S/X)$ — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	6/3/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.017	1.017	1.033	1.033	4.59	4.59
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.186	1.186	1.186	1.186	5.56	5.56
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.995	0.995	1.001	1.001	3.43	3.43
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.077	1.077	1.101	1.101	4.02	4.02
			OCDF (^{13}C-OCDF)	0.945	0.945	0.974	0.974	3.54	3.54
2	ICAL	6/24/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	1.022	1.028	1.028	7.77	7.77
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	1.133	1.142	1.142	3.52	3.52
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	0.971	1.018	1.018	4.32	4.32
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	1.053	1.087	1.087	4.49	4.49
			OCDF (^{13}C-OCDF)	0.950	0.950	1.001	1.001	5.01	5.01
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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

LDC #: 26850I21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %R	Recalculated %R
1	CCV 17:36	9/14/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	10.0	9.530	9.530	95	95
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	10.0	10.270	10.270	103	103
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	50.0	50.240	50.240	100	100
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	50.0	49.050	49.050	98	98
			OCDF (^{13}C-OCDF)	100	99.910	99.910	100	100
2	CCV 18:07	9/16/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		10.290	10.290	103	103
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.180	10.180	102	102
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		53.360	53.360	107	107
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		52.870	52.870	106	106
			OCDF (^{13}C-OCDF)		106.910	106.910	107	107
3	CCV 4:38	9/17/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		10.330	10330	103	103
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.170	10.170	102	102
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		53730	53.73	107	107
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		51.590	51.590	103	103
			OCDF (^{13}C-OCDF)		105.650	105.650	106	106

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

LDC #: 26850I21

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

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 * (SSR - SR)/SA Where: SSR = Spiked sample result, SR = Sample result
SA = Spike added

RPD = | MSR - MSDR | * 2/(MSR + MSDR) MSR = Matrix spike percent recovery MSDR = Matrix spike duplicate percent recovery

MS/MSD samples: 14 + 15

Compound	Spike Added (ng/kg)		Sample Concentration (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		Reported RPD	Recalculated RPD
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	----	----
2,3,7,8-TCDD	21.8	21.8	ND	21.2	21.3	97	97	98	98	0	0
1,2,3,7,8-PeCDD	109	109	ND	115	114	106	106	105	105	0	0
1,2,3,4,7,8-HxCDD	109	109	ND	114	117	105	105	107	107	2	2
1,2,3,4,7,8,9-HpCDF	109	109	0.0351	115	112	106	106	102	102	3	3
OCDF	218	218	0.343	228	226	105	105	104	104	1	1

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

LDC #: 26850I21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

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

METHOD: GC/MS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

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

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

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

LCS ID: OPR 257002

Compound	Spike Added (ng/kg)		Spiked Sample Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20.0	NA	19.1	NA	96	96				
1,2,3,7,8-PeCDD	100		104		104	104				
1,2,3,4,7,8-HxCDD	100		105		105	105				
1,2,3,4,7,8,9-HpCDF	100		101		101	101				
OCDF	200		206		103	103	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 #: 26850I21

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

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

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

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

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

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

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

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

Example:

Sample I.D. #1, OCDD:

Conc. = $\frac{(391163)(4000)(\quad)}{(300421 + 266245)(0.926)(10.0)(0.483)}$ = 572 ng/kg

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

SAMPLE DELIVERY GROUP

DX133

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Sep-2011	SL-001-SA6-SB-0.0-1.0	6401600	N	METHOD	1613B	III
09-Sep-2011	SL-001-SA6-SB-0.0-1.0MS	6401601	MS	METHOD	1613B	III
09-Sep-2011	SL-001-SA6-SB-0.0-1.0MSD	6401602	MSD	METHOD	1613B	III
09-Sep-2011	DUP15-SA6-QC-090911	6401607	FD	METHOD	1613B	III
09-Sep-2011	SL-217-SA6-SB-4.0-5.0	6401605	N	METHOD	1613B	III
09-Sep-2011	SL-217-SA6-SB-7.5-8.5	6401606	N	METHOD	1613B	III
09-Sep-2011	SL-210-SA6-SB-4.0-5.0	6401603	N	METHOD	1613B	III
09-Sep-2011	SL-210-SA6-SB-9.0-10.0	6401604	N	METHOD	1613B	III
12-Sep-2011	SL-051-SA6-SB-3.5-4.5	6404358	N	METHOD	1613B	III
12-Sep-2011	SL-235-SA6-SB-4.0-5.0	6404361	N	METHOD	1613B	III
12-Sep-2011	SL-050-SA6-SB-1.0-2.0	6404357	N	METHOD	1613B	III
12-Sep-2011	SL-269-SA6-SB-1.5-2.5	6404360	N	METHOD	1613B	III
12-Sep-2011	SL-055-SA6-SB-2.0-3.0	6404359	N	METHOD	1613B	III
13-Sep-2011	SL-040-SA7-SS-0.0-0.5	6404534	N	METHOD	1613B	III
13-Sep-2011	SL-041-SA7-SS-0.0-0.5	6404535	N	METHOD	1613B	III
13-Sep-2011	SL-071-SA7-SS-0.0-0.5	6404537	N	METHOD	1613B	III
13-Sep-2011	SL-037-SA7-SS-0.0-0.5	6404533	N	METHOD	1613B	III
13-Sep-2011	SL-070-SA7-SS-0.0-0.5	6404536	N	METHOD	1613B	III
13-Sep-2011	SL-034-SA7-SS-0.0-0.5	6404531	N	METHOD	1613B	III
13-Sep-2011	SL-035-SA7-SS-0.0-0.5	6404532	N	METHOD	1613B	III
13-Sep-2011	SL-073-SA7-SS-0.0-0.5	6404538	N	METHOD	1613B	III
13-Sep-2011	SL-030-SA7-SS-0.0-0.5	6404530	N	METHOD	1613B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 1613B **Matrix: SO**

Sample ID: DUP15-SA6-QC-090911 *Collected:* 9/9/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.61	JB	0.0352	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.241	JBQ	0.0505	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0836	JBQ	0.0510	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.300	JQ	0.0399	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.355	J	0.0502	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.155	J	0.0368	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.267	JBQ	0.0473	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0685	JQ	0.0342	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.252	JQ	0.0496	MDL	5.25	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.338	J	0.0358	MDL	5.25	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.157	JBQ	0.0395	MDL	5.25	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.310	JB	0.0365	MDL	5.25	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDD	0.0868	JQ	0.0594	MDL	1.05	PQL	ng/Kg	J	Z, FD
OCDF	5.30	JB	0.0442	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: SL-001-SA6-SB-0.0-1.0 *Collected:* 9/9/2011 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
1,2,3,4,6,7,8-HPCDF	1.49	JB	0.0350	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.176	JBQ	0.0572	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.107	JBQ	0.0515	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.269	J	0.0425	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.347	JQ	0.0501	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0932	JQ	0.0386	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.202	JBQ	0.0514	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0706	JQ	0.0485	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0486	U	0.0486	MDL	5.20	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.0490	J	0.0383	MDL	5.20	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.161	JBQ	0.0375	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.170	JB	0.0396	MDL	5.20	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.0825	U	0.0825	MDL	1.04	PQL	ng/Kg	UJ	FD
OCDD	219	B	0.0856	MDL	10.4	PQL	ng/Kg	J	Q, Q
OCDF	4.62	JB	0.0546	MDL	10.4	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-030-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.452	JB	0.0802	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.01	JB	0.113	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.14	J	0.0710	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.08	J	0.110	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.604	J	0.0682	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.80	JB	0.0987	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.346	J	0.0705	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.319	J	0.0798	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.494	J	0.0715	MDL	5.02	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.600	JB	0.0606	MDL	5.02	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.05	JB	0.0658	MDL	5.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.386	JQ	0.123	MDL	1.00	PQL	ng/Kg	J	Z

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.804	JC	0.0637	MDL	0.994	PQL	ng/Kg	J	Z

Sample ID: SL-034-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.36	JB	0.0742	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.45	JB	0.0908	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.39	J	0.0673	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	4.58	J	0.0908	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.834	J	0.0680	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.95	JB	0.0671	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.775	J	0.0844	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.686	J	0.0691	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.18	JB	0.0615	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.953	JB	0.0651	MDL	4.97	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.142	J	0.0703	MDL	0.994	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.937	JC	0.0563	MDL	0.993	PQL	ng/Kg	J	Z

Sample ID: SL-035-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.15	JB	0.0826	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.20	JB	0.0964	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.51	J	0.0734	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.30	J	0.0986	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.725	J	0.0710	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.29	JB	0.0821	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.226	JQ	0.0760	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.715	JQ	0.0914	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.83	J	0.0861	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.968	JB	0.0716	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.980	JB	0.0738	MDL	4.97	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.388	J	0.0740	MDL	0.993	PQL	ng/Kg	J	Z

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.976	JC	0.0823	MDL	1.01	PQL	ng/Kg	J	Z

Sample ID: SL-037-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.968	JB	0.0745	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.696	JB	0.0706	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.77	J	0.0844	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.42	J	0.0733	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.992	J	0.0803	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.12	JB	0.0619	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.337	JQ	0.0655	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.476	J	0.0688	MDL	5.03	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.806	JQ	0.0943	MDL	5.03	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-037-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.946	JB	0.0609	MDL	5.03	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.48	JB	0.0804	MDL	5.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.140	JQ	0.0687	MDL	1.01	PQL	ng/Kg	J	Z

Sample ID: SL-040-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 8:46:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.25	JB	0.0557	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	1.07	JB	0.0257	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0922	JB	0.0407	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0941	JB	0.0454	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.188	JQ	0.0265	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.207	JQ	0.0458	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.113	J	0.0251	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.177	JBQ	0.0405	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0876	J	0.0312	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.121	JQ	0.0441	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.175	JQ	0.0293	MDL	5.02	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.164	JB	0.0311	MDL	5.02	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.277	JB	0.0304	MDL	5.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0973	J	0.0618	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	3.38	JB	0.0507	MDL	10.0	PQL	ng/Kg	J	Z

Sample ID: SL-041-SA7-SS-0.0-0.5 ***Collected:*** 9/13/2011 9:09:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.72	JB	0.0301	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.166	JBQ	0.0467	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.236	JBQ	0.0679	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.556	J	0.0355	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.595	JQ	0.0687	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.177	JQ	0.0305	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.434	JBQ	0.0624	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0691	JQ	0.0358	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.242	JQ	0.0461	MDL	5.02	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-041-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.166	J	0.0309	MDL	5.02	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.159	JB	0.0308	MDL	5.02	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.240	JB	0.0290	MDL	5.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0719	JQ	0.0601	MDL	1.00	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.176	JQ	0.0721	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	3.74	JB	0.0512	MDL	10.0	PQL	ng/Kg	J	Z

Sample ID: SL-050-SA6-SB-1.0-2.0 *Collected:* 9/12/2011 10:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.02	JB	0.0596	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.829	JB	0.0276	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.108	JBQ	0.0445	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0972	JBQ	0.0400	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.280	JQ	0.0403	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.292	JQ	0.0410	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.165	JQ	0.0369	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.263	JBQ	0.0400	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.168	J	0.0385	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.216	JQ	0.0423	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.224	JQ	0.0305	MDL	5.15	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.157	JBQ	0.0364	MDL	5.15	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.197	JBQ	0.0303	MDL	5.15	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.112	JQ	0.0637	MDL	1.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.102	J	0.0586	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	2.02	JB	0.0557	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID: SL-051-SA6-SB-3.5-4.5 *Collected:* 9/12/2011 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
1,2,3,4,6,7,8-HPCDD	0.348	JB	0.0457	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.121	JBQ	0.0175	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0528	JQ	0.0231	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0653	J	0.0328	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0296	JQ	0.0198	MDL	5.15	PQL	ng/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: DX133 Laboratory: LL

EDD Filename: DX133_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-051-SA6-SB-3.5-4.5 *Collected:* 9/12/2011 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
1,2,3,7,8,9-HXCDD	0.0713	JB	0.0286	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0550	JQ	0.0261	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0700	JQ	0.0424	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0643	JQ	0.0237	MDL	5.15	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0432	JBQ	0.0219	MDL	5.15	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.113	JB	0.0243	MDL	5.15	PQL	ng/Kg	U	B
OCDD	1.63	JB	0.0309	MDL	10.3	PQL	ng/Kg	U	B
OCDF	0.165	JB	0.0580	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: SL-055-SA6-SB-2.0-3.0 *Collected:* 9/12/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.68	JB	0.0749	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.972	JB	0.0329	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0835	JB	0.0601	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.224	JQ	0.0387	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.347	J	0.0491	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.114	JQ	0.0329	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.316	JB	0.0463	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.105	J	0.0464	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0662	JQ	0.0586	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.328	J	0.0324	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.167	JBQ	0.0356	MDL	5.10	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0767	J	0.0754	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	2.37	JB	0.0703	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: SL-070-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.636	JB	0.0555	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.350	JBQ	0.0737	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.14	J	0.0460	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.06	J	0.0761	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.500	J	0.0506	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.682	JB	0.0638	MDL	4.90	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-070-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	0.246	J	0.0525	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.334	JQ	0.0588	MDL	4.90	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.46	J	0.0679	MDL	4.90	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.630	JB	0.0515	MDL	4.90	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.08	JB	0.0609	MDL	4.90	PQL	ng/Kg	J	Z

Sample ID: SL-071-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 9:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.17	JB	0.0311	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.380	JBQ	0.0544	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.590	JBQ	0.0659	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.376	JQ	0.0476	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.702	JQ	0.0676	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.203	J	0.0398	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.575	JBQ	0.0651	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.163	J	0.0308	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.193	J	0.0566	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.157	JQ	0.0305	MDL	5.01	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.241	JBQ	0.0391	MDL	5.01	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.277	JB	0.0340	MDL	5.01	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0843	JQ	0.0674	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	8.44	JB	0.0588	MDL	10.0	PQL	ng/Kg	J	Z

Sample ID: SL-073-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.588	JBQ	0.0803	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.64	JB	0.110	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.09	JQ	0.0782	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	4.78	J	0.112	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.724	JQ	0.0641	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.45	JBQ	0.114	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.451	JQ	0.0549	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.554	J	0.101	MDL	5.00	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-073-SA7-SS-0.0-0.5 *Collected:* 9/13/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.859	J	0.0668	MDL	5.00	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.599	JB	0.0708	MDL	5.00	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.03	JB	0.0671	MDL	5.00	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.316	JQ	0.121	MDL	0.999	PQL	ng/Kg	J	Z

Sample ID: SL-210-SA6-SB-4.0-5.0 *Collected:* 9/9/2011 3:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.33	JB	0.0568	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.952	JB	0.0289	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0518	JB	0.0432	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0902	JBQ	0.0449	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.149	JQ	0.0401	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.275	JQ	0.0463	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.118	JQ	0.0345	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.426	JBQ	0.0339	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.359	JQ	0.0308	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0904	JQ	0.0534	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.189	J	0.0266	MDL	5.37	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.145	JBQ	0.0317	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.202	JB	0.0280	MDL	5.37	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.105	J	0.0586	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	3.75	JB	0.0559	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: SL-210-SA6-SB-9.0-10.0 *Collected:* 9/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.466	JB	0.0624	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0950	JBQ	0.0252	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0597	JB	0.0450	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0584	JQ	0.0265	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0461	JQ	0.0445	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0462	JQ	0.0226	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.0889	JBQ	0.0298	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0884	JQ	0.0244	MDL	5.50	PQL	ng/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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-210-SA6-SB-9.0-10.0 *Collected:* 9/9/2011 3:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.0619	JB	0.0242	MDL	5.50	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0721	JB	0.0295	MDL	5.50	PQL	ng/Kg	U	B
OCDD	1.97	JB	0.0340	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.283	JBQ	0.0554	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-217-SA6-SB-4.0-5.0 *Collected:* 9/9/2011 1:41:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.57	JB	0.0362	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.115	JB	0.0580	MDL	6.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.109	JBQ	0.0498	MDL	6.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.195	JQ	0.0455	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.602	J	0.0495	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.126	JQ	0.0377	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.584	JBQ	0.0479	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.498	JQ	0.0535	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.165	JQ	0.0593	MDL	6.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.193	JQ	0.0383	MDL	6.05	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.191	JBQ	0.0438	MDL	6.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.160	JQ	0.0787	MDL	1.21	PQL	ng/Kg	J	Z
OCDF	4.10	JB	0.0673	MDL	12.1	PQL	ng/Kg	J	Z

Sample ID: SL-217-SA6-SB-7.5-8.5 *Collected:* 9/9/2011 1:48:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.255	JB	0.0519	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0758	JBQ	0.0186	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0353	JQ	0.0283	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0431	JQ	0.0243	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.0796	JBQ	0.0232	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0353	JQ	0.0233	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0433	JQ	0.0275	MDL	5.46	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0877	JB	0.0268	MDL	5.46	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0927	JQ	0.0556	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	0.568	JB	0.0295	MDL	10.9	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: DX133 **Laboratory:** LL

EDD Filename: DX133_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 1613B **Matrix:** SO

Sample ID: SL-217-SA6-SB-7.5-8.5 *Collected:* 9/9/2011 1:48:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDF	0.110	JBQ	0.0566	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: SL-235-SA6-SB-4.0-5.0 *Collected:* 9/12/2011 9:01:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.324	JB	0.0618	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.147	JB	0.0328	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0793	JQ	0.0341	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0840	JQ	0.0444	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.103	JBQ	0.0448	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0804	JQ	0.0389	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0627	JBQ	0.0352	MDL	5.41	PQL	ng/Kg	U	B
OCDD	0.460	JB	0.0490	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.208	JB	0.0889	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: SL-269-SA6-SB-1.5-2.5 *Collected:* 9/12/2011 10:46:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.214	JB	0.0568	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0981	JB	0.0250	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0463	JQ	0.0385	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.0432	JBQ	0.0290	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0539	JQ	0.0378	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0488	JB	0.0296	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0565	JBQ	0.0285	MDL	5.09	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0792	JQ	0.0764	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	0.740	JBQ	0.0302	MDL	10.2	PQL	ng/Kg	U	B
OCDF	0.345	JBQ	0.0711	MDL	10.2	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_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: DX133 **Laboratory: LL**

EDD Filename: DX133_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: DX133 **Laboratory: LL**

EDD Filename: DX133_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

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DX133

Method Blank Outlier Report

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2630B370406	9/22/2011 4:06:00 AM	1,2,3,4,6,7,8-HPCDD	0.184 ng/Kg	DUP15-SA6-QC-090911
		1,2,3,4,6,7,8-HPCDF	0.0934 ng/Kg	SL-001-SA6-SB-0.0-1.0
		1,2,3,4,7,8,9-HPCDF	0.0517 ng/Kg	SL-030-SA7-SS-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0330 ng/Kg	SL-034-SA7-SS-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0687 ng/Kg	SL-035-SA7-SS-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0706 ng/Kg	SL-037-SA7-SS-0.0-0.5
		2,3,4,7,8-PECDF	0.0420 ng/Kg	SL-040-SA7-SS-0.0-0.5
		OCDD	0.418 ng/Kg	SL-041-SA7-SS-0.0-0.5
		OCDF	0.129 ng/Kg	SL-050-SA6-SB-1.0-2.0
				SL-051-SA6-SB-3.5-4.5
				SL-055-SA6-SB-2.0-3.0
				SL-070-SA7-SS-0.0-0.5
				SL-071-SA7-SS-0.0-0.5
				SL-073-SA7-SS-0.0-0.5
				SL-210-SA6-SB-4.0-5.0
				SL-210-SA6-SB-9.0-10.0
				SL-217-SA6-SB-4.0-5.0
				SL-217-SA6-SB-7.5-8.5
				SL-235-SA6-SB-4.0-5.0
				SL-269-SA6-SB-1.5-2.5

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
DUP15-SA6-QC-090911(RES)	1,2,3,4,7,8,9-HPCDF	0.241 ng/Kg	0.241U ng/Kg
DUP15-SA6-QC-090911(RES)	1,2,3,4,7,8-HxCDD	0.0836 ng/Kg	0.0836U ng/Kg
DUP15-SA6-QC-090911(RES)	1,2,3,7,8,9-HXCDD	0.267 ng/Kg	0.267U ng/Kg
DUP15-SA6-QC-090911(RES)	2,3,4,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-001-SA6-SB-0.0-1.0(RES)	1,2,3,4,7,8,9-HPCDF	0.176 ng/Kg	0.176U ng/Kg
SL-001-SA6-SB-0.0-1.0(RES)	1,2,3,4,7,8-HxCDD	0.107 ng/Kg	0.107U ng/Kg
SL-001-SA6-SB-0.0-1.0(RES)	1,2,3,7,8,9-HXCDD	0.202 ng/Kg	0.202U ng/Kg
SL-001-SA6-SB-0.0-1.0(RES)	2,3,4,6,7,8-HXCDF	0.161 ng/Kg	0.161U ng/Kg
SL-001-SA6-SB-0.0-1.0(RES)	2,3,4,7,8-PECDF	0.170 ng/Kg	0.170U ng/Kg
SL-040-SA7-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0922 ng/Kg	0.0922U ng/Kg
SL-040-SA7-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0941 ng/Kg	0.0941U ng/Kg
SL-040-SA7-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.177 ng/Kg	0.177U ng/Kg
SL-040-SA7-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.164 ng/Kg	0.164U ng/Kg
SL-041-SA7-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.166 ng/Kg	0.166U ng/Kg
SL-041-SA7-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.159 ng/Kg	0.159U ng/Kg
SL-050-SA6-SB-1.0-2.0(RES)	1,2,3,4,7,8,9-HPCDF	0.108 ng/Kg	0.108U ng/Kg
SL-050-SA6-SB-1.0-2.0(RES)	1,2,3,4,7,8-HxCDD	0.0972 ng/Kg	0.0972U ng/Kg
SL-050-SA6-SB-1.0-2.0(RES)	1,2,3,7,8,9-HXCDD	0.263 ng/Kg	0.263U ng/Kg
SL-050-SA6-SB-1.0-2.0(RES)	2,3,4,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-050-SA6-SB-1.0-2.0(RES)	2,3,4,7,8-PECDF	0.197 ng/Kg	0.197U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	1,2,3,4,6,7,8-HPCDD	0.348 ng/Kg	0.348U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	1,2,3,4,6,7,8-HPCDF	0.121 ng/Kg	0.121U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	1,2,3,7,8,9-HXCDD	0.0713 ng/Kg	0.0713U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	2,3,4,6,7,8-HXCDF	0.0432 ng/Kg	0.0432U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	2,3,4,7,8-PECDF	0.113 ng/Kg	0.113U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	OCDD	1.63 ng/Kg	1.63U ng/Kg
SL-051-SA6-SB-3.5-4.5(RES)	OCDF	0.165 ng/Kg	0.165U ng/Kg

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

Method Blank Outlier Report

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-055-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0835 ng/Kg	0.0835U ng/Kg
SL-055-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	0.316 ng/Kg	0.316U ng/Kg
SL-055-SA6-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.167 ng/Kg	0.167U ng/Kg
SL-071-SA7-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.241 ng/Kg	0.241U ng/Kg
SL-210-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0518 ng/Kg	0.0518U ng/Kg
SL-210-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0902 ng/Kg	0.0902U ng/Kg
SL-210-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.145 ng/Kg	0.145U ng/Kg
SL-210-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.202 ng/Kg	0.202U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.466 ng/Kg	0.466U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0950 ng/Kg	0.0950U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0597 ng/Kg	0.0597U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0889 ng/Kg	0.0889U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0619 ng/Kg	0.0619U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0721 ng/Kg	0.0721U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	OCDD	1.97 ng/Kg	1.97U ng/Kg
SL-210-SA6-SB-9.0-10.0(RES)	OCDF	0.283 ng/Kg	0.283U ng/Kg
SL-217-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.115 ng/Kg	0.115U ng/Kg
SL-217-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.109 ng/Kg	0.109U ng/Kg
SL-217-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.191 ng/Kg	0.191U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDD	0.255 ng/Kg	0.255U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0758 ng/Kg	0.0758U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	1,2,3,7,8,9-HXCDD	0.0796 ng/Kg	0.0796U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	2,3,4,7,8-PECDF	0.0877 ng/Kg	0.0877U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	OCDD	0.568 ng/Kg	0.568U ng/Kg
SL-217-SA6-SB-7.5-8.5(RES)	OCDF	0.110 ng/Kg	0.110U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.324 ng/Kg	0.324U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.147 ng/Kg	0.147U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.103 ng/Kg	0.103U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0627 ng/Kg	0.0627U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	OCDD	0.460 ng/Kg	0.460U ng/Kg
SL-235-SA6-SB-4.0-5.0(RES)	OCDF	0.208 ng/Kg	0.208U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDD	0.214 ng/Kg	0.214U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0981 ng/Kg	0.0981U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDD	0.0432 ng/Kg	0.0432U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	2,3,4,6,7,8-HXCDF	0.0488 ng/Kg	0.0488U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	2,3,4,7,8-PECDF	0.0565 ng/Kg	0.0565U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	OCDD	0.740 ng/Kg	0.740U ng/Kg
SL-269-SA6-SB-1.5-2.5(RES)	OCDF	0.345 ng/Kg	0.345U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-001-SA6-SB-0.0-1.0MS SL-001-SA6-SB-0.0-1.0MSD (SL-001-SA6-SB-0.0-1.0)	OCDD	341	-	40.00-135.00	83 (20.00)	OCDD	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DX133 Laboratory: LL

EDD Filename: DX133_v1 eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-001-SA6-SB-0.0-1.0	DUP15-SA6-QC-090911			
MOISTURE	4.0	4.9	20		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-001-SA6-SB-0.0-1.0	DUP15-SA6-QC-090911			
1,2,3,4,6,7,8-HPCDD	14.6	14.9	2	50.00	No Qualifiers Applied
1,2,3,4,6,7,8-HPCDF	1.49	1.61	8	50.00	
1,2,3,4,7,8,9-HPCDF	0.176	0.241	31	50.00	
1,2,3,4,7,8-HxCDD	0.107	0.0836	25	50.00	
1,2,3,4,7,8-HXCDF	0.269	0.300	11	50.00	
1,2,3,6,7,8-HXCDD	0.347	0.355	2	50.00	
1,2,3,6,7,8-HXCDF	0.0932	0.155	50	50.00	
1,2,3,7,8,9-HXCDD	0.202	0.267	28	50.00	
1,2,3,7,8,9-HXCDF	0.0706	0.0685	3	50.00	
2,3,4,6,7,8-HXCDF	0.161	0.157	3	50.00	
OCDD	219	268	20	50.00	
OCDF	4.62	5.30	14	50.00	
1,2,3,7,8-PECDD	5.20 U	0.252	200	50.00	J(all detects) UJ(all non-detects)
1,2,3,7,8-PECDF	0.0490	0.338	149	50.00	
2,3,4,7,8-PECDF	0.170	0.310	58	50.00	
2,3,7,8-TCDD	1.04 U	0.0868	200	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP15-SA6-QC-090911	1,2,3,4,6,7,8-HPCDF	JB	1.61	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.241	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0836	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.300	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.355	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.155	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.267	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0685	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.252	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.338	5.25	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.157	5.25	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.310	5.25	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0868	1.05	PQL	ng/Kg	
	OCDF	JB	5.30	10.5	PQL	ng/Kg	
SL-001-SA6-SB-0.0-1.0	1,2,3,4,6,7,8-HPCDF	JB	1.49	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.176	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.107	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.269	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.347	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.0932	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.202	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0706	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.0490	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.161	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.170	5.20	PQL	ng/Kg	
	OCDF	JB	4.62	10.4	PQL	ng/Kg	
SL-030-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.452	5.02	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	1.01	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	1.14	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	3.08	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.604	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.80	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.346	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.319	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.494	5.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.600	5.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.05	5.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.386	1.00	PQL	ng/Kg	
SL-034-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.36	4.97	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	1.45	4.97	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	1.39	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	4.58	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.834	4.97	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.95	4.97	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.775	4.97	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.686	4.97	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.18	4.97	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.953	4.97	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.142	0.994	PQL	ng/Kg	
	2,3,7,8-TCDF	JC	0.804	0.994	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-035-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.15	4.97	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	1.20	4.97	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	1.51	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	3.30	4.97	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.725	4.97	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.29	4.97	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.226	4.97	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.715	4.97	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	1.83	4.97	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.968	4.97	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.980	4.97	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.388	0.993	PQL	ng/Kg	
	2,3,7,8-TCDF	JC	0.937	0.993	PQL	ng/Kg	
SL-037-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.968	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.696	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	2.77	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	1.42	5.03	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.992	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.12	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.337	5.03	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.476	5.03	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.806	5.03	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.946	5.03	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.48	5.03	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.140	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	JC	0.976	1.01	PQL	ng/Kg	
SL-040-SA7-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.25	5.02	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	1.07	5.02	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0922	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0941	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.188	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.207	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.113	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.177	5.02	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.0876	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.121	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.175	5.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.164	5.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.277	5.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0973	1.00	PQL	ng/Kg	
	OCDF	JB	3.38	10.0	PQL	ng/Kg	
SL-041-SA7-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.72	5.02	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.166	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.236	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.556	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.595	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.177	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.434	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0691	5.02	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.242	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.166	5.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.159	5.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.240	5.02	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0719	1.00	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.176	1.00	PQL	ng/Kg	
	OCDF	JB	3.74	10.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-050-SA6-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDD	JB	5.02	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.829	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.108	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0972	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.280	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.292	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.165	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.263	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.168	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.216	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.224	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.157	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.197	5.15	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.112	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.102	1.03	PQL	ng/Kg	
	OCDF	JB	2.02	10.3	PQL	ng/Kg	
SL-051-SA6-SB-3.5-4.5	1,2,3,4,6,7,8-HPCDD	JB	0.348	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.121	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0528	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.0653	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.0296	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0713	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0550	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0700	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.0643	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0432	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.113	5.15	PQL	ng/Kg	
	OCDD	JB	1.63	10.3	PQL	ng/Kg	
	OCDF	JB	0.165	10.3	PQL	ng/Kg	
SL-055-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD	JB	3.68	5.10	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.972	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0835	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.224	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.347	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.114	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.316	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.105	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0662	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.328	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.167	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0767	1.02	PQL	ng/Kg	
	OCDF	JB	2.37	10.2	PQL	ng/Kg	
SL-070-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.636	4.90	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.350	4.90	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	2.14	4.90	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	1.06	4.90	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.500	4.90	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.682	4.90	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.246	4.90	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.334	4.90	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	1.46	4.90	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.630	4.90	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.08	4.90	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-071-SA7-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.17	5.01	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.380	5.01	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.590	5.01	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.376	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.702	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	J	0.203	5.01	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.575	5.01	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.163	5.01	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.193	5.01	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.157	5.01	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.241	5.01	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.277	5.01	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0843	1.00	PQL	ng/Kg	
	OCDF	JB	8.44	10.0	PQL	ng/Kg	
SL-073-SA7-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JBQ	0.588	5.00	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	1.64	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	1.09	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	4.78	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.724	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	2.45	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.451	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.554	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.859	5.00	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.599	5.00	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.03	5.00	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.316	0.999	PQL	ng/Kg	
SL-210-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	5.33	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.952	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0518	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0902	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.149	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.275	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.118	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.426	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.359	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0904	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.189	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.145	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.202	5.37	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.105	1.07	PQL	ng/Kg	
	OCDF	JB	3.75	10.7	PQL	ng/Kg	
SL-210-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.466	5.50	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0950	5.50	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0597	5.50	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0584	5.50	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0461	5.50	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.0462	5.50	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0889	5.50	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0884	5.50	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0619	5.50	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0721	5.50	PQL	ng/Kg	
	OCDD	JB	1.97	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.283	11.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX133 **Laboratory: LL**

EDD Filename: DX133_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-217-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	1.57	6.05	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.115	6.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.109	6.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.195	6.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.602	6.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.126	6.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.584	6.05	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.498	6.05	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.165	6.05	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.193	6.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.191	6.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.160	1.21	PQL	ng/Kg	
	OCDF	JB	4.10	12.1	PQL	ng/Kg	
SL-217-SA6-SB-7.5-8.5	1,2,3,4,6,7,8-HPCDD	JB	0.255	5.46	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0758	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0353	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JQ	0.0431	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0796	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0353	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JQ	0.0433	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0877	5.46	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0927	1.09	PQL	ng/Kg	
	OCDD	JB	0.568	10.9	PQL	ng/Kg	
	OCDF	JBQ	0.110	10.9	PQL	ng/Kg	
SL-235-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.324	5.41	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.147	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0793	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0840	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.103	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0804	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0627	5.41	PQL	ng/Kg	
	OCDD	JB	0.460	10.8	PQL	ng/Kg	
	OCDF	JB	0.208	10.8	PQL	ng/Kg	
SL-269-SA6-SB-1.5-2.5	1,2,3,4,6,7,8-HPCDD	JB	0.214	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0981	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0463	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0432	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0539	5.09	PQL	ng/Kg	J (all detects)
	2,3,4,6,7,8-HXCDF	JB	0.0488	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0565	5.09	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0792	1.02	PQL	ng/Kg	
	OCDD	JBQ	0.740	10.2	PQL	ng/Kg	
	OCDF	JBQ	0.345	10.2	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

DX146

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-Sep-2011	EB-SA5DS-SS-092811	6422610	EB	METHOD	1613B	III
28-Sep-2011	SL-034-SA5DS-SS-0.0-0.5	6422605	N	METHOD	1613B	III
28-Sep-2011	SL-034-SA5DS-SS-0.0-0.5MS	6422606	MS	METHOD	1613B	III
28-Sep-2011	DUP-02-SA5DS-QC-092811	6422609	FD	METHOD	1613B	III
28-Sep-2011	SL-040-SA5DS-SS-0.0-0.5	6422608	N	METHOD	1613B	III
30-Sep-2011	SL-132-SA7-SB-8.5-9.5	6426151	N	METHOD	1613B	III
30-Sep-2011	SL-132-SA7-SB-4.0-5.0	6426150	N	METHOD	1613B	III
30-Sep-2011	SL-023-SA8S-SS-0.0-0.5	6426146	N	METHOD	1613B	III
30-Sep-2011	SL-022-SA8S-SS-0.0-0.5	6426145	N	METHOD	1613B	III
30-Sep-2011	SL-180-SA7-SB-2.0-3.0	6426152	N	METHOD	1613B	III
30-Sep-2011	SL-084-SA7-SB-0.0-1.0	6426147	N	METHOD	1613B	III
30-Sep-2011	SL-115-SA7-SB-0.5-1.5	6426149	N	METHOD	1613B	III
30-Sep-2011	SL-113-SA7-SB-0.0-1.0	6426148	N	METHOD	1613B	III
03-Oct-2011	SL-064-SA6-SB-4.0-5.0	6427660	N	METHOD	1613B	III
03-Oct-2011	SL-064-SA6-SB-9.0-10.0	6427661	N	METHOD	1613B	III
04-Oct-2011	SL-037-SA6-SB-4.0-5.0	6429939	N	METHOD	1613B	III
04-Oct-2011	SL-037-SA6-SB-9.0-10.0	6429940	N	METHOD	1613B	III
04-Oct-2011	SL-225-SA6-SB-3.0-4.0	6429943	N	METHOD	1613B	III
04-Oct-2011	SL-007-SA6-SB-1.0-2.0	6429938	N	METHOD	1613B	III
04-Oct-2011	SL-206-SA6-SB-4.0-5.0	6429942	N	METHOD	1613B	III
04-Oct-2011	SL-191-SA6-SB-0.0-1.0	6429941	N	METHOD	1613B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX146 Laboratory: LL

EDD Filename: DX146_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 1613B **Matrix:** AQ

Sample ID: EB-SA5DS-SS-092811 *Collected:* 9/28/2011 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
1,2,3,4,6,7,8-HPCDD	2.89	JB	0.297	MDL	9.69	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	1.76	JB	0.135	MDL	9.69	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.521	JBQ	0.154	MDL	9.69	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.360	JB	0.179	MDL	9.69	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.497	JB	0.112	MDL	9.69	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.286	JB	0.183	MDL	9.69	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.497	JB	0.113	MDL	9.69	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.355	JBQ	0.181	MDL	9.69	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.562	JB	0.108	MDL	9.69	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.594	JBQ	0.214	MDL	9.69	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.627	JBQ	0.135	MDL	9.69	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.387	JBQ	0.110	MDL	9.69	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.712	JB	0.122	MDL	9.69	PQL	pg/L	U	B
OCDD	5.08	JB	0.321	MDL	19.4	PQL	pg/L	U	B
OCDF	1.67	JBQ	0.217	MDL	19.4	PQL	pg/L	U	B

Method Category: SVOA **Method:** 1613B **Matrix:** SO

Sample ID: DUP-02-SA5DS-QC-092811 *Collected:* 9/28/2011 1:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.809	JB	0.0253	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.571	JB	0.0239	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8,9-HPCDF	0.0552	JB	0.0241	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.0496	JBQ	0.0248	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HXCDF	0.172	JB	0.0333	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.0932	JB	0.0258	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.101	JBQ	0.0285	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.192	JBQ	0.0243	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.174	JQ	0.0196	MDL	5.06	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	0.0619	JB	0.0317	MDL	5.06	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDF	0.107	JB	0.0203	MDL	5.06	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.134	JBQ	0.0161	MDL	5.06	PQL	ng/Kg	UJ	B, 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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: DUP-02-SA5DS-QC-092811 *Collected:* 9/28/2011 1:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	0.117	JB	0.0193	MDL	5.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0615	J	0.0275	MDL	1.01	PQL	ng/Kg	J	Z, FD
OCDD	6.37	JB	0.0209	MDL	10.1	PQL	ng/Kg	J	Z
OCDF	0.480	JB	0.0340	MDL	10.1	PQL	ng/Kg	U	B

Sample ID: SL-007-SA6-SB-1.0-2.0 *Collected:* 10/4/2011 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
1,2,3,4,6,7,8-HPCDD	0.332	JBQ	0.0404	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.133	JB	0.0243	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0287	JBQ	0.0267	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0321	JQ	0.0257	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0604	JBQ	0.0259	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0353	JQ	0.0254	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0531	JBQ	0.0229	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0556	JQ	0.0255	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0307	JBQ	0.0181	MDL	5.24	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0488	JBQ	0.0176	MDL	5.24	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0572	JBQ	0.0166	MDL	5.24	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0711	JBQ	0.0169	MDL	5.24	PQL	ng/Kg	U	B
OCDD	1.00	JB	0.0289	MDL	10.5	PQL	ng/Kg	U	B
OCDF	0.171	JB	0.0457	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: SL-022-SA8S-SS-0.0-0.5 *Collected:* 9/30/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.60	JB	0.0328	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.777	JB	0.0181	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0858	JB	0.0243	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0991	J	0.0297	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.126	JBQ	0.0243	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.182	JQ	0.0327	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.102	JB	0.0223	MDL	5.26	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.153	J	0.0283	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.112	JB	0.0309	MDL	5.26	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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-022-SA8S-SS-0.0-0.5 *Collected:* 9/30/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.0992	JBQ	0.0286	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.130	JBQ	0.0220	MDL	5.26	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.165	JB	0.0276	MDL	5.26	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.128	JQ	0.0559	MDL	1.05	PQL	ng/Kg	J	Z
OCDF	1.23	JB	0.0256	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: SL-023-SA8S-SS-0.0-0.5 *Collected:* 9/30/2011 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
1,2,3,4,6,7,8-HPCDF	1.01	JB	0.0312	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0811	JBQ	0.0387	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.128	JQ	0.0384	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.186	JBQ	0.0295	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.310	J	0.0411	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.175	JB	0.0278	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.333	JQ	0.0666	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0383	JBQ	0.0314	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0967	JB	0.0377	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.116	JBQ	0.0368	MDL	5.25	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.183	JBQ	0.0287	MDL	5.25	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0466	JQ	0.0403	MDL	1.05	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.474	J	0.0693	MDL	1.05	PQL	ng/Kg	J	Z
OCDF	1.63	JB	0.0310	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: SL-034-SA5DS-SS-0.0-0.5 *Collected:* 9/28/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.974	JBQ	0.0306	MDL	5.13	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.301	JB	0.0221	MDL	5.13	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8,9-HPCDF	0.0310	JBQ	0.0217	MDL	5.13	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.0227	U	0.0227	MDL	5.13	PQL	ng/Kg	UJ	FD
1,2,3,4,7,8-HXCDF	0.0775	JBQ	0.0315	MDL	5.13	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.0828	JQ	0.0233	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0507	JBQ	0.0302	MDL	5.13	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.133	JQ	0.0244	MDL	5.13	PQL	ng/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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-034-SA5DS-SS-0.0-0.5 *Collected:* 9/28/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	0.101	JBQ	0.0180	MDL	5.13	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0265	U	0.0265	MDL	5.13	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.0401	JBQ	0.0176	MDL	5.13	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0678	JBQ	0.0156	MDL	5.13	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0902	JBQ	0.0168	MDL	5.13	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0290	U	0.0290	MDL	1.03	PQL	ng/Kg	UJ	FD
OCDD	9.33	JB	0.0295	MDL	10.3	PQL	ng/Kg	J	Z, Q, Q
OCDF	0.613	JB	0.0370	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID: SL-037-SA6-SB-4.0-5.0 *Collected:* 10/4/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.987	JB	0.0409	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.208	JB	0.0159	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0559	JBQ	0.0248	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0707	JQ	0.0228	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.107	JBQ	0.0207	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0677	J	0.0235	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0692	JB	0.0177	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0672	JQ	0.0240	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0594	JBQ	0.0211	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.121	JBQ	0.0270	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.131	JBQ	0.0196	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0562	JBQ	0.0177	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.181	JB	0.0188	MDL	5.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0582	J	0.0358	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0640	JQ	0.0320	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	5.58	JB	0.0282	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.386	JBQ	0.0354	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-037-SA6-SB-9.0-10.0 *Collected:* 10/4/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.59	JB	0.0633	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.153	JB	0.0240	MDL	5.51	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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-037-SA6-SB-9.0-10.0 *Collected:* 10/4/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.0818	JBQ	0.0404	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0376	JQ	0.0322	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.140	JBQ	0.0249	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0453	JQ	0.0320	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0326	JBQ	0.0207	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0781	JQ	0.0332	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0283	JBQ	0.0237	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.125	JBQ	0.0400	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0902	JBQ	0.0200	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0541	JB	0.0184	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0634	JBQ	0.0204	MDL	5.51	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0547	JQ	0.0474	MDL	1.10	PQL	ng/Kg	J	Z
OCDF	0.205	JB	0.0632	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-040-SA5DS-SS-0.0-0.5 *Collected:* 9/28/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.38	JB	0.0399	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.128	JBQ	0.0265	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.341	J	0.0439	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.275	JBQ	0.0531	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.696	JQ	0.0486	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.219	JBQ	0.0498	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.648	J	0.0372	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.585	JB	0.0201	MDL	5.06	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.154	JB	0.0298	MDL	5.06	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.201	JBQ	0.0184	MDL	5.06	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.172	JB	0.0171	MDL	5.06	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0854	JB	0.0182	MDL	5.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.186	J	0.0314	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	4.60	JB	0.0275	MDL	10.1	PQL	ng/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: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-064-SA6-SB-4.0-5.0 *Collected:* 10/3/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.91	JB	0.0859	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.835	J	0.0629	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.15	JB	0.0811	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	5.15	J	0.0615	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.790	JB	0.0678	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.83	J	0.0607	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.170	JBQ	0.0584	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	1.15	JBQ	0.0433	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0327	JBQ	0.0276	MDL	5.17	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	1.17	JB	0.0462	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.346	JB	0.0274	MDL	5.17	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.190	JQ	0.0390	MDL	1.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0770	JQ	0.0381	MDL	1.03	PQL	ng/Kg	J	Z

Sample ID: SL-064-SA6-SB-9.0-10.0 *Collected:* 10/3/2011 4:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.04	JB	0.0717	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.457	J	0.0636	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.461	JB	0.0468	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.01	J	0.0646	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.393	JB	0.0384	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.27	J	0.0635	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.127	JBQ	0.0468	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.299	JBQ	0.0522	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0547	JB	0.0263	MDL	5.64	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.606	JB	0.0373	MDL	5.64	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.152	JB	0.0264	MDL	5.64	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0779	J	0.0414	MDL	1.13	PQL	ng/Kg	J	Z

Sample ID: SL-084-SA7-SB-0.0-1.0 *Collected:* 9/30/2011 12:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.374	JB	0.0230	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.144	JBQ	0.0189	MDL	5.09	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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-084-SA7-SB-0.0-1.0 *Collected:* 9/30/2011 12:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.0268	JBQ	0.0251	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0473	J	0.0235	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0709	JBQ	0.0205	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0561	JQ	0.0265	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0683	JBQ	0.0168	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0453	JQ	0.0407	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0466	JBQ	0.0243	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0447	JB	0.0271	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0527	JB	0.0135	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0603	JBQ	0.0127	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.106	JBQ	0.0138	MDL	5.09	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0390	J	0.0340	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	2.44	JB	0.0205	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.212	JB	0.0345	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-113-SA7-SB-0.0-1.0 *Collected:* 9/30/2011 2:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.662	JB	0.0255	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.195	JBQ	0.0114	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0386	JBQ	0.0204	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0587	J	0.0240	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.149	JBQ	0.0185	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.487	J	0.0241	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.161	JB	0.0157	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.643	J	0.0234	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0741	JB	0.0218	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.155	JB	0.0249	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.156	JB	0.0135	MDL	5.53	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0789	JBQ	0.0167	MDL	5.53	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.167	JB	0.0142	MDL	5.53	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0643	JQ	0.0266	MDL	1.11	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0416	JQ	0.0197	MDL	1.11	PQL	ng/Kg	J	Z
OCDD	4.39	JB	0.0200	MDL	11.1	PQL	ng/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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-113-SA7-SB-0.0-1.0 *Collected:* 9/30/2011 2:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDF	0.329	JB	0.0331	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: SL-115-SA7-SB-0.5-1.5 *Collected:* 9/30/2011 12:23:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.395	JB	0.0262	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.130	JB	0.0101	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0320	JBQ	0.0263	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.313	J	0.0270	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.199	JBQ	0.0192	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.434	J	0.0283	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0431	JBQ	0.0208	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0468	JBQ	0.0307	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0864	JB	0.0135	MDL	5.20	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0565	JB	0.0157	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.110	JBQ	0.0140	MDL	5.20	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0243	J	0.0220	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	3.13	JB	0.0248	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.221	JB	0.0380	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: SL-132-SA7-SB-4.0-5.0 *Collected:* 9/30/2011 8:23:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.709	JB	0.0181	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0713	JB	0.0251	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0415	JQ	0.0316	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0727	JBQ	0.0195	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.239	J	0.0317	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0644	JBQ	0.0182	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.187	JQ	0.0310	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0498	JBQ	0.0208	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0449	JBQ	0.0226	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0365	JBQ	0.0140	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0652	JBQ	0.0175	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.115	JBQ	0.0130	MDL	5.09	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: DX146 Laboratory: LL

EDD Filename: DX146_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-132-SA7-SB-4.0-5.0 *Collected:* 9/30/2011 8:23:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDF	1.77	JB	0.0299	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: SL-132-SA7-SB-8.5-9.5 *Collected:* 9/30/2011 8:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.70	JB	0.0493	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.364	JB	0.0153	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.102	JBQ	0.0267	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0579	JBQ	0.0257	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.446	J	0.0332	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.182	JB	0.0209	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.762	J	0.0307	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.110	JBQ	0.0243	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0489	JBQ	0.0300	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0636	JBQ	0.0168	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0422	JB	0.0198	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0637	JB	0.0180	MDL	5.28	PQL	ng/Kg	U	B
OCDF	0.667	JB	0.0484	MDL	10.6	PQL	ng/Kg	J	Z

Sample ID: SL-180-SA7-SB-2.0-3.0 *Collected:* 9/30/2011 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
1,2,3,4,6,7,8-HPCDD	0.591	JBQ	0.0301	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.191	JB	0.0102	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0489	JBQ	0.0182	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0426	JBQ	0.0168	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0787	JQ	0.0220	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0179	JBQ	0.0140	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.127	JQ	0.0220	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0730	JBQ	0.0155	MDL	5.12	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0278	JB	0.0159	MDL	5.12	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0712	JBQ	0.0134	MDL	5.12	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0980	JBQ	0.0169	MDL	5.12	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0376	JQ	0.0366	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	2.78	JB	0.0195	MDL	10.2	PQL	ng/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: DX146 Laboratory: LL

EDD Filename: DX146_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-180-SA7-SB-2.0-3.0 *Collected:* 9/30/2011 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
OCDF	0.252	JBQ	0.0377	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-191-SA6-SB-0.0-1.0 *Collected:* 10/4/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.65	JB	0.0563	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.29	J	0.0506	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.38	JB	0.0471	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	4.20	J	0.0542	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.24	JB	0.0467	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.09	J	0.0527	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.380	JBQ	0.0409	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.822	JB	0.0462	MDL	4.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.577	JB	0.0353	MDL	4.91	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.49	JB	0.0357	MDL	4.91	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.978	JB	0.0329	MDL	4.91	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0615	J	0.0337	MDL	0.983	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.419	J	0.0566	MDL	0.983	PQL	ng/Kg	J	Z

Sample ID: SL-206-SA6-SB-4.0-5.0 *Collected:* 10/4/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.58	JB	0.0481	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.642	JB	0.0180	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0703	JBQ	0.0294	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0694	JQ	0.0292	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0777	JBQ	0.0215	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.132	JQ	0.0294	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0463	JB	0.0192	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.108	J	0.0296	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0452	JBQ	0.0296	MDL	5.21	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0328	JBQ	0.0179	MDL	5.21	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0648	JB	0.0190	MDL	5.21	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.121	JBQ	0.0175	MDL	5.21	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.100	JQ	0.0325	MDL	1.04	PQL	ng/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: DX146 **Laboratory:** LL

EDD Filename: DX146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-206-SA6-SB-4.0-5.0 *Collected:* 10/4/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDF	1.38	JB	0.0430	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: SL-225-SA6-SB-3.0-4.0 *Collected:* 10/4/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.663	JB	0.0397	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.257	JB	0.0141	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0364	JBQ	0.0172	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0694	J	0.0236	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0170	JBQ	0.0150	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0467	JQ	0.0244	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0309	JBQ	0.0272	MDL	5.43	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0426	JB	0.0148	MDL	5.43	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0638	JBQ	0.0152	MDL	5.43	PQL	ng/Kg	U	B
OCDD	6.16	JB	0.0259	MDL	10.9	PQL	ng/Kg	J	Z
OCDF	0.575	JB	0.0389	MDL	10.9	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: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
L	Laboratory Control Spike Upper Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DX146

Method Blank Outlier Report

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2760B370751	10/5/2011 7:51:00 AM	1,2,3,4,6,7,8-HPCDD	2.57 pg/L	EB-SA5DS-SS-092811
		1,2,3,4,6,7,8-HPCDF	1.42 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.763 pg/L	
		1,2,3,4,7,8-HxCDD	0.388 pg/L	
		1,2,3,4,7,8-HXCDF	0.622 pg/L	
		1,2,3,6,7,8-HXCDD	0.421 pg/L	
		1,2,3,6,7,8-HXCDF	0.553 pg/L	
		1,2,3,7,8,9-HXCDD	0.543 pg/L	
		1,2,3,7,8,9-HXCDF	0.770 pg/L	
		1,2,3,7,8-PECDD	0.712 pg/L	
		1,2,3,7,8-PECDF	0.901 pg/L	
		2,3,4,6,7,8-HXCDF	0.643 pg/L	
		2,3,4,7,8-PECDF	0.929 pg/L	
		2,3,7,8-TCDD	0.373 pg/L	
		2,3,7,8-TCDF	0.261 pg/L	
		OCDD	3.69 pg/L	
		OCDF	1.50 pg/L	

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA5DS-SS-092811(RES)	1,2,3,4,6,7,8-HPCDD	2.89 pg/L	2.89U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,4,6,7,8-HPCDF	1.76 pg/L	1.76U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,4,7,8,9-HPCDF	0.521 pg/L	0.521U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,4,7,8-HxCDD	0.360 pg/L	0.360U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,4,7,8-HXCDF	0.497 pg/L	0.497U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,6,7,8-HXCDD	0.286 pg/L	0.286U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,6,7,8-HXCDF	0.497 pg/L	0.497U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,7,8,9-HXCDD	0.355 pg/L	0.355U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,7,8,9-HXCDF	0.562 pg/L	0.562U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,7,8-PECDD	0.594 pg/L	0.594U pg/L
EB-SA5DS-SS-092811(RES)	1,2,3,7,8-PECDF	0.627 pg/L	0.627U pg/L
EB-SA5DS-SS-092811(RES)	2,3,4,6,7,8-HXCDF	0.387 pg/L	0.387U pg/L
EB-SA5DS-SS-092811(RES)	2,3,4,7,8-PECDF	0.712 pg/L	0.712U pg/L
EB-SA5DS-SS-092811(RES)	OCDD	5.08 pg/L	5.08U pg/L
EB-SA5DS-SS-092811(RES)	OCDF	1.67 pg/L	1.67U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2830B371806	10/13/2011 6:06:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDF 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF OCDD OCDF	0.268 ng/Kg 0.129 ng/Kg 0.0187 ng/Kg 0.0314 ng/Kg 0.0471 ng/Kg 0.0484 ng/Kg 0.0326 ng/Kg 0.0149 ng/Kg 0.0274 ng/Kg 0.0319 ng/Kg 0.392 ng/Kg 0.121 ng/Kg	SL-007-SA6-SB-1.0-2.0 SL-022-SA8S-SS-0.0-0.5 SL-023-SA8S-SS-0.0-0.5 SL-034-SA5DS-SS-0.0-0.5 SL-037-SA6-SB-4.0-5.0 SL-037-SA6-SB-9.0-10.0 SL-040-SA5DS-SS-0.0-0.5 SL-064-SA6-SB-4.0-5.0 SL-064-SA6-SB-9.0-10.0 SL-084-SA7-SB-0.0-1.0 SL-113-SA7-SB-0.0-1.0 SL-115-SA7-SB-0.5-1.5 SL-132-SA7-SB-4.0-5.0 SL-132-SA7-SB-8.5-9.5 SL-180-SA7-SB-2.0-3.0 SL-191-SA6-SB-0.0-1.0 SL-206-SA6-SB-4.0-5.0 SL-225-SA6-SB-3.0-4.0
BLK2920B371824	10/20/2011 6:24:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF OCDD OCDF	0.305 ng/Kg 0.370 ng/Kg 0.0805 ng/Kg 0.0310 ng/Kg 0.114 ng/Kg 0.0294 ng/Kg 0.0822 ng/Kg 0.0415 ng/Kg 0.0488 ng/Kg 0.0392 ng/Kg 0.0874 ng/Kg 0.0693 ng/Kg 0.653 ng/Kg 0.256 ng/Kg	DUP-02-SA5DS-QC-092811

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP-02-SA5DS-QC-092811(RES)	1,2,3,4,6,7,8-HPCDD	0.809 ng/Kg	0.809U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,4,6,7,8-HPCDF	0.571 ng/Kg	0.571U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,4,7,8,9-HPCDF	0.0552 ng/Kg	0.0552U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,4,7,8-HxCDD	0.0496 ng/Kg	0.0496U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,4,7,8-HXCDF	0.172 ng/Kg	0.172U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,6,7,8-HXCDD	0.0932 ng/Kg	0.0932U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,6,7,8-HXCDF	0.101 ng/Kg	0.101U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,7,8,9-HXCDD	0.192 ng/Kg	0.192U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,7,8-PECDD	0.0619 ng/Kg	0.0619U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	1,2,3,7,8-PECDF	0.107 ng/Kg	0.107U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	2,3,4,6,7,8-HXCDF	0.134 ng/Kg	0.134U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	2,3,4,7,8-PECDF	0.117 ng/Kg	0.117U ng/Kg
DUP-02-SA5DS-QC-092811(RES)	OCDF	0.480 ng/Kg	0.480U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDD	0.332 ng/Kg	0.332U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDF	0.133 ng/Kg	0.133U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0287 ng/Kg	0.0287U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,4,7,8-HXCDF	0.0604 ng/Kg	0.0604U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,6,7,8-HXCDF	0.0531 ng/Kg	0.0531U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,7,8,9-HXCDF	0.0307 ng/Kg	0.0307U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-007-SA6-SB-1.0-2.0(RES)	1,2,3,7,8-PECDF	0.0488 ng/Kg	0.0488U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	2,3,4,6,7,8-HXCDF	0.0572 ng/Kg	0.0572U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	2,3,4,7,8-PECDF	0.0711 ng/Kg	0.0711U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	OCDD	1.00 ng/Kg	1.00U ng/Kg
SL-007-SA6-SB-1.0-2.0(RES)	OCDF	0.171 ng/Kg	0.171U ng/Kg
SL-022-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0858 ng/Kg	0.0858U ng/Kg
SL-022-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.126 ng/Kg	0.126U ng/Kg
SL-022-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.102 ng/Kg	0.102U ng/Kg
SL-022-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.112 ng/Kg	0.112U ng/Kg
SL-022-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.130 ng/Kg	0.130U ng/Kg
SL-023-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0811 ng/Kg	0.0811U ng/Kg
SL-023-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.175 ng/Kg	0.175U ng/Kg
SL-023-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0383 ng/Kg	0.0383U ng/Kg
SL-023-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0967 ng/Kg	0.0967U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.974 ng/Kg	0.974U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.301 ng/Kg	0.301U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0310 ng/Kg	0.0310U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0775 ng/Kg	0.0775U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0507 ng/Kg	0.0507U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.101 ng/Kg	0.101U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0401 ng/Kg	0.0401U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0678 ng/Kg	0.0678U ng/Kg
SL-034-SA5DS-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0902 ng/Kg	0.0902U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.987 ng/Kg	0.987U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.208 ng/Kg	0.208U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0559 ng/Kg	0.0559U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.107 ng/Kg	0.107U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0692 ng/Kg	0.0692U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0594 ng/Kg	0.0594U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.121 ng/Kg	0.121U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0562 ng/Kg	0.0562U ng/Kg
SL-037-SA6-SB-4.0-5.0(RES)	OCDF	0.386 ng/Kg	0.386U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.153 ng/Kg	0.153U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0818 ng/Kg	0.0818U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.140 ng/Kg	0.140U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0326 ng/Kg	0.0326U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0283 ng/Kg	0.0283U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.125 ng/Kg	0.125U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0541 ng/Kg	0.0541U ng/Kg
SL-037-SA6-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0634 ng/Kg	0.0634U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-037-SA6-SB-9.0-10.0(RES)	OCDF	0.205 ng/Kg	0.205U ng/Kg
SL-040-SA5DS-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.219 ng/Kg	0.219U ng/Kg
SL-040-SA5DS-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.154 ng/Kg	0.154U ng/Kg
SL-040-SA5DS-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0854 ng/Kg	0.0854U ng/Kg
SL-064-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.170 ng/Kg	0.170U ng/Kg
SL-064-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0327 ng/Kg	0.0327U ng/Kg
SL-064-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.127 ng/Kg	0.127U ng/Kg
SL-064-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0547 ng/Kg	0.0547U ng/Kg
SL-064-SA6-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.152 ng/Kg	0.152U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,4,6,7,8-HPCDD	0.374 ng/Kg	0.374U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,4,6,7,8-HPCDF	0.144 ng/Kg	0.144U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0268 ng/Kg	0.0268U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,4,7,8-HXCDF	0.0709 ng/Kg	0.0709U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,6,7,8-HXCDF	0.0683 ng/Kg	0.0683U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,7,8,9-HXCDF	0.0466 ng/Kg	0.0466U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,7,8-PECDD	0.0447 ng/Kg	0.0447U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	1,2,3,7,8-PECDF	0.0527 ng/Kg	0.0527U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	2,3,4,6,7,8-HXCDF	0.0603 ng/Kg	0.0603U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	2,3,4,7,8-PECDF	0.106 ng/Kg	0.106U ng/Kg
SL-084-SA7-SB-0.0-1.0(RES)	OCDF	0.212 ng/Kg	0.212U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,4,6,7,8-HPCDD	0.662 ng/Kg	0.662U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,4,6,7,8-HPCDF	0.195 ng/Kg	0.195U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0386 ng/Kg	0.0386U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,4,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,6,7,8-HXCDF	0.161 ng/Kg	0.161U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,7,8,9-HXCDF	0.0741 ng/Kg	0.0741U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	1,2,3,7,8-PECDD	0.155 ng/Kg	0.155U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	2,3,4,6,7,8-HXCDF	0.0789 ng/Kg	0.0789U ng/Kg
SL-113-SA7-SB-0.0-1.0(RES)	OCDF	0.329 ng/Kg	0.329U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDD	0.395 ng/Kg	0.395U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDF	0.130 ng/Kg	0.130U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,4,7,8-HXCDF	0.0320 ng/Kg	0.0320U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDF	0.199 ng/Kg	0.199U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,7,8,9-HXCDF	0.0431 ng/Kg	0.0431U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	1,2,3,7,8-PECDD	0.0468 ng/Kg	0.0468U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	2,3,4,6,7,8-HXCDF	0.0565 ng/Kg	0.0565U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	2,3,4,7,8-PECDF	0.110 ng/Kg	0.110U ng/Kg
SL-115-SA7-SB-0.5-1.5(RES)	OCDF	0.221 ng/Kg	0.221U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0713 ng/Kg	0.0713U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0727 ng/Kg	0.0727U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0644 ng/Kg	0.0644U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0498 ng/Kg	0.0498U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0449 ng/Kg	0.0449U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0365 ng/Kg	0.0365U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0652 ng/Kg	0.0652U ng/Kg
SL-132-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.115 ng/Kg	0.115U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,4,6,7,8-HPCDF	0.364 ng/Kg	0.364U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,4,7,8-HXCDF	0.0579 ng/Kg	0.0579U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,6,7,8-HXCDF	0.182 ng/Kg	0.182U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,7,8,9-HXCDF	0.110 ng/Kg	0.110U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,7,8-PECDD	0.0489 ng/Kg	0.0489U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	1,2,3,7,8-PECDF	0.0636 ng/Kg	0.0636U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	2,3,4,6,7,8-HXCDF	0.0422 ng/Kg	0.0422U ng/Kg
SL-132-SA7-SB-8.5-9.5(RES)	2,3,4,7,8-PECDF	0.0637 ng/Kg	0.0637U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDD	0.591 ng/Kg	0.591U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	0.191 ng/Kg	0.191U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0489 ng/Kg	0.0489U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,4,7,8-HXCDF	0.0426 ng/Kg	0.0426U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDF	0.0179 ng/Kg	0.0179U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDF	0.0730 ng/Kg	0.0730U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	1,2,3,7,8-PECDF	0.0278 ng/Kg	0.0278U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.0712 ng/Kg	0.0712U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	2,3,4,7,8-PECDF	0.0980 ng/Kg	0.0980U ng/Kg
SL-180-SA7-SB-2.0-3.0(RES)	OCDF	0.252 ng/Kg	0.252U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.642 ng/Kg	0.642U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0703 ng/Kg	0.0703U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0777 ng/Kg	0.0777U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0463 ng/Kg	0.0463U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0452 ng/Kg	0.0452U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0328 ng/Kg	0.0328U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0648 ng/Kg	0.0648U ng/Kg
SL-206-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.121 ng/Kg	0.121U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.663 ng/Kg	0.663U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.257 ng/Kg	0.257U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0364 ng/Kg	0.0364U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0170 ng/Kg	0.0170U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.0309 ng/Kg	0.0309U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0426 ng/Kg	0.0426U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.0838 ng/Kg	0.0838U ng/Kg
SL-225-SA6-SB-3.0-4.0(RES)	OCDF	0.575 ng/Kg	0.575U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-034-SA5DS-SS-0.0-0.5MSD (SL-034-SA5DS-SS-0.0-0.5)	OCDD	-	169	40.00-135.00	54 (20.00)	OCDD	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DX146

Laboratory: LL

EDD Filename: DX146_v1

eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-034-SA5DS-SS-0.0-0.5	DUP-02-SA5DS-QC-092811			
MOISTURE	4.0	3.8	5		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-034-SA5DS-SS-0.0-0.5	DUP-02-SA5DS-QC-092811			
1,2,3,4,6,7,8-HPCDD	0.974	0.809	19	50.00	No Qualifiers Applied
1,2,3,6,7,8-HXCDD	0.0828	0.0932	12	50.00	
1,2,3,7,8,9-HXCDD	0.133	0.192	36	50.00	
2,3,4,7,8-PECDF	0.0902	0.117	26	50.00	
OCDD	9.33	6.37	38	50.00	
OCDF	0.613	0.480	24	50.00	
1,2,3,4,6,7,8-HPCDF	0.301	0.571	62	50.00	J(all detects) UJ(all non-detects)
1,2,3,4,7,8,9-HPCDF	0.0310	0.0552	56	50.00	
1,2,3,4,7,8-HxCDD	5.13 U	0.0496	200	50.00	
1,2,3,4,7,8-HXCDF	0.0775	0.172	76	50.00	
1,2,3,6,7,8-HXCDF	0.0507	0.101	66	50.00	
1,2,3,7,8,9-HXCDF	0.101	0.174	53	50.00	
1,2,3,7,8-PECDD	5.13 U	0.0619	200	50.00	
1,2,3,7,8-PECDF	0.0401	0.107	91	50.00	
2,3,4,6,7,8-HXCDF	0.0678	0.134	66	50.00	
2,3,7,8-TCDF	1.03 U	0.0615	200	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA5DS-SS-092811	1,2,3,4,6,7,8-HPCDD	JB	2.89	9.69	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JB	1.76	9.69	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.521	9.69	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JB	0.360	9.69	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.497	9.69	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JB	0.286	9.69	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.497	9.69	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.355	9.69	PQL	pg/L	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.562	9.69	PQL	pg/L	
	1,2,3,7,8-PECDD	JBQ	0.594	9.69	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.627	9.69	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.387	9.69	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.712	9.69	PQL	pg/L	
	OCDD	JB	5.08	19.4	PQL	pg/L	
	OCDF	JBQ	1.67	19.4	PQL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-02-SA5DS-QC-092811	1,2,3,4,6,7,8-HPCDD	JB	0.809	5.06	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.571	5.06	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0552	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0496	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.172	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0932	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.101	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.192	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.174	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0619	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.107	5.06	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.134	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.117	5.06	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0615	1.01	PQL	ng/Kg	
	OCDD	JB	6.37	10.1	PQL	ng/Kg	
	OCDF	JB	0.480	10.1	PQL	ng/Kg	
SL-007-SA6-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.332	5.24	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.133	5.24	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0287	5.24	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0321	5.24	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0604	5.24	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0353	5.24	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0531	5.24	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0556	5.24	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0307	5.24	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0488	5.24	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0572	5.24	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0711	5.24	PQL	ng/Kg	
	OCDD	JB	1.00	10.5	PQL	ng/Kg	
	OCDF	JB	0.171	10.5	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.60	5.26	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.777	5.26	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0858	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0991	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.126	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.182	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.102	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.153	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.112	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0992	5.26	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.130	5.26	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.165	5.26	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.128	1.05	PQL	ng/Kg	
	OCDF	JB	1.23	10.5	PQL	ng/Kg	
SL-023-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.01	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0811	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.128	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.186	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.310	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.175	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.333	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0383	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0967	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.116	5.25	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.183	5.25	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0466	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.474	1.05	PQL	ng/Kg	
	OCDF	JB	1.63	10.5	PQL	ng/Kg	
SL-034-SA5DS-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.974	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.301	5.13	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0310	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0775	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0828	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0507	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.133	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.101	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0401	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0678	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0902	5.13	PQL	ng/Kg	
	OCDD	JB	9.33	10.3	PQL	ng/Kg	
	OCDF	JB	0.613	10.3	PQL	ng/Kg	
SL-037-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.987	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.208	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0559	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0707	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.107	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.0677	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0692	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0672	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0594	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.121	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.131	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0562	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.181	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0582	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0640	1.02	PQL	ng/Kg	
	OCDD	JB	5.58	10.2	PQL	ng/Kg	
	OCDF	JBQ	0.386	10.2	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-037-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	1.59	5.51	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.153	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0818	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0376	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.140	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0453	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0326	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0781	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0283	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.125	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0902	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0541	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0634	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0547	1.10	PQL	ng/Kg	
	OCDF	JB	0.205	11.0	PQL	ng/Kg	
SL-040-SA5DS-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.38	5.06	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.128	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.341	5.06	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.275	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.696	5.06	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.219	5.06	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.648	5.06	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.585	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.154	5.06	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.201	5.06	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.172	5.06	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0854	5.06	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.186	1.01	PQL	ng/Kg	
	OCDF	JB	4.60	10.1	PQL	ng/Kg	
SL-064-SA6-SB-4.0-5.0	1,2,3,4,7,8,9-HPCDF	JB	2.91	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.835	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.15	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	5.15	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.790	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	1.83	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.170	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	1.15	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0327	5.17	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.17	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.346	5.17	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.190	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0770	1.03	PQL	ng/Kg	
SL-064-SA6-SB-9.0-10.0	1,2,3,4,7,8,9-HPCDF	JB	1.04	5.64	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.457	5.64	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.461	5.64	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	3.01	5.64	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.393	5.64	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	1.27	5.64	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.127	5.64	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.299	5.64	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0547	5.64	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.606	5.64	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.152	5.64	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0779	1.13	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 **Laboratory: LL**

EDD Filename: DX146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-084-SA7-SB-0.0-1.0	1,2,3,4,6,7,8-HPCDD	JB	0.374	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.144	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0268	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0473	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0709	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0561	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0683	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0453	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0466	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0447	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0527	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0603	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.106	5.09	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0390	1.02	PQL	ng/Kg	
	OCDD	JB	2.44	10.2	PQL	ng/Kg	
	OCDF	JB	0.212	10.2	PQL	ng/Kg	
SL-113-SA7-SB-0.0-1.0	1,2,3,4,6,7,8-HPCDD	JB	0.662	5.53	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.195	5.53	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0386	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0587	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.149	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.487	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.161	5.53	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.643	5.53	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0741	5.53	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.155	5.53	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.156	5.53	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0789	5.53	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.167	5.53	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0643	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0416	1.11	PQL	ng/Kg	
	OCDD	JB	4.39	11.1	PQL	ng/Kg	
	OCDF	JB	0.329	11.1	PQL	ng/Kg	
SL-115-SA7-SB-0.5-1.5	1,2,3,4,6,7,8-HPCDD	JB	0.395	5.20	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.130	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0320	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.313	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.199	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.434	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0431	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0468	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0864	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0565	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.110	5.20	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0243	1.04	PQL	ng/Kg	
	OCDD	JB	3.13	10.4	PQL	ng/Kg	
	OCDF	JB	0.221	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-132-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	0.709	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0713	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0415	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0727	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.239	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0644	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.187	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0498	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0449	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0365	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0652	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.115	5.09	PQL	ng/Kg	
	OCDF	JB	1.77	10.2	PQL	ng/Kg	
SL-132-SA7-SB-8.5-9.5	1,2,3,4,6,7,8-HPCDD	JB	2.70	5.28	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.364	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.102	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0579	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.446	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.182	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.762	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.110	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0489	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0636	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0422	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0637	5.28	PQL	ng/Kg	
	OCDF	JB	0.667	10.6	PQL	ng/Kg	
SL-180-SA7-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.591	5.12	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.191	5.12	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0489	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0426	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.0787	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0179	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.127	5.12	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0730	5.12	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0278	5.12	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0712	5.12	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0980	5.12	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0376	1.02	PQL	ng/Kg	
	OCDD	JB	2.78	10.2	PQL	ng/Kg	
	OCDF	JBQ	0.252	10.2	PQL	ng/Kg	
SL-191-SA6-SB-0.0-1.0	1,2,3,4,7,8,9-HPCDF	JB	1.65	4.91	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	1.29	4.91	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.38	4.91	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	4.20	4.91	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.24	4.91	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	2.09	4.91	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.380	4.91	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.822	4.91	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.577	4.91	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.49	4.91	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.978	4.91	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0615	0.983	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.419	0.983	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX146 | Laboratory: LL

EDD Filename: DX146_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-206-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	3.58	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.642	5.21	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0703	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0694	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0777	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JQ	0.132	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0463	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.108	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0452	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0328	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0648	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.121	5.21	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.100	1.04	PQL	ng/Kg	
	OCDF	JB	1.38	10.4	PQL	ng/Kg	
SL-225-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.663	5.43	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.257	5.43	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0364	5.43	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	J	0.0694	5.43	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0170	5.43	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.0467	5.43	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0309	5.43	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0426	5.43	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0638	5.43	PQL	ng/Kg	
	OCDD	JB	6.16	10.9	PQL	ng/Kg	
	OCDF	JB	0.575	10.9	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

DX147

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-Sep-2011	SL-007-SA8S-SS-0.0-0.5	6423878	N	METHOD	1613B	IV
29-Sep-2011	SL-005-SA8S-SS-0.0-0.5	6423877	N	METHOD	1613B	IV
29-Sep-2011	SL-177-SA7-SB-3.0-4.0	6423886	N	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5	6423874	N	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5MS	6423875	MS	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5MSD	6423876	MSD	METHOD	1613B	IV
29-Sep-2011	SL-127-SA7-SB-4.0-5.0	6423885	N	METHOD	1613B	IV
29-Sep-2011	DUP01-SA8S-QC-092911	6423883	FD	METHOD	1613B	IV
29-Sep-2011	SL-001-SA8S-SS-0.0-0.5	6423873	N	METHOD	1613B	IV
29-Sep-2011	SL-126-SA7-SB-4.0-5.0	6423884	N	METHOD	1613B	IV
29-Sep-2011	SL-024-SA8S-SS-0.0-0.5	6423882	N	METHOD	1613B	IV
29-Sep-2011	SL-013-SA8S-SS-0.0-0.5	6423879	N	METHOD	1613B	IV
29-Sep-2011	SL-014-SA8S-SS-0.0-0.5	6423880	N	METHOD	1613B	IV
29-Sep-2011	SL-015-SA8S-SS-0.0-0.5	6423881	N	METHOD	1613B	IV
06-Oct-2011	SL-229-SA6-SS-0.0-0.5	6431147	N	METHOD	1613B	IV
06-Oct-2011	SL-229-SA6-SB-2.0-3.0	6431152	N	METHOD	1613B	IV
06-Oct-2011	SL-230-SA6-SS-0.0-0.5	6431148	N	METHOD	1613B	IV
06-Oct-2011	SL-230-SA6-SB-4.0-5.0	6431153	N	METHOD	1613B	IV
06-Oct-2011	SL-254-SA6-SB-2.5-3.5	6431154	N	METHOD	1613B	IV
06-Oct-2011	SL-234-SA6-SS-0.0-0.5	6431149	N	METHOD	1613B	IV
06-Oct-2011	SL-232-SA6-SS-0.0-0.5	6431150	N	METHOD	1613B	IV
06-Oct-2011	SL-232-SA6-SB-2.5-3.5	6431151	N	METHOD	1613B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory:** LL

EDD Filename: DX147_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: DUP01-SA8S-QC-092911 *Collected:* 9/29/2011 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
1,2,3,4,6,7,8-HPCDD	3.04	JB	0.0303	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.615	JBQ	0.0183	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0624	JBQ	0.0245	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0704	JQ	0.0271	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.361	J	0.0281	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.193	JB	0.0260	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.148	JB	0.0233	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.138	JB	0.0256	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0609	JB	0.0205	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0846	JQ	0.0258	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0763	JB	0.0215	MDL	5.15	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.149	JB	0.0186	MDL	5.15	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.233	JB	0.0220	MDL	5.15	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.265	JB	0.0349	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	1.00	JB	0.0284	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID: SL-001-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.77	JB	0.0590	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.592	JB	0.0323	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.118	JBQ	0.0499	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0733	J	0.0329	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.288	JQ	0.0388	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.152	JB	0.0326	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.133	JBQ	0.0311	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.125	JB	0.0347	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0547	JBQ	0.0320	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0599	J	0.0362	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0941	JBQ	0.0250	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.203	JB	0.0242	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.381	JB	0.0263	MDL	5.28	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.179	JB	0.0436	MDL	1.06	PQL	ng/Kg	U	B
OCDF	1.15	JB	0.0920	MDL	10.6	PQL	ng/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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: SL-003-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 9:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.71	JB	0.0405	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.574	JB	0.0211	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0457	JB	0.0282	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0692	JQ	0.0320	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.220	J	0.0352	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.165	JB	0.0345	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.113	JBQ	0.0268	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.163	JBQ	0.0290	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0252	U	0.0252	MDL	5.09	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDD	0.0765	J	0.0313	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0217	U	0.0217	MDL	5.09	PQL	ng/Kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.150	JB	0.0209	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.317	JB	0.0220	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.196	JB	0.0375	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	0.882	JB	0.0464	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-005-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 8:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.781	JB	0.0297	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.151	JB	0.0191	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0559	JB	0.0189	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0315	J	0.0252	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0398	JQ	0.0348	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0811	JBQ	0.0273	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0340	JB	0.0326	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0560	JB	0.0238	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0374	JBQ	0.0192	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0587	JQ	0.0286	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0389	JB	0.0198	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0512	JB	0.0162	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0720	JBQ	0.0189	MDL	5.09	PQL	ng/Kg	U	B
OCDD	5.28	JB	0.0248	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.353	JB	0.0407	MDL	10.2	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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-007-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 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
1,2,3,4,6,7,8-HPCDD	2.29	JB	0.0341	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.474	JB	0.0190	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0508	JB	0.0211	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0397	JQ	0.0280	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0598	JQ	0.0255	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.119	JB	0.0270	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0674	JB	0.0227	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.118	JBQ	0.0273	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0505	JBQ	0.0178	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0474	JQ	0.0270	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0823	JBQ	0.0153	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0428	JBQ	0.0171	MDL	5.14	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0545	JB	0.0312	MDL	1.03	PQL	ng/Kg	U	B
OCDF	0.884	JB	0.0379	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: SL-013-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 2:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.17	JB	0.0342	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.756	JB	0.0242	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.211	JBQ	0.0263	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.224	J	0.0317	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.438	J	0.0445	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.253	JB	0.0310	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.372	JBQ	0.0382	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.289	JB	0.0323	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.222	JBQ	0.0314	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.188	J	0.0333	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.268	JBQ	0.0288	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.311	JB	0.0265	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.601	JB	0.0291	MDL	5.14	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.183	JB	0.0618	MDL	1.03	PQL	ng/Kg	U	B
OCDF	1.27	JB	0.0324	MDL	10.3	PQL	ng/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: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-014-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.690	JB	0.0225	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0761	JBQ	0.0259	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.194	J	0.0411	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.220	J	0.0344	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.247	JB	0.0443	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.172	JB	0.0266	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.210	JBQ	0.0377	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.164	J	0.0295	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.220	JB	0.0239	MDL	5.20	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.184	JB	0.0193	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.409	JB	0.0245	MDL	5.20	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0992	JB	0.0421	MDL	1.04	PQL	ng/Kg	U	B
OCDF	1.33	JB	0.0312	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: SL-015-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.08	JB	0.0435	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.862	JB	0.0254	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.108	JB	0.0244	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0940	JBQ	0.0360	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.189	JBQ	0.0463	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.169	JBQ	0.0345	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.129	JBQ	0.0412	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0999	JB	0.0333	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0687	JQ	0.0240	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0439	JB	0.0285	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0687	JB	0.0184	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.178	JB	0.0190	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.220	JBQ	0.0185	MDL	5.14	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0580	JQ	0.0372	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	0.875	JB	0.0367	MDL	10.3	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: SL-024-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 2:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.94	JB	0.0303	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.772	JB	0.0181	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0874	JBQ	0.0267	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.137	JBQ	0.0388	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.179	JBQ	0.0242	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.225	JB	0.0417	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.138	JB	0.0222	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.183	JBQ	0.0314	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0642	JQ	0.0265	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0493	JBQ	0.0288	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.190	JB	0.0273	MDL	5.00	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.190	JBQ	0.0224	MDL	5.00	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0436	JBQ	0.0256	MDL	5.00	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0482	JQ	0.0321	MDL	1.00	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.282	J	0.0531	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	1.26	JB	0.0253	MDL	10.0	PQL	ng/Kg	U	B

Sample ID: SL-126-SA7-SB-4.0-5.0 ***Collected:*** 9/29/2011 11:33:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.211	JBQ	0.0217	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0901	JBQ	0.0170	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0193	JB	0.0156	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.124	JB	0.0231	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.234	JB	0.0209	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.210	JBQ	0.0136	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0429	JB	0.0155	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0159	JB	0.0120	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0412	JB	0.0145	MDL	5.35	PQL	ng/Kg	U	B
OCDD	0.577	JB	0.0193	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.124	JBQ	0.0278	MDL	10.7	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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: SL-127-SA7-SB-4.0-5.0 ***Collected:*** 9/29/2011 10:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.284	JB	0.0175	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.163	JB	0.0112	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0235	JBQ	0.0114	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0219	J	0.0146	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0346	JB	0.0158	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0482	JBQ	0.0180	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0636	JBQ	0.0146	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0500	JBQ	0.0119	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0360	J	0.0167	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0254	JBQ	0.00973	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0396	JB	0.0104	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0610	JBQ	0.00952	MDL	5.11	PQL	ng/Kg	U	B
OCDD	0.862	JB	0.0149	MDL	10.2	PQL	ng/Kg	U	B
OCDF	0.230	JB	0.0225	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-177-SA7-SB-3.0-4.0 ***Collected:*** 9/29/2011 8:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.339	JB	0.0214	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.135	JBQ	0.0113	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0411	JBQ	0.0186	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0413	JBQ	0.0161	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0551	JBQ	0.0204	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0191	JBQ	0.0139	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0930	JBQ	0.0202	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0556	JQ	0.0176	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0346	JBQ	0.0234	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0291	JBQ	0.0138	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0511	JBQ	0.0147	MDL	5.28	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0319	JQ	0.0314	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0344	JQ	0.0252	MDL	1.06	PQL	ng/Kg	J	Z
OCDD	1.15	JB	0.0208	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.179	JB	0.0316	MDL	10.6	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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-229-SA6-SB-2.0-3.0 *Collected:* 10/6/2011 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
1,2,3,4,7,8,9-HPCDF	3.51	JB	0.0617	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.52	JB	0.0622	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.65	JB	0.0372	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.38	JB	0.0337	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	3.92	JB	0.0645	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.432	J	0.0407	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.03	JB	0.0556	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.714	JB	0.0280	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.20	JB	0.0354	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.834	JB	0.0280	MDL	5.18	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.224	J	0.0333	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.319	J	0.0443	MDL	1.04	PQL	ng/Kg	J	Z

Sample ID: SL-229-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 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
1,2,3,4,7,8,9-HPCDF	2.79	JB	0.0599	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.87	J	0.0542	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.32	J	0.0740	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.06	JB	0.0629	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.84	JB	0.0511	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.254	JBQ	0.0378	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	2.23	J	0.0461	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.255	JBQ	0.0214	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.79	JB	0.0359	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.555	JB	0.0214	MDL	5.23	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.151	JBQ	0.0307	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.184	JBQ	0.0368	MDL	1.05	PQL	ng/Kg	U	B

Sample ID: SL-230-SA6-SB-4.0-5.0 *Collected:* 10/6/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.22	JB	0.0287	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.398	JBQ	0.0497	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.206	JBQ	0.0591	MDL	5.18	PQL	ng/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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-230-SA6-SB-4.0-5.0 *Collected:* 10/6/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	0.336	JB	0.0404	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.544	JBQ	0.0581	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.234	JBQ	0.0346	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.226	JBQ	0.0605	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0487	JQ	0.0456	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0606	JBQ	0.0544	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.110	JBQ	0.0274	MDL	5.18	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.322	JB	0.0365	MDL	5.18	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0939	JBQ	0.0274	MDL	5.18	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0620	JQ	0.0441	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	7.59	JB	0.0550	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: SL-230-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.20	JB	0.0490	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.816	JB	0.0620	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.95	JB	0.0434	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.49	JB	0.0629	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.07	JB	0.0399	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.51	JB	0.0630	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.316	J	0.0474	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.427	JB	0.0702	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.45	JB	0.0473	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.09	JB	0.0433	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.35	JB	0.0449	MDL	5.34	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0733	J	0.0493	MDL	1.07	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.939	J	0.0847	MDL	1.07	PQL	ng/Kg	J	Z

Sample ID: SL-232-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.308	JBQ	0.0206	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.175	JBQ	0.0145	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0271	JBQ	0.0270	MDL	5.37	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: DX147 **Laboratory:** LL

EDD Filename: DX147_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-232-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.0832	JBQ	0.0237	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.106	JBQ	0.0177	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0730	JB	0.0225	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0607	JB	0.0146	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0963	JB	0.0216	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0889	JQ	0.0201	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.121	JBQ	0.0144	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0858	JB	0.0156	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0960	JB	0.0151	MDL	5.37	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0684	JQ	0.0263	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	1.23	JB	0.0212	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.213	JB	0.0310	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: SL-232-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	4.46	JB	0.0399	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	1.18	JB	0.0246	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.131	JBQ	0.0420	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.129	JBQ	0.0366	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.158	JBQ	0.0292	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.289	JB	0.0324	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.103	JBQ	0.0255	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.291	JB	0.0307	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0996	JQ	0.0313	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.104	JBQ	0.0340	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0936	JB	0.0212	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.175	JB	0.0251	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.209	JB	0.0214	MDL	5.61	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0661	J	0.0364	MDL	1.12	PQL	ng/Kg	J	Z
OCDF	3.55	JB	0.0404	MDL	11.2	PQL	ng/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: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-234-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 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
1,2,3,4,6,7,8-HPCDF	3.56	JB	0.0220	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.338	JB	0.0372	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.200	JB	0.0436	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.386	JBQ	0.0378	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.648	JB	0.0422	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.369	JB	0.0319	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.588	JB	0.0420	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.183	JQ	0.0401	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.202	JB	0.0429	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.546	JB	0.0320	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.551	JB	0.0320	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.783	JBQ	0.0315	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.294	J	0.0639	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID: SL-254-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 12:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.33	JB	0.0314	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.913	JB	0.0185	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0826	JB	0.0311	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0357	JBQ	0.0309	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.281	JBQ	0.0277	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.247	JB	0.0313	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.172	JBQ	0.0229	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.198	JBQ	0.0307	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0849	JQ	0.0302	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0424	JB	0.0276	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.242	JB	0.0225	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.133	JB	0.0239	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.472	JB	0.0226	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.372	JQ	0.0526	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	1.19	JB	0.0340	MDL	10.2	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: DX147

Laboratory: LL

EDD Filename: DX147_v1

eQAPP Name: CDM_SSFL_110509

* 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: DX147

Laboratory: LL

EDD Filename: DX147_v1

eQAPP Name: CDM_SSFL_110509

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DX147

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2860B370829	10/15/2011 8:29:00 AM	1,2,3,4,6,7,8-HPCDD	0.202 ng/Kg	DUP01-SA8S-QC-092911
		1,2,3,4,6,7,8-HPCDF	0.0913 ng/Kg	SL-001-SA8S-SS-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0260 ng/Kg	SL-003-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0344 ng/Kg	SL-005-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0263 ng/Kg	SL-007-SA8S-SS-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0271 ng/Kg	SL-013-SA8S-SS-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0293 ng/Kg	SL-014-SA8S-SS-0.0-0.5
		1,2,3,7,8-PECDF	0.0281 ng/Kg	SL-126-SA7-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.0606 ng/Kg	SL-127-SA7-SB-4.0-5.0
		2,3,4,7,8-PECDF	0.0553 ng/Kg	SL-229-SA6-SS-0.0-0.5
		2,3,7,8-TCDD	0.0626 ng/Kg	
		2,3,7,8-TCDF	0.0391 ng/Kg	
		OCDD	0.380 ng/Kg	
		OCDF	0.189 ng/Kg	
BLK2920B371824	10/20/2011 6:24:00 PM	1,2,3,4,6,7,8-HPCDD	0.305 ng/Kg	SL-015-SA8S-SS-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.370 ng/Kg	SL-024-SA8S-SS-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0805 ng/Kg	SL-177-SA7-SB-3.0-4.0
		1,2,3,4,7,8-HxCDD	0.0310 ng/Kg	SL-229-SA6-SB-2.0-3.0
		1,2,3,4,7,8-HXCDF	0.114 ng/Kg	SL-230-SA6-SB-4.0-5.0
		1,2,3,6,7,8-HXCDD	0.0294 ng/Kg	SL-230-SA6-SS-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0822 ng/Kg	SL-232-SA6-SB-2.5-3.5
		1,2,3,7,8,9-HXCDD	0.0415 ng/Kg	SL-232-SA6-SS-0.0-0.5
		1,2,3,7,8-PECDD	0.0488 ng/Kg	SL-234-SA6-SS-0.0-0.5
		1,2,3,7,8-PECDF	0.0392 ng/Kg	SL-254-SA6-SB-2.5-3.5
		2,3,4,6,7,8-HXCDF	0.0874 ng/Kg	
		2,3,4,7,8-PECDF	0.0693 ng/Kg	
		OCDD	0.653 ng/Kg	
		OCDF	0.256 ng/Kg	

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP01-SA8S-QC-092911(RES)	1,2,3,4,7,8,9-HPCDF	0.0624 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	1,2,3,7,8,9-HXCDF	0.0609 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	1,2,3,7,8-PECDF	0.0763 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	2,3,4,6,7,8-HXCDF	0.149 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	2,3,4,7,8-PECDF	0.233 ng/Kg	5.15U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.118 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.152 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.125 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0547 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0941 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.203 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.179 ng/Kg	1.06U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0457 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.165 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.113 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.150 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	OCDF	0.882 ng/Kg	10.2U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.781 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.151 ng/Kg	5.09U ng/Kg

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

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0559 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0811 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0340 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0560 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0374 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0389 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0512 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0720 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	OCDF	0.353 ng/Kg	10.2U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0508 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.119 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0674 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.118 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0505 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0823 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0428 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0545 ng/Kg	1.03U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	OCDF	0.884 ng/Kg	10.3U ng/Kg
SL-013-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.183 ng/Kg	1.03U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0761 ng/Kg	5.20U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.184 ng/Kg	5.20U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0992 ng/Kg	1.04U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.862 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.108 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0940 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.189 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.129 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0999 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0439 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0687 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.178 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.220 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	OCDF	0.875 ng/Kg	10.3U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.772 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0874 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.137 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.179 ng/Kg	5.00U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.138 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.183 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0493 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.190 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.190 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0436 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	OCDF	1.26 ng/Kg	10.0U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.211 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0901 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0193 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.124 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0429 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0159 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0412 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	OCDD	0.577 ng/Kg	10.7U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	OCDF	0.124 ng/Kg	10.7U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.284 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.163 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0235 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0346 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0482 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0636 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0500 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0254 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0396 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0610 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	OCDD	0.862 ng/Kg	10.2U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	OCDF	0.230 ng/Kg	10.2U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.339 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.135 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0411 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0413 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.0551 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0191 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.0930 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.0346 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.0291 ng/Kg	5.28U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-177-SA7-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0511 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	OCDD	1.15 ng/Kg	10.6U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	OCDF	0.179 ng/Kg	10.6U ng/Kg
SL-229-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.151 ng/Kg	1.05U ng/Kg
SL-229-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.184 ng/Kg	1.05U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.398 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.336 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.234 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0606 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.110 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.322 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0939 ng/Kg	5.18U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.308 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.175 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0271 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0832 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.106 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0730 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0607 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0963 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.121 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0858 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0960 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	OCDD	1.23 ng/Kg	10.7U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	OCDF	0.213 ng/Kg	10.7U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	1.18 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.131 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.129 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.158 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.103 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.104 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0936 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.175 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.209 ng/Kg	5.61U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.338 ng/Kg	5.51U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.386 ng/Kg	5.51U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.369 ng/Kg	5.51U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.202 ng/Kg	5.51U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.913 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0826 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0357 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.281 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.172 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.198 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0424 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.133 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	OCDF	1.19 ng/Kg	10.2U ng/Kg

Field Duplicate RPD Report

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
MOISTURE	3.3	3.1	6		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,4,6,7,8-HPCDD	2.71	3.04	11	50.00	
1,2,3,4,6,7,8-HPCDF	0.574	0.615	7	50.00	
1,2,3,4,7,8,9-HPCDF	0.0457	0.0624	31	50.00	
1,2,3,4,7,8-HxCDD	0.0692	0.0704	2	50.00	
1,2,3,4,7,8-HXCDF	0.220	0.361	49	50.00	
1,2,3,6,7,8-HXCDD	0.165	0.193	16	50.00	
1,2,3,6,7,8-HXCDF	0.113	0.148	27	50.00	
1,2,3,7,8,9-HXCDD	0.163	0.138	17	50.00	No Qualifiers Applied
1,2,3,7,8-PECDD	0.0765	0.0846	10	50.00	
2,3,4,6,7,8-HXCDF	0.150	0.149	1	50.00	
2,3,4,7,8-PECDF	0.317	0.233	31	50.00	
2,3,7,8-TCDF	0.196	0.265	30	50.00	
OCDD	18.7	27.5	38	50.00	
OCDF	0.882	1.00	13	50.00	
1,2,3,7,8,9-HXCDF	5.09 U	0.0609	200	50.00	J(all detects)
1,2,3,7,8-PECDF	5.09 U	0.0763	200	50.00	UJ(all non-detects)

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

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP01-SA8S-QC-092911	1,2,3,4,6,7,8-HPCDD	JB	3.04	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.615	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0624	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0704	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.361	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.193	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.148	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.138	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.0609	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0846	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0763	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.149	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.233	5.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.265	1.03	PQL	ng/Kg	
	OCDF	JB	1.00	10.3	PQL	ng/Kg	
SL-001-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.77	5.28	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.592	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.118	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0733	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.288	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.152	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.133	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.125	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0547	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0599	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0941	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.203	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.381	5.28	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.179	1.06	PQL	ng/Kg	
	OCDF	JB	1.15	10.6	PQL	ng/Kg	
SL-003-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.71	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.574	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0457	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0692	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.220	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.165	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.113	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDD	JBQ	0.163	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0765	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.150	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.317	5.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.196	1.02	PQL	ng/Kg	
	OCDF	JB	0.882	10.2	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-005-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.781	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.151	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0559	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0315	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0398	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0811	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0340	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0560	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0374	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0587	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0389	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0512	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0720	5.09	PQL	ng/Kg	
	OCDD	JB	5.28	10.2	PQL	ng/Kg	
	OCDF	JB	0.353	10.2	PQL	ng/Kg	
SL-007-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.29	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.474	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0508	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0397	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0598	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.119	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0674	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.118	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0505	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0474	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0823	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0428	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0545	1.03	PQL	ng/Kg	
	OCDF	JB	0.884	10.3	PQL	ng/Kg	
SL-013-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.17	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.756	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.211	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.224	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.438	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.253	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.372	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.289	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.222	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.188	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.268	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.311	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.601	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.183	1.03	PQL	ng/Kg	
	OCDF	JB	1.27	10.3	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.690	5.20	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0761	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.194	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.220	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.247	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.172	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.210	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.164	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.220	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.184	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.409	5.20	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0992	1.04	PQL	ng/Kg	
	OCDF	JB	1.33	10.4	PQL	ng/Kg	
SL-015-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	5.08	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.862	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.108	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0940	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.189	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.169	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.129	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0999	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0687	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0439	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0687	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.178	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.220	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0580	1.03	PQL	ng/Kg	
	OCDF	JB	0.875	10.3	PQL	ng/Kg	
SL-024-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.94	5.00	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.772	5.00	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0874	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.137	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.179	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.225	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.138	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.183	5.00	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0642	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0493	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.190	5.00	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.190	5.00	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0436	5.00	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0482	1.00	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.282	1.00	PQL	ng/Kg	
	OCDF	JB	1.26	10.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-126-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.211	5.35	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0901	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0193	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.124	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.234	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.210	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.0429	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0159	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0412	5.35	PQL	ng/Kg	
	OCDD	JB	0.577	10.7	PQL	ng/Kg	
	OCDF	JBQ	0.124	10.7	PQL	ng/Kg	
SL-127-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.284	5.11	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.163	5.11	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0235	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0219	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0346	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0482	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0636	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0500	5.11	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.0360	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0254	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0396	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0610	5.11	PQL	ng/Kg	
	OCDD	JB	0.862	10.2	PQL	ng/Kg	
	OCDF	JB	0.230	10.2	PQL	ng/Kg	
SL-177-SA7-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.339	5.28	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.135	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0411	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0413	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0551	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0191	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0930	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0556	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0346	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0291	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0511	5.28	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0319	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0344	1.06	PQL	ng/Kg	
	OCDD	JB	1.15	10.6	PQL	ng/Kg	
	OCDF	JB	0.179	10.6	PQL	ng/Kg	
SL-229-SA6-SB-2.0-3.0	1,2,3,4,7,8,9-HPCDF	JB	3.51	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	2.52	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.65	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.38	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	3.92	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.432	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	1.03	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.714	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.20	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.834	5.18	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.224	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.319	1.04	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-229-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	2.79	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	1.87	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	1.32	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.06	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.84	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.254	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	2.23	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.255	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.79	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.555	5.23	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.151	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.184	1.05	PQL	ng/Kg	
SL-230-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	3.22	5.18	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.398	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.206	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.336	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.544	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.234	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.226	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0487	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0606	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.110	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.322	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0939	5.18	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0620	1.04	PQL	ng/Kg	
	OCDF	JB	7.59	10.4	PQL	ng/Kg	
SL-230-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.20	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.816	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.95	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.49	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.07	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.51	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.316	5.34	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.427	5.34	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.45	5.34	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.09	5.34	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.35	5.34	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0733	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.939	1.07	PQL	ng/Kg	
SL-232-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.308	5.37	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.175	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0271	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0832	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.106	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0730	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0607	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0963	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0889	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.121	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0858	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0960	5.37	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0684	1.07	PQL	ng/Kg	
	OCDD	JB	1.23	10.7	PQL	ng/Kg	
	OCDF	JB	0.213	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-232-SA6-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	4.46	5.61	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	1.18	5.61	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.131	5.61	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.129	5.61	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.158	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.289	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.103	5.61	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.291	5.61	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0996	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.104	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0936	5.61	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.175	5.61	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.209	5.61	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0661	1.12	PQL	ng/Kg	
	OCDF	JB	3.55	11.2	PQL	ng/Kg	
SL-234-SA6-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.56	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.338	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.200	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.386	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.648	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.369	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.588	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.183	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.202	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.546	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.551	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.783	5.51	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.294	1.10	PQL	ng/Kg	
SL-254-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	2.33	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.913	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0826	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0357	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.281	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.247	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.172	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.198	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0849	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0424	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.242	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.133	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.472	5.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.372	1.02	PQL	ng/Kg	
	OCDF	JB	1.19	10.2	PQL	ng/Kg	

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	September 29, 2011
LDC Report Date:	January 31, 2012
Matrix:	Soil
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DX147

Sample Identification

SL-001-SA8S-SS-0.0-0.5
SL-003-SA8S-SS-0.0-0.5
SL-005-SA8S-SS-0.0-0.5
SL-007-SA8S-SS-0.0-0.5
SL-013-SA8S-SS-0.0-0.5
SL-014-SA8S-SS-0.0-0.5
SL-015-SA8S-SS-0.0-0.5
SL-024-SA8S-SS-0.0-0.5
DUP01-SA8S-QC-092911
SL-126-SA7-SB-4.0-5.0
SL-127-SA7-SB-4.0-5.0
SL-177-SA7-SB-3.0-4.0
SL-229-SA6-SS-0.0-0.5
SL-230-SA6-SS-0.0-0.5
SL-234-SA6-SS-0.0-0.5
SL-232-SA6-SS-0.0-0.5
SL-232-SA6-SB-2.5-3.5
SL-229-SA6-SB-2.0-3.0
SL-230-SA6-SB-4.0-5.0
SL-254-SA6-SB-2.5-3.5
SL-003-SA8S-SS-0.0-0.5MS
SL-003-SA8S-SS-0.0-0.5MSD

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and the USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

PFK and static resolving power were within validation criteria.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Routine Calibration (Continuing)

Routine calibration was performed at the required frequencies.

All of the routine calibration percent differences (%D) between the initial calibration RRF and the routine calibration RRF were within QC limits.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

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

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
BLK286001	10/13/11	2,3,7,8-TCDF 2,3,7,8-TCDD 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0391 ng/Kg 0.0626 ng/Kg 0.0281 ng/Kg 0.0553 ng/Kg 0.0263 ng/Kg 0.0606 ng/Kg 0.0344 ng/Kg 0.0271 ng/Kg 0.0293 ng/Kg 0.0913 ng/Kg 0.202 ng/Kg 0.0260 ng/Kg 0.380 ng/Kg 0.189 ng/Kg	SL-001-SA8S-SS-0.0-0.5 SL-003-SA8S-SS-0.0-0.5 SL-005-SA8S-SS-0.0-0.5 SL-007-SA8S-SS-0.0-0.5 SL-013-SA8S-SS-0.0-0.5 SL-014-SA8S-SS-0.0-0.5 DUP01-SA8S-QC-092911 SL-126-SA7-SB-4.0-5.0 SL-127-SA7-SB-4.0-5.0 SL-229-SA6-SS-0.0-0.5
BLK292003	10/19/11	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0392 ng/Kg 0.0693 ng/Kg 0.0488 ng/Kg 0.114 ng/Kg 0.0822 ng/Kg 0.0874 ng/Kg 0.0310 ng/Kg 0.0294 ng/Kg 0.0415 ng/Kg 0.370 ng/Kg 0.305 ng/Kg 0.0805 ng/Kg 0.653 ng/Kg 0.256 ng/Kg	SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5 SL-177-SA7-SB-3.0-4.0 SL-230-SA6-SS-0.0-0.5 SL-234-SA6-SS-0.0-0.5 SL-232-SA6-SS-0.0-0.5 SL-232-SA6-SB-2.5-3.5 SL-229-SA6-SB-2.0-3.0 SL-230-SA6-SB-4.0-5.0 SL-254-SA6-SB-2.5-3.5

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

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-001-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF	0.179 ng/Kg 0.0941 ng/Kg 0.203 ng/Kg 0.152 ng/Kg 0.125 ng/Kg 0.0547 ng/Kg 0.118 ng/Kg	0.179U ng/Kg 0.0941U ng/Kg 0.203U ng/Kg 0.152U ng/Kg 0.125U ng/Kg 0.0547U ng/Kg 0.118U ng/Kg
SL-003-SA8S-SS-0.0-0.5	1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,4,7,8,9-HpCDF OCDF	0.113 ng/Kg 0.150 ng/Kg 0.165 ng/Kg 0.0457 ng/Kg 0.882 ng/Kg	0.113U ng/Kg 0.150U ng/Kg 0.165U ng/Kg 0.0457U ng/Kg 0.882U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-005-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF	0.0389 ng/Kg	0.0389U ng/Kg
	2,3,4,7,8-PeCDF	0.0720 ng/Kg	0.0720U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0340 ng/Kg	0.0340U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0512 ng/Kg	0.0512U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0811 ng/Kg	0.0811U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0560 ng/Kg	0.0560U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0374 ng/Kg	0.0374U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.151 ng/Kg	0.151U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.781 ng/Kg	0.781U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0559 ng/Kg	0.0559U ng/Kg
	OCDF	0.353 ng/Kg	0.353U ng/Kg
SL-007-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.0545 ng/Kg	0.0545U ng/Kg
	2,3,4,7,8-PeCDF	0.0428 ng/Kg	0.0428U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0674 ng/Kg	0.0674U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0823 ng/Kg	0.0823U ng/Kg
	1,2,3,6,7,8-HxCDD	0.119 ng/Kg	0.119U ng/Kg
	1,2,3,7,8,9-HxCDD	0.118 ng/Kg	0.118U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0505 ng/Kg	0.0505U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0508 ng/Kg	0.0508U ng/Kg
	OCDF	0.884 ng/Kg	0.884U ng/Kg
SL-013-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.183 ng/Kg	0.183U ng/Kg
SL-014-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.0992 ng/Kg	0.0992U ng/Kg
	2,3,4,6,7,8-HxCDF	0.184 ng/Kg	0.184U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0761 ng/Kg	0.0761U ng/Kg
DUP01-SA8S-QC-092911	1,2,3,7,8-PeCDF	0.0763 ng/Kg	0.0763U ng/Kg
	2,3,4,7,8-PeCDF	0.233 ng/Kg	0.233U ng/Kg
	2,3,4,6,7,8-HxCDF	0.149 ng/Kg	0.149U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0609 ng/Kg	0.0609U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0624 ng/Kg	0.0624U ng/Kg
SL-126-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.0429 ng/Kg	0.0429U ng/Kg
	2,3,4,7,8-PeCDF	0.0412 ng/Kg	0.0412U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0159 ng/Kg	0.0159U ng/Kg
	1,2,3,6,7,8-HxCDD	0.124 ng/Kg	0.124U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.0901 ng/Kg	0.0901U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.211 ng/Kg	0.211U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0193 ng/Kg	0.0193U ng/Kg
	OCDD	0.577 ng/Kg	0.577U ng/Kg
	OCDF	0.124 ng/Kg	0.124U ng/Kg
SL-127-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.0254 ng/Kg	0.0254U ng/Kg
	2,3,4,7,8-PeCDF	0.0610 ng/Kg	0.0610U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0482 ng/Kg	0.0482U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0396 ng/Kg	0.0396U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0346 ng/Kg	0.0346U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0636 ng/Kg	0.0636U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0500 ng/Kg	0.0500U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.163 ng/Kg	0.163U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.284 ng/Kg	0.284U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0235 ng/Kg	0.0235U ng/Kg
	OCDD	0.862 ng/Kg	0.862U ng/Kg
	OCDF	0.230 ng/Kg	0.230U ng/Kg
SL-229-SA6-SS-0.0-0.5	2,3,7,8-TCDF	0.184 ng/Kg	0.184U ng/Kg
	2,3,7,8-TCDD	0.151 ng/Kg	0.151U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0687 ng/Kg 0.220 ng/Kg 0.0439 ng/Kg 0.189 ng/Kg 0.129 ng/Kg 0.178 ng/Kg 0.0940 ng/Kg 0.0999 ng/Kg 0.862 ng/Kg 0.108 ng/Kg 0.875 ng/Kg	0.0687U ng/Kg 0.220U ng/Kg 0.0439U ng/Kg 0.189U ng/Kg 0.129U ng/Kg 0.178U ng/Kg 0.0940U ng/Kg 0.0999U ng/Kg 0.862U ng/Kg 0.108U ng/Kg 0.875U ng/Kg
SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.190 ng/Kg 0.0436 ng/Kg 0.0493 ng/Kg 0.179 ng/Kg 0.138 ng/Kg 0.190 ng/Kg 0.137 ng/Kg 0.183 ng/Kg 0.772 ng/Kg 0.0874 ng/Kg 1.26 ng/Kg	0.190U ng/Kg 0.0436U ng/Kg 0.0493U ng/Kg 0.179U ng/Kg 0.138U ng/Kg 0.190U ng/Kg 0.137U ng/Kg 0.183U ng/Kg 0.772U ng/Kg 0.0874U ng/Kg 1.26U ng/Kg
SL-177-SA7-SB-3.0-4.0	1,2,3,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0291 ng/Kg 0.0346 ng/Kg 0.0413 ng/Kg 0.0191 ng/Kg 0.0511 ng/Kg 0.0551 ng/Kg 0.0930 ng/Kg 0.135 ng/Kg 0.339 ng/Kg 0.0411 ng/Kg 1.15 ng/Kg 0.179 ng/Kg	0.0291U ng/Kg 0.0346U ng/Kg 0.0413U ng/Kg 0.0191U ng/Kg 0.0511U ng/Kg 0.0551U ng/Kg 0.0930U ng/Kg 0.135U ng/Kg 0.339U ng/Kg 0.0411U ng/Kg 1.15U ng/Kg 0.179U ng/Kg
SL-234-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.202 ng/Kg 0.386 ng/Kg 0.369 ng/Kg 0.338 ng/Kg	0.202U ng/Kg 0.386U ng/Kg 0.369U ng/Kg 0.338U ng/Kg
SL-232-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	0.0936 ng/Kg 0.209 ng/Kg 0.104 ng/Kg 0.158 ng/Kg 0.103 ng/Kg 0.175 ng/Kg 0.129 ng/Kg 1.18 ng/Kg 0.131 ng/Kg	0.0936U ng/Kg 0.209U ng/Kg 0.104U ng/Kg 0.158U ng/Kg 0.103U ng/Kg 0.175U ng/Kg 0.129U ng/Kg 1.18U ng/Kg 0.131U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-232-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDF	0.121 ng/Kg	0.121U ng/Kg
	2,3,4,7,8-PeCDF	0.0960 ng/Kg	0.0960U ng/Kg
	1,2,3,4,7,8-HxCDF	0.106 ng/Kg	0.106U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0607 ng/Kg	0.0607U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0858 ng/Kg	0.0858U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0832 ng/Kg	0.0832U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0730 ng/Kg	0.0730U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0963 ng/Kg	0.0963U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.175 ng/Kg	0.175U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.308 ng/Kg	0.308U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0271 ng/Kg	0.0271U ng/Kg
	OCDD	1.23 ng/Kg	1.23U ng/Kg
	OCDF	0.213 ng/Kg	0.213U ng/Kg
SL-230-SA6-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.110 ng/Kg	0.110U ng/Kg
	2,3,4,7,8-PeCDF	0.0939 ng/Kg	0.0939U ng/Kg
	1,2,3,7,8-PeCDD	0.0606 ng/Kg	0.0606U ng/Kg
	1,2,3,4,7,8-HxCDF	0.336 ng/Kg	0.336U ng/Kg
	1,2,3,6,7,8-HxCDF	0.234 ng/Kg	0.234U ng/Kg
	2,3,4,6,7,8-HxCDF	0.322 ng/Kg	0.322U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.398 ng/Kg	0.398U ng/Kg
SL-254-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDD	0.0424 ng/Kg	0.0424U ng/Kg
	1,2,3,4,7,8-HxCDF	0.281 ng/Kg	0.281U ng/Kg
	1,2,3,6,7,8-HxCDF	0.172 ng/Kg	0.172U ng/Kg
	2,3,4,6,7,8-HxCDF	0.133 ng/Kg	0.133U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0357 ng/Kg	0.0357U ng/Kg
	1,2,3,7,8,9-HxCDD	0.198 ng/Kg	0.198U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.913 ng/Kg	0.913U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0826 ng/Kg	0.0826U ng/Kg
	OCDF	1.19 ng/Kg	1.19U ng/Kg

No field blanks were identified in this SDG.

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 the QC limits.

VII. Laboratory Control Samples (LCS)

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

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation 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 DX147	All compounds reported below the RL.	J (all detects)	A

XII. System Performance

The system performance was acceptable.

XIII. Overall Assessment of Data

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

XIV. Field Duplicates

Samples SL-003-SA8S-SS-0.0-0.5 and DUP01-SA8S-QC-092911 were identified as field duplicates. No polychlorinated dioxins/dibenzofurans were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/Kg)		RPD (Limits)	Flags	A or P
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,7,8-PeCDD	0.0765	0.0846	10 (≤50)	-	-
1,2,3,4,7,8-HxCDD	0.0692	0.0704	2 (≤50)	-	-
1,2,3,6,7,8-HxCDD	0.165	0.193	16 (≤50)	-	-
1,2,3,7,8,9-HxCDD	0.163	0.138	17 (≤50)	-	-
1,2,3,4,6,7,8-HpCDD	2.71	3.04	11 (≤50)	-	-
OCDD	18.7	27.5	38 (≤50)	-	-
2,3,7,8-TCDF	0.196	0.265	30 (≤50)	-	-

Compound	Concentration (ng/Kg)		RPD (Limits)	Flags	A or P
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,7,8-PeCDF	5.09U	0.0763	200 (≤50)	J (all detects) UJ (all non-detects)	A
2,3,4,7,8-PeCDF	0.317	0.233	31 (≤50)	-	-
1,2,3,4,7,8-HxCDF	0.220	0.361	49 (≤50)	-	-
1,2,3,6,7,8-HxCDF	0.113	0.148	27 (≤50)	-	-
1,2,3,7,8,9-HxCDF	5.09U	0.0609	200 (≤50)	J (all detects) UJ (all non-detects)	A
2,3,4,6,7,8-HxCDF	0.150	0.149	1 (≤50)	-	-
1,2,3,4,6,7,8-HpCDF	0.574	0.615	7 (≤50)	-	-
1,2,3,4,7,8,9-HpCDF	0.0457	0.0624	31 (≤50)	-	-
OCDF	0.882	1.0	13 (≤50)	-	-

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Dioxins/Dibenzofurans - Data Qualification Summary - SDG DX147

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DX147	SL-001-SA8S-SS-0.0-0.5 SL-003-SA8S-SS-0.0-0.5 SL-005-SA8S-SS-0.0-0.5 SL-007-SA8S-SS-0.0-0.5 SL-013-SA8S-SS-0.0-0.5 SL-014-SA8S-SS-0.0-0.5 SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5 DUP01-SA8S-QC-092911 SL-126-SA7-SB-4.0-5.0 SL-127-SA7-SB-4.0-5.0 SL-177-SA7-SB-3.0-4.0 SL-229-SA6-SS-0.0-0.5 SL-230-SA6-SS-0.0-0.5 SL-234-SA6-SS-0.0-0.5 SL-232-SA6-SS-0.0-0.5 SL-232-SA6-SB-2.5-3.5 SL-229-SA6-SB-2.0-3.0 SL-230-SA6-SB-4.0-5.0 SL-254-SA6-SB-2.5-3.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DX147	SL-003-SA8S-SS-0.0-0.5 DUP01-SA8S-QC-09291	1,2,3,7,8-PeCDF 1,2,3,7,8,9-HxCDF	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG DX147

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-001-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF	0.179U ng/Kg 0.0941U ng/Kg 0.203U ng/Kg 0.152U ng/Kg 0.125U ng/Kg 0.0547U ng/Kg 0.118U ng/Kg	A	B
DX147	SL-003-SA8S-SS-0.0-0.5	1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,4,7,8,9-HpCDF OCDF	0.113U ng/Kg 0.150U ng/Kg 0.165U ng/Kg 0.0457U ng/Kg 0.882U ng/Kg	A	B
DX147	SL-005-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDF	0.0389U ng/Kg 0.0720U ng/Kg 0.0340U ng/Kg 0.0512U ng/Kg 0.0811U ng/Kg 0.0560U ng/Kg 0.0374U ng/Kg 0.151U ng/Kg 0.781U ng/Kg 0.0559U ng/Kg 0.353U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-007-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0545U ng/Kg 0.0428U ng/Kg 0.0674U ng/Kg 0.0823U ng/Kg 0.119U ng/Kg 0.118U ng/Kg 0.0505U ng/Kg 0.0508U ng/Kg 0.884U ng/Kg	A	B
DX147	SL-013-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.183U ng/Kg	A	B
DX147	SL-014-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.0992U ng/Kg 0.184U ng/Kg 0.0761U ng/Kg	A	B
DX147	DUP01-SA8S-QC-092911	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF	0.0763U ng/Kg 0.233U ng/Kg 0.149U ng/Kg 0.0609U ng/Kg 0.0624U ng/Kg	A	B
DX147	SL-126-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0429U ng/Kg 0.0412U ng/Kg 0.0159U ng/Kg 0.124U ng/Kg 0.0901U ng/Kg 0.211U ng/Kg 0.0193U ng/Kg 0.577U ng/Kg 0.124U ng/Kg	A	B
DX147	SL-127-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0254U ng/Kg 0.0610U ng/Kg 0.0482U ng/Kg 0.0396U ng/Kg 0.0346U ng/Kg 0.0636U ng/Kg 0.0500U ng/Kg 0.163U ng/Kg 0.284U ng/Kg 0.0235U ng/Kg 0.862U ng/Kg 0.230U ng/Kg	A	B
DX147	SL-229-SA6-SS-0.0-0.5	2,3,7,8-TCDF 2,3,7,8-TCDD	0.184U ng/Kg 0.151U ng/Kg	A	B
DX147	SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0687U ng/Kg 0.220U ng/Kg 0.0439U ng/Kg 0.189U ng/Kg 0.129U ng/Kg 0.178U ng/Kg 0.0940U ng/Kg 0.0999U ng/Kg 0.862U ng/Kg 0.108U ng/Kg 0.875U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.190U ng/Kg 0.0436U ng/Kg 0.0493U ng/Kg 0.179U ng/Kg 0.138U ng/Kg 0.190U ng/Kg 0.137U ng/Kg 0.183U ng/Kg 0.772U ng/Kg 0.0874U ng/Kg 1.26U ng/Kg	A	B
DX147	SL-177-SA7-SB-3.0-4.0	1,2,3,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0291U ng/Kg 0.0346U ng/Kg 0.0413U ng/Kg 0.0191U ng/Kg 0.0511U ng/Kg 0.0551U ng/Kg 0.0930U ng/Kg 0.135U ng/Kg 0.339U ng/Kg 0.0411U ng/Kg 1.15U ng/Kg 0.179U ng/Kg	A	B
DX147	SL-234-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.202U ng/Kg 0.386U ng/Kg 0.369U ng/Kg 0.338U ng/Kg	A	B
DX147	SL-232-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	0.0936U ng/Kg 0.209U ng/Kg 0.104U ng/Kg 0.158U ng/Kg 0.103U ng/Kg 0.175U ng/Kg 0.129U ng/Kg 1.18U ng/Kg 0.131U ng/Kg	A	B
DX147	SL-232-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.121U ng/Kg 0.0960U ng/Kg 0.106U ng/Kg 0.0607U ng/Kg 0.0858U ng/Kg 0.0832U ng/Kg 0.0730U ng/Kg 0.0963U ng/Kg 0.175U ng/Kg 0.308U ng/Kg 0.0271U ng/Kg 1.23U ng/Kg 0.213U ng/Kg	A	B
DX147	SL-230-SA6-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.110U ng/Kg 0.0939U ng/Kg 0.0606U ng/Kg 0.336U ng/Kg 0.234U ng/Kg 0.322U ng/Kg 0.398U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-254-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0424U ng/Kg 0.281U ng/Kg 0.172U ng/Kg 0.133U ng/Kg 0.0357U ng/Kg 0.198U ng/Kg 0.913U ng/Kg 0.0826U ng/Kg 1.19U ng/Kg	A	B

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG DX147

No Sample Data Qualified in this SDG

LDC #: 26978A21 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/24/12
SDG #: DX147 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/29/11
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤ 20/35
IV.	Routine calibration/~~ICV~~	A	QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	
X.	Target compound identifications	A	
XI.	Compound quantitation and CRQLs	A	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D = 2, 9
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: SOILS

1	1	SL-001-SA8S-SS-0.0-0.5	11	1	SL-127-SA7-SB-4.0-5.0	21	1	SL-003-SA8S-SS-0.0-0.5MS	31	1	Blank 286001
2	1	SL-003-SA8S-SS-0.0-0.5 ✓	12	2	SL-177-SA7-SB-3.0-4.0	22	1	SL-003-SA8S-SS-0.0-0.5MSD	32		Blank 292003
3	1	SL-005-SA8S-SS-0.0-0.5	13	1	SL-229-SA6-SS-0.0-0.5	23			33		
4	1	SL-007-SA8S-SS-0.0-0.5	14	2	SL-230-SA6-SS-0.0-0.5	24			34		
5	1	SL-013-SA8S-SS-0.0-0.5	15	2	SL-234-SA6-SS-0.0-0.5	25			35		
6	1	SL-014-SA8S-SS-0.0-0.5	16	2	SL-232-SA6-SS-0.0-0.5	26			36		
7	2	SL-015-SA8S-SS-0.0-0.5	17	2	SL-232-SA6-SB-2.5-3.5	27			37		
8	2	SL-024-SA8S-SS-0.0-0.5	18	2	SL-229-SA6-SB-2.0-3.0	28			38		
9	1	DUP01-SA8S-QC-092911 ✓	19	2	SL-230-SA6-SB-4.0-5.0	29			39		
10	1	SL-126-SA7-SB-4.0-5.0	20	2	SL-254-SA6-SB-2.5-3.5	30			40		

Notes: _____

LDC #: 26978A21

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: [illegible]

Method: Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard ≥ 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 26978A2 1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the ~~25-150%~~ 6 Limits criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks ≥ 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?		✓		
Was an acceptable lock mass recorded and monitored?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: EF
2nd Reviewer: C

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

(b)

Blank extraction date: 10/13/11 **Blank analysis date:** 10/15/11 **Associated samples:** 1-6, 9-11, 13I

Conc. units: ng/Kg

Compound	Blank ID		Sample Identification									
	BLK286001	5X	1	2	3	4	5	6	9	10	11	13
H	0.0391	0.1955	0.179			0.0545	0.183	0.0992				0.184*
A	0.0626*	0.313										0.151*
I	0.0281	0.1405	0.0941*		0.0389				0.0763	0.0429	0.0254*	
J	0.0553*	0.2765			0.0720*	0.0428*			0.233	0.0412	0.0610*	
L	0.0263*	0.1315		0.113*	0.0340	0.0674					0.0482*	
M	0.0606*	0.303	0.203	0.150	0.0512	0.0823*		0.184	0.149	0.0159	0.0396	
D	0.0344*	0.172	0.152	0.165	0.0811*	0.119				0.124	0.0346	
E	0.0271*	0.1355	0.125		0.0560	0.118*					0.0636*	
N	0.0293	0.1465	0.0547*		0.0374*	0.0505*			0.0609		0.0500*	
O	0.0913	0.4565			0.151					0.0901*	0.163	
F	0.202	1.01			0.781					0.211*	0.284	
P	0.0260*	0.13	0.118*	0.0457	0.0559	0.0508		0.0761*	0.0624*	0.0193	0.0235*	
G	0.380	1.9								0.577	0.862	
Q	0.189	0.945		0.882	0.353	0.884				0.124*	0.230	
		0										
		0										
		0										

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 #: ~~26064A21~~ 26978A21

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: PD
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

(b)

Blank extraction date: 10/19/11 **Blank analysis date:** 10/20/11 **Associated samples:** 7,8,12, 14-20

Conc. units: ng/Kg

Compound	Blank ID	Sample Identification								
	BLK292003	5X	7	8	12	15	16	17	19	20
I	0.0392*	0.196	0.0687U	0.190U	0.0291*U		0.0936U	0.121*U	0.110*U	
J	0.0693	0.3465	0.220*U	0.0436*U			0.209U	0.0960U	0.0939*U	
B	0.0488*	0.244	0.0439U	0.0493U	0.0346*U	0.202U	0.104*U		0.0606*U	0.0424U
K	0.114	0.57	0.189*U	0.179*U	0.0413*U	0.386*U	0.158*U	0.106*U	0.336U	0.281*U
L	0.0822*	0.411	0.129*U	0.138U	0.0191*U	0.369U	0.103*U	0.0607U	0.234*U	0.172*U
M	0.0874*	0.437	0.178U	0.190*U	0.0511*U		0.175U	0.0858U	0.322U	0.133U
C	0.0310	0.155	0.0940*U	0.137*U			0.129*U	0.0832*U		0.0357*U
D	0.0294*	0.147			0.0551*U			0.0730U		
E	0.0415*	0.2075	0.0999U	0.183*U	0.0930*U			0.0963U		0.198*U
O	0.370*	1.85	0.862U	0.772U	0.135*U		1.18U	0.175*U		0.913U
F	0.305*	1.525			0.339*U			0.308*U		
P	0.0805	0.4025	0.108U	0.0874*U	0.0411*U	0.338U	0.131*U	0.0271*U	0.398*U	0.0826U
G	0.653	3.265			1.15*U			1.23U		
Q	0.256	1.28	0.875U	1.26U	0.179*U			0.213U		1.19U

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#: 26978A21 **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: F
2nd Reviewer: A APL

METHOD: Method 1613B
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(fd

Compound	Concentration (ng/kg)		(≤30) RPD	
	2	9		
B	0.0765	0.0846*	10	
C	0.0692*	0.0704*	2	
D	0.165	0.193	16	
E	0.163*	0.138	17	
F	2.71	3.04	11	
G	18.7	27.5	38	
H	0.196	0.265	30	
I	5.09 u ~~0.0217U~~	0.0763	200 ~~111*~~	~~J~~ J/UJ/A
J	0.317	0.233	31	A
K	0.220	0.361	49	
L	0.113*	0.148	27	
N	5.09 u ~~0.0252U~~	0.0609	200	J/UJ/A
M	0.150	0.149	1	
O	0.574	0.615*	7	
P	0.0457	0.0624*	31	
Q	0.882	1.0	13	

LDC #: 26928A2/

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

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

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	6/24/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	1.022	1.028	1.028	7.7	7.7
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	1.133	1.142	1.142	3.52	3.52
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	0.971	1.018	1.018	4.32	4.32
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	1.053	1.087	1.087	4.49	4.49
			OCDF (^{13}C-OCDF)	0.950	0.952	1.001	1.001	5.01	5.01
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compound 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 conc (CC)	Recalculated RRF conc (CC)	Reported %D	Recalculated %D
1	CCV 3:46	10/15/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	9.590	9.590		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	10.070	10.070		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	49.150	49.150		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	49.320	49.320		
			OCDF (^{13}C-OCDF)	0.950	98.970	98.970		
2	CCV 16:15	10/15/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.570	9.570		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.370	10.370		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		50.980	50.980		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		49.220	49.220		
			OCDF (^{13}C-OCDF)		100.270	100.270		
3	CCV 0049	10/18/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.620	9.620		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.380	10.380		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		50.620	50.620		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		49.800	49.800		
			OCDF (^{13}C-OCDF)		100.970	100.970		

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

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compound 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 13:24	10/20/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	9.890	9.890		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	10.040	10.040		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	51.230	51.230		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	50.540	50.540		
			OCDF (^{13}C-OCDF)	0.950	101.220	101.220		
2	CCV 01:13	10/21/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.920	9.920		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.190	10.190		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		51.650	51.650		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		50.720	50.720		
			OCDF (^{13}C-OCDF)		101.730	101.730		
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)					
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-OCDF)					

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

LDC #: 26978A2 1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

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 * (SSR - SR)/SA Where: SSR = Spiked sample result, SR = Sample result
SA = Spike added

RPD = | MSR - MSDR | * 2/(MSR + MSDR) MSR = Matrix spike percent recovery MSDR = Matrix spike duplicate percent recovery

MS/MSD samples: 21 + 22

Compound	Spike Added (ng/kg)		Sample Concentration (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		Reported RPD	Recalculated RPD
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	---	---
2,3,7,8-TCDD	20.2	20.2	0.196	20.8	20.0	102	102	98	98	4	4
1,2,3,7,8-PeCDD	101	101	0.0765	104	104	103	103	103	103	1	1
1,2,3,4,7,8-HxCDD	101	101	0.0692	105	103	104	104	102	102	2	2
1,2,3,4,7,8,9-HpCDF	101	101	0.0457	101	99.5	100	100	99	99	1	1
OCDF	202	202	0.882	207	201	102	102	99	99	3	3

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

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

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

METHOD: GC/MS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

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

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

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

LCS ID: OPR286001

Compound	Spike Added (ng/kg)		Spiked Sample Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20.0	NA	20.8	NA	104	104				
1,2,3,7,8-PeCDD	100.0		102		102	102				
1,2,3,4,7,8-HxCDD	100.0		103		103	103				
1,2,3,4,7,8,9-HpCDF	100		98.5		98	98				
OCDF	200		198		99	99	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 #: 26978A2 / **VALIDATION FINDINGS WORKSHEET**
Sample Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

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

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

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

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

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

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

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

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

Example:

Sample I.D. #1 , OCDD :

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

= 19.3 ng/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification
	OCDD =	$\frac{(5013\text{7} + 46357)(4000)}{(1071590 + 954322)(1.041)(10.04)(0.943)}$			
		= 19.3 ng/kg			

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SAMPLE DELIVERY GROUP

DX148

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
05-Oct-2011	SL-301-SA6-SB-4.0-5.0	6430044	N	METHOD	1613B	III
05-Oct-2011	SL-319-SA6-SB-4.0-5.0	6430041	N	METHOD	1613B	III
05-Oct-2011	SL-319-SA6-SB-4.0-5.0MS	6430042	MS	METHOD	1613B	III
05-Oct-2011	SL-319-SA6-SB-4.0-5.0MSD	6430043	MSD	METHOD	1613B	III
05-Oct-2011	DUP16-SA6-QC-100511	6430045	FD	METHOD	1613B	III
05-Oct-2011	EB-SA6-SB-100511	6430046	EB	METHOD	1613B	III
06-Oct-2011	SL-268-SA6-SB-4.0-5.0	6431155	N	METHOD	1613B	III
06-Oct-2011	EB-SA6-SB-100611	6431156	EB	METHOD	1613B	III
07-Oct-2011	SL-138-SA7-SB-1.5-2.5	6432187	N	METHOD	1613B	III
07-Oct-2011	SL-046-SA7-SB-2.5-3.5	6432185	N	METHOD	1613B	III
07-Oct-2011	SL-137-SA7-SB-0.0-1.0	6432186	N	METHOD	1613B	III
10-Oct-2011	SL-169-SA7-SB-3.0-4.0	6433435	N	METHOD	1613B	III
10-Oct-2011	SL-112-SA7-SB-0.0-1.0	6433433	N	METHOD	1613B	III
10-Oct-2011	SL-159-SA7-SB-3.0-4.0	6433434	N	METHOD	1613B	III
11-Oct-2011	SL-265-SA6-SB-4.0-5.0	6434481	N	METHOD	1613B	III
11-Oct-2011	SL-167-SA7-SB-0.5-1.5	6434488	N	METHOD	1613B	III
11-Oct-2011	SL-166-SA7-SB-1.0-2.0	6434487	N	METHOD	1613B	III
11-Oct-2011	SL-162-SA7-SB-0.0-1.0	6434486	N	METHOD	1613B	III
11-Oct-2011	SL-147-SA7-SB-1.0-2.0	6434482	N	METHOD	1613B	III
11-Oct-2011	SL-155-SA7-SB-1.5-2.5	6434483	N	METHOD	1613B	III
11-Oct-2011	SL-009-SA3-SB-4.0-5.0	6434484	N	METHOD	1613B	III
11-Oct-2011	SL-049-SA7-SB-4.0-5.0	6434485	N	METHOD	1613B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-SA6-SB-100511 *Collected:* 10/5/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.28	JBQ	0.227	MDL	10.6	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	1.43	JBQ	0.103	MDL	10.6	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.138	JBQ	0.119	MDL	10.6	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.367	JB	0.108	MDL	10.6	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.198	J	0.177	MDL	10.6	PQL	pg/L	J	Z
1,2,3,6,7,8-HXCDF	0.256	JB	0.105	MDL	10.6	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.190	J	0.180	MDL	10.6	PQL	pg/L	J	Z
1,2,3,7,8,9-HXCDF	0.139	JQ	0.0966	MDL	10.6	PQL	pg/L	J	Z
1,2,3,7,8-PECDD	0.260	JQ	0.241	MDL	10.6	PQL	pg/L	J	Z
2,3,4,6,7,8-HXCDF	0.248	JBQ	0.0988	MDL	10.6	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.594	JB	0.105	MDL	10.6	PQL	pg/L	U	B
OCDD	3.86	JB	0.255	MDL	21.3	PQL	pg/L	U	B
OCDF	0.743	JBQ	0.267	MDL	21.3	PQL	pg/L	U	B

Sample ID: EB-SA6-SB-100611 *Collected:* 10/6/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.42	JB	0.249	MDL	9.55	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	1.19	JB	0.118	MDL	9.55	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.295	JB	0.139	MDL	9.55	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.274	JB	0.125	MDL	9.55	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.354	J	0.201	MDL	9.55	PQL	pg/L	J	Z
1,2,3,6,7,8-HXCDF	0.279	JBQ	0.125	MDL	9.55	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.157	JB	0.122	MDL	9.55	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.259	JBQ	0.116	MDL	9.55	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.358	JBQ	0.112	MDL	9.55	PQL	pg/L	U	B
OCDD	5.46	JB	0.249	MDL	19.1	PQL	pg/L	U	B
OCDF	1.12	JB	0.309	MDL	19.1	PQL	pg/L	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: DUP16-SA6-QC-100511 *Collected:* 10/5/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.43	JB	0.0294	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.319	JB	0.0162	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0604	JB	0.0274	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0870	JB	0.0195	MDL	5.35	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.108	JBQ	0.0252	MDL	5.35	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDF	0.0550	JBQ	0.0168	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0904	JB	0.0257	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0579	JBQ	0.0228	MDL	5.35	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0422	JQ	0.0321	MDL	5.35	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.0608	JBQ	0.0180	MDL	5.35	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0648	JB	0.0177	MDL	5.35	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0451	JB	0.0185	MDL	5.35	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0399	JQ	0.0314	MDL	1.07	PQL	ng/Kg	J	Z, FD
OCDF	0.880	JB	0.0342	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: SL-009-SA3-SB-4.0-5.0 *Collected:* 10/11/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.29	JB	0.0477	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.602	J	0.0606	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.11	JB	0.0465	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.85	JB	0.0445	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.38	JB	0.0576	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.720	JB	0.0501	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.560	J	0.0562	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.27	JB	0.0586	MDL	5.39	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	5.33	JB	0.0421	MDL	5.39	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0717	JQ	0.0417	MDL	1.08	PQL	ng/Kg	J	Z

Sample ID: SL-046-SA7-SB-2.5-3.5 *Collected:* 10/7/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.630	JBQ	0.0241	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.151	JB	0.0126	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0398	JBQ	0.0213	MDL	5.09	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: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-046-SA7-SB-2.5-3.5 *Collected:* 10/7/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.0313	J	0.0184	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0390	JB	0.0139	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0723	JB	0.0186	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0365	JBQ	0.0122	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0672	JB	0.0194	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0455	JBQ	0.0161	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0660	JQ	0.0238	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0300	JBQ	0.0130	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0671	JB	0.0125	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0733	JBQ	0.0133	MDL	5.09	PQL	ng/Kg	U	B
OCDD	3.82	JB	0.0234	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.276	JBQ	0.0285	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-049-SA7-SB-4.0-5.0 *Collected:* 10/11/2011 3:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.02	JB	0.0186	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0862	JB	0.0286	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.171	JQ	0.0354	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.186	JB	0.0246	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.352	JB	0.0352	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.167	JB	0.0221	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.276	JB	0.0344	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.125	JB	0.0255	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.258	J	0.0320	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.336	JB	0.0170	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.142	JBQ	0.0217	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.259	JBQ	0.0166	MDL	5.14	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0573	JQ	0.0318	MDL	1.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.114	J	0.0235	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	2.31	JB	0.0309	MDL	10.3	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX148 **Laboratory:** LL

EDD Filename: DX148_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-112-SA7-SB-0.0-1.0 *Collected:* 10/10/2011 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
1,2,3,4,6,7,8-HPCDF	4.93	JB	0.0278	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.531	JBQ	0.0425	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.547	J	0.0415	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.658	JB	0.0314	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.70	JB	0.0427	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.515	JB	0.0277	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.29	JB	0.0427	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.258	JB	0.0516	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.525	J	0.0416	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.663	JBQ	0.0410	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.523	JB	0.0270	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.15	JB	0.0407	MDL	5.30	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.137	J	0.0365	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.519	J	0.0687	MDL	1.06	PQL	ng/Kg	J	Z
OCDF	10.4	JB	0.0324	MDL	10.6	PQL	ng/Kg	J	Z

Sample ID: SL-137-SA7-SB-0.0-1.0 *Collected:* 10/7/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	4.61	JB	0.0689	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	3.74	J	0.0796	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.95	JB	0.0525	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.18	JB	0.0474	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.559	JB	0.0591	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.94	J	0.0816	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.817	JB	0.0425	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	3.78	JB	0.0519	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.925	JB	0.0399	MDL	5.13	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.241	JQ	0.0378	MDL	1.03	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.268	J	0.0511	MDL	1.03	PQL	ng/Kg	J	Z

Sample ID: SL-138-SA7-SB-1.5-2.5 *Collected:* 10/7/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	3.73	JB	0.0796	MDL	5.91	PQL	ng/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: DX148 **Laboratory:** LL

EDD Filename: DX148_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-138-SA7-SB-1.5-2.5 *Collected:* 10/7/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	3.53	J	0.0747	MDL	5.91	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.62	JB	0.0579	MDL	5.91	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.77	JB	0.0537	MDL	5.91	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.538	JBQ	0.0577	MDL	5.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.82	J	0.0815	MDL	5.91	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.846	JB	0.0333	MDL	5.91	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	3.31	JB	0.0499	MDL	5.91	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.07	JB	0.0329	MDL	5.91	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.166	J	0.0473	MDL	1.18	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.244	J	0.0472	MDL	1.18	PQL	ng/Kg	J	Z

Sample ID: SL-147-SA7-SB-1.0-2.0 *Collected:* 10/11/2011 11:22:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.303	JBQ	0.0275	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0737	JB	0.0137	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0356	JBQ	0.0247	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0494	JBQ	0.0162	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.262	JBQ	0.0241	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.187	JB	0.0136	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.377	JB	0.0244	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.122	JBQ	0.0186	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0361	JQ	0.0288	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0394	JB	0.0147	MDL	5.33	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0351	JB	0.0143	MDL	5.33	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0496	JB	0.0142	MDL	5.33	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0343	JQ	0.0232	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	0.495	JB	0.0248	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.125	JBQ	0.0327	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: SL-155-SA7-SB-1.5-2.5 *Collected:* 10/11/2011 12:32:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.292	JBQ	0.0217	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.122	JBQ	0.0114	MDL	5.19	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: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-155-SA7-SB-1.5-2.5 *Collected:* 10/11/2011 12:32:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.0326	JBQ	0.0201	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0301	JQ	0.0216	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0334	JB	0.0220	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0272	JBQ	0.0129	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0465	JBQ	0.0216	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0355	JBQ	0.0160	MDL	5.19	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0395	JBQ	0.0158	MDL	5.19	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0447	JBQ	0.0130	MDL	5.19	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0634	JBQ	0.0168	MDL	5.19	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0419	JQ	0.0332	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	1.11	JB	0.0215	MDL	10.4	PQL	ng/Kg	U	B
OCDF	0.173	JBQ	0.0278	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: SL-159-SA7-SB-3.0-4.0 *Collected:* 10/10/2011 2:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.334	JB	0.0248	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.101	JB	0.0136	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0416	JBQ	0.0240	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0672	JQ	0.0273	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0590	JBQ	0.0181	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0497	JB	0.0155	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0741	JBQ	0.0189	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0671	JBQ	0.0188	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0643	JQ	0.0279	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0892	JBQ	0.0155	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0419	JBQ	0.0148	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.123	JB	0.0157	MDL	5.20	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0296	JQ	0.0280	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	0.615	JB	0.0223	MDL	10.4	PQL	ng/Kg	U	B
OCDF	0.0980	JB	0.0323	MDL	10.4	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-162-SA7-SB-0.0-1.0 *Collected:* 10/11/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.04	JB	0.0239	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.375	JB	0.0333	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.392	JQ	0.0438	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.301	JB	0.0288	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.02	JBQ	0.0452	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.209	JBQ	0.0263	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.697	JB	0.0409	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.126	JBQ	0.0279	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.385	JQ	0.0332	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.308	JB	0.0183	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.307	JBQ	0.0246	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.328	JBQ	0.0178	MDL	5.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0823	J	0.0234	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	9.98	JB	0.0310	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID: SL-166-SA7-SB-1.0-2.0 *Collected:* 10/11/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	4.14	J	0.0740	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.06	JB	0.0599	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.41	JB	0.0495	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.544	JB	0.0706	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.76	J	0.0703	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.645	JB	0.0307	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	4.65	JB	0.0527	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.861	JB	0.0329	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.116	J	0.0336	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.250	JQ	0.0443	MDL	1.02	PQL	ng/Kg	J	Z

Sample ID: SL-167-SA7-SB-0.5-1.5 *Collected:* 10/11/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.779	JB	0.0365	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.765	J	0.0452	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.645	JB	0.0320	MDL	5.13	PQL	ng/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: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-167-SA7-SB-0.5-1.5 *Collected:* 10/11/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDD	2.70	JB	0.0459	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.447	JBQ	0.0304	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.50	JB	0.0484	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.169	JB	0.0340	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.450	JQ	0.0356	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.199	JBQ	0.0351	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.655	JB	0.0293	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.439	JBQ	0.0333	MDL	5.13	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.138	JQ	0.0376	MDL	1.03	PQL	ng/Kg	J	Z

Sample ID: SL-169-SA7-SB-3.0-4.0 *Collected:* 10/10/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.749	JB	0.0308	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.270	JB	0.0175	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0638	JBQ	0.0311	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0331	JQ	0.0255	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.130	JBQ	0.0236	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.124	JBQ	0.0269	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0708	JB	0.0200	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.139	JBQ	0.0256	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0908	JBQ	0.0281	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0522	J	0.0273	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.240	JBQ	0.0193	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0784	JBQ	0.0210	MDL	5.17	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.138	JB	0.0197	MDL	5.17	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0809	J	0.0331	MDL	1.03	PQL	ng/Kg	J	Z
OCDD	4.64	JB	0.0289	MDL	10.3	PQL	ng/Kg	J	Z
OCDF	0.471	JB	0.0353	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: SL-265-SA6-SB-4.0-5.0 *Collected:* 10/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.836	JB	0.0292	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.170	JB	0.0167	MDL	5.22	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-265-SA6-SB-4.0-5.0 *Collected:* 10/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.0550	JB	0.0256	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0246	JQ	0.0228	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0509	JBQ	0.0173	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0662	JB	0.0211	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0370	JBQ	0.0154	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0835	JBQ	0.0211	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0336	JB	0.0130	MDL	5.22	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0898	JBQ	0.0153	MDL	5.22	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0481	J	0.0230	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	6.83	JB	0.0256	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.322	JB	0.0272	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: SL-268-SA6-SB-4.0-5.0 *Collected:* 10/6/2011 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
1,2,3,4,6,7,8-HPCDD	1.93	JB	0.0257	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.467	JBQ	0.0151	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0839	JBQ	0.0221	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0497	JQ	0.0255	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.150	JB	0.0225	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.146	JB	0.0264	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0979	JBQ	0.0207	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.134	JB	0.0263	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0445	JBQ	0.0236	MDL	5.02	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0873	JQ	0.0280	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.222	JBQ	0.0175	MDL	5.02	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0871	JB	0.0206	MDL	5.02	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.177	JB	0.0171	MDL	5.02	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0933	J	0.0346	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	0.703	JB	0.0277	MDL	10.0	PQL	ng/Kg	J	Z

Sample ID: SL-301-SA6-SB-4.0-5.0 *Collected:* 10/5/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.892	JB	0.0228	MDL	5.27	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: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-301-SA6-SB-4.0-5.0 *Collected:* 10/5/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.188	JB	0.0102	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0539	JBQ	0.0170	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0432	JQ	0.0211	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0840	JB	0.0163	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0924	JBQ	0.0220	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0680	JBQ	0.0144	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.136	JBQ	0.0224	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.102	JB	0.0177	MDL	5.27	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0784	JQ	0.0261	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0946	JBQ	0.0156	MDL	5.27	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0749	JBQ	0.0149	MDL	5.27	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0757	JB	0.0158	MDL	5.27	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0408	JQ	0.0254	MDL	1.05	PQL	ng/Kg	J	Z
OCDD	8.34	JB	0.0211	MDL	10.5	PQL	ng/Kg	J	Z
OCDF	0.455	JB	0.0260	MDL	10.5	PQL	ng/Kg	U	B

Sample ID: SL-319-SA6-SB-4.0-5.0 *Collected:* 10/5/2011 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
1,2,3,4,6,7,8-HPCDD	0.977	JB	0.0230	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.243	JB	0.00992	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0384	JB	0.0158	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0511	JB	0.0148	MDL	5.35	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.0541	JBQ	0.0194	MDL	5.35	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDF	0.0518	JBQ	0.0125	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0619	JB	0.0188	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0153	U	0.0153	MDL	5.35	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDD	0.0242	U	0.0242	MDL	5.35	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.0286	JBQ	0.0138	MDL	5.35	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0333	JB	0.0130	MDL	5.35	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0606	JBQ	0.0138	MDL	5.35	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0224	U	0.0224	MDL	1.07	PQL	ng/Kg	UJ	FD
OCDD	9.80	JB	0.0245	MDL	10.7	PQL	ng/Kg	J	Z
OCDF	0.535	JB	0.0276	MDL	10.7	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

* 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: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DX148

Method Blank Outlier Report

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2830B371902	10/13/2011 7:02:00 PM	1,2,3,4,6,7,8-HPCDD	2.73 pg/L	EB-SA6-SB-100511
		1,2,3,4,6,7,8-HPCDF	1.80 pg/L	EB-SA6-SB-100611
		1,2,3,4,7,8,9-HPCDF	0.278 pg/L	
		1,2,3,4,7,8-HXCDF	0.167 pg/L	
		1,2,3,6,7,8-HXCDF	0.270 pg/L	
		1,2,3,7,8-PECDF	0.312 pg/L	
		2,3,4,6,7,8-HXCDF	0.518 pg/L	
		2,3,4,7,8-PECDF	0.662 pg/L	
		OCDD	5.02 pg/L	
		OCDF	1.34 pg/L	

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SB-100511(RES)	1,2,3,4,6,7,8-HPCDD	2.28 pg/L	2.28U pg/L
EB-SA6-SB-100511(RES)	1,2,3,4,6,7,8-HPCDF	1.43 pg/L	1.43U pg/L
EB-SA6-SB-100511(RES)	1,2,3,4,7,8,9-HPCDF	0.138 pg/L	0.138U pg/L
EB-SA6-SB-100511(RES)	1,2,3,4,7,8-HXCDF	0.367 pg/L	0.367U pg/L
EB-SA6-SB-100511(RES)	1,2,3,6,7,8-HXCDF	0.256 pg/L	0.256U pg/L
EB-SA6-SB-100511(RES)	2,3,4,6,7,8-HXCDF	0.248 pg/L	0.248U pg/L
EB-SA6-SB-100511(RES)	2,3,4,7,8-PECDF	0.594 pg/L	0.594U pg/L
EB-SA6-SB-100511(RES)	OCDD	3.86 pg/L	3.86U pg/L
EB-SA6-SB-100511(RES)	OCDF	0.743 pg/L	0.743U pg/L
EB-SA6-SB-100611(RES)	1,2,3,4,6,7,8-HPCDD	2.42 pg/L	2.42U pg/L
EB-SA6-SB-100611(RES)	1,2,3,4,6,7,8-HPCDF	1.19 pg/L	1.19U pg/L
EB-SA6-SB-100611(RES)	1,2,3,4,7,8,9-HPCDF	0.295 pg/L	0.295U pg/L
EB-SA6-SB-100611(RES)	1,2,3,4,7,8-HXCDF	0.274 pg/L	0.274U pg/L
EB-SA6-SB-100611(RES)	1,2,3,6,7,8-HXCDF	0.279 pg/L	0.279U pg/L
EB-SA6-SB-100611(RES)	1,2,3,7,8-PECDF	0.157 pg/L	0.157U pg/L
EB-SA6-SB-100611(RES)	2,3,4,6,7,8-HXCDF	0.259 pg/L	0.259U pg/L
EB-SA6-SB-100611(RES)	2,3,4,7,8-PECDF	0.358 pg/L	0.358U pg/L
EB-SA6-SB-100611(RES)	OCDD	5.46 pg/L	5.46U pg/L
EB-SA6-SB-100611(RES)	OCDF	1.12 pg/L	1.12U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2930B370500	10/22/2011 5:00:00 AM	1,2,3,4,6,7,8-HPCDD	0.244 ng/Kg	DUP16-SA6-QC-100511
		1,2,3,4,6,7,8-HPCDF	0.0886 ng/Kg	SL-009-SA3-SB-4.0-5.0
		1,2,3,4,7,8,9-HPCDF	0.0364 ng/Kg	SL-046-SA7-SB-2.5-3.5
		1,2,3,4,7,8-HXCDF	0.0412 ng/Kg	SL-049-SA7-SB-4.0-5.0
		1,2,3,6,7,8-HXCDD	0.0373 ng/Kg	SL-112-SA7-SB-0.0-1.0
		1,2,3,6,7,8-HXCDF	0.0308 ng/Kg	SL-137-SA7-SB-0.0-1.0
		1,2,3,7,8,9-HXCDD	0.0323 ng/Kg	SL-138-SA7-SB-1.5-2.5
		1,2,3,7,8,9-HXCDF	0.0261 ng/Kg	SL-147-SA7-SB-1.0-2.0
		1,2,3,7,8-PECDF	0.0371 ng/Kg	SL-155-SA7-SB-1.5-2.5
		2,3,4,6,7,8-HXCDF	0.0373 ng/Kg	SL-159-SA7-SB-3.0-4.0
		2,3,4,7,8-PECDF	0.0800 ng/Kg	SL-162-SA7-SB-0.0-1.0
		OCDD	0.356 ng/Kg	SL-166-SA7-SB-1.0-2.0
		OCDF	0.107 ng/Kg	SL-167-SA7-SB-0.5-1.5
				SL-169-SA7-SB-3.0-4.0
				SL-265-SA6-SB-4.0-5.0
				SL-268-SA6-SB-4.0-5.0
				SL-301-SA6-SB-4.0-5.0
				SL-319-SA6-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP16-SA6-QC-100511(RES)	1,2,3,4,6,7,8-HPCDF	0.319 ng/Kg	0.319U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,4,7,8,9-HPCDF	0.0604 ng/Kg	0.0604U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,4,7,8-HXCDF	0.0870 ng/Kg	0.0870U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,6,7,8-HXCDD	0.108 ng/Kg	0.108U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,6,7,8-HXCDF	0.0550 ng/Kg	0.0550U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,7,8,9-HXCDD	0.0904 ng/Kg	0.0904U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,7,8,9-HXCDF	0.0579 ng/Kg	0.0579U ng/Kg
DUP16-SA6-QC-100511(RES)	1,2,3,7,8-PECDF	0.0608 ng/Kg	0.0608U ng/Kg
DUP16-SA6-QC-100511(RES)	2,3,4,6,7,8-HXCDF	0.0648 ng/Kg	0.0648U ng/Kg
DUP16-SA6-QC-100511(RES)	2,3,4,7,8-PECDF	0.0451 ng/Kg	0.0451U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.630 ng/Kg	0.630U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.151 ng/Kg	0.151U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0398 ng/Kg	0.0398U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0390 ng/Kg	0.0390U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0723 ng/Kg	0.0723U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0365 ng/Kg	0.0365U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0672 ng/Kg	0.0672U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.0455 ng/Kg	0.0455U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0300 ng/Kg	0.0300U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0671 ng/Kg	0.0671U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0733 ng/Kg	0.0733U ng/Kg
SL-046-SA7-SB-2.5-3.5(RES)	OCDF	0.276 ng/Kg	0.276U ng/Kg
SL-049-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0862 ng/Kg	0.0862U ng/Kg
SL-049-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.186 ng/Kg	0.186U ng/Kg
SL-049-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.125 ng/Kg	0.125U ng/Kg
SL-049-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.142 ng/Kg	0.142U ng/Kg
SL-049-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.259 ng/Kg	0.259U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDD	0.303 ng/Kg	0.303U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0737 ng/Kg	0.0737U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0356 ng/Kg	0.0356U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,4,7,8-HXCDF	0.0494 ng/Kg	0.0494U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,7,8,9-HXCDF	0.122 ng/Kg	0.122U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	1,2,3,7,8-PECDF	0.0394 ng/Kg	0.0394U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	2,3,4,6,7,8-HXCDF	0.0351 ng/Kg	0.0351U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	2,3,4,7,8-PECDF	0.0496 ng/Kg	0.0496U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	OCDD	0.495 ng/Kg	0.495U ng/Kg
SL-147-SA7-SB-1.0-2.0(RES)	OCDF	0.125 ng/Kg	0.125U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDD	0.292 ng/Kg	0.292U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDF	0.122 ng/Kg	0.122U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0326 ng/Kg	0.0326U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDD	0.0334 ng/Kg	0.0334U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDF	0.0272 ng/Kg	0.0272U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDD	0.0465 ng/Kg	0.0465U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDF	0.0355 ng/Kg	0.0355U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	1,2,3,7,8-PECDF	0.0395 ng/Kg	0.0395U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	2,3,4,6,7,8-HXCDF	0.0447 ng/Kg	0.0447U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	2,3,4,7,8-PECDF	0.0634 ng/Kg	0.0634U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	OCDD	1.11 ng/Kg	1.11U ng/Kg
SL-155-SA7-SB-1.5-2.5(RES)	OCDF	0.173 ng/Kg	0.173U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.334 ng/Kg	0.334U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.101 ng/Kg	0.101U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0416 ng/Kg	0.0416U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0590 ng/Kg	0.0590U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0497 ng/Kg	0.0497U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.0741 ng/Kg	0.0741U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.0671 ng/Kg	0.0671U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.0892 ng/Kg	0.0892U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0419 ng/Kg	0.0419U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.123 ng/Kg	0.123U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	OCDD	0.615 ng/Kg	0.615U ng/Kg
SL-159-SA7-SB-3.0-4.0(RES)	OCDF	0.0980 ng/Kg	0.0980U ng/Kg
SL-162-SA7-SB-0.0-1.0(RES)	1,2,3,7,8,9-HXCDF	0.126 ng/Kg	0.126U ng/Kg
SL-162-SA7-SB-0.0-1.0(RES)	2,3,4,7,8-PECDF	0.328 ng/Kg	0.328U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.749 ng/Kg	0.749U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.270 ng/Kg	0.270U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0638 ng/Kg	0.0638U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.130 ng/Kg	0.130U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.124 ng/Kg	0.124U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0708 ng/Kg	0.0708U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.139 ng/Kg	0.139U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.0908 ng/Kg	0.0908U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0784 ng/Kg	0.0784U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.138 ng/Kg	0.138U ng/Kg
SL-169-SA7-SB-3.0-4.0(RES)	OCDF	0.471 ng/Kg	0.471U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.836 ng/Kg	0.836U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.170 ng/Kg	0.170U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0550 ng/Kg	0.0550U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0509 ng/Kg	0.0509U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0662 ng/Kg	0.0662U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0370 ng/Kg	0.0370U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0835 ng/Kg	0.0835U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0336 ng/Kg	0.0336U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0898 ng/Kg	0.0898U ng/Kg
SL-265-SA6-SB-4.0-5.0(RES)	OCDF	0.322 ng/Kg	0.322U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0839 ng/Kg	0.0839U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.150 ng/Kg	0.150U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.146 ng/Kg	0.146U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0979 ng/Kg	0.0979U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.134 ng/Kg	0.134U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0445 ng/Kg	0.0445U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0871 ng/Kg	0.0871U ng/Kg
SL-268-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.177 ng/Kg	0.177U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.892 ng/Kg	0.892U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.188 ng/Kg	0.188U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0539 ng/Kg	0.0539U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0840 ng/Kg	0.0840U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0924 ng/Kg	0.0924U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0680 ng/Kg	0.0680U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.136 ng/Kg	0.136U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.102 ng/Kg	0.102U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0946 ng/Kg	0.0946U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0749 ng/Kg	0.0749U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0757 ng/Kg	0.0757U ng/Kg
SL-301-SA6-SB-4.0-5.0(RES)	OCDF	0.455 ng/Kg	0.455U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.977 ng/Kg	0.977U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.243 ng/Kg	0.243U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0384 ng/Kg	0.0384U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0511 ng/Kg	0.0511U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX148 | Laboratory: LL

EDD Filename: DX148_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0541 ng/Kg	0.0541U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0518 ng/Kg	0.0518U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0619 ng/Kg	0.0619U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0286 ng/Kg	0.0286U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0333 ng/Kg	0.0333U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0606 ng/Kg	0.0606U ng/Kg
SL-319-SA6-SB-4.0-5.0(RES)	OCDF	0.535 ng/Kg	0.535U ng/Kg

Field Duplicate RPD Report

Lab Reporting Batch ID: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-319-SA6-SB-4.0-5.0	DUP16-SA6-QC-100511			
MOISTURE	8.3	8.5	2		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-319-SA6-SB-4.0-5.0	DUP16-SA6-QC-100511			
1,2,3,4,6,7,8-HPCDD	0.977	1.43	38	50.00	No Qualifiers Applied
1,2,3,4,6,7,8-HPCDF	0.243	0.319	27	50.00	
1,2,3,4,7,8,9-HPCDF	0.0384	0.0604	45	50.00	
1,2,3,6,7,8-HXCDF	0.0518	0.0550	6	50.00	
1,2,3,7,8,9-HXCDD	0.0619	0.0904	37	50.00	
2,3,4,7,8-PECDF	0.0606	0.0451	29	50.00	
OCDD	9.80	15.7	46	50.00	
OCDF	0.535	0.880	49	50.00	
1,2,3,4,7,8-HXCDF	0.0511	0.0870	52	50.00	J(all detects) UJ(all non-detects)
1,2,3,6,7,8-HXCDD	0.0541	0.108	67	50.00	
1,2,3,7,8,9-HXCDF	5.35 U	0.0579	200	50.00	
1,2,3,7,8-PECDD	5.35 U	0.0422	200	50.00	
1,2,3,7,8-PECDF	0.0286	0.0608	72	50.00	
2,3,4,6,7,8-HXCDF	0.0333	0.0648	64	50.00	
2,3,7,8-TCDF	1.07 U	0.0399	200	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: DX148 Laboratory: LL

EDD Filename: DX148_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-100511	1,2,3,4,6,7,8-HPCDD	JBQ	2.28	10.6	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	1.43	10.6	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.138	10.6	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.367	10.6	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	J	0.198	10.6	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.256	10.6	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	J	0.190	10.6	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JQ	0.139	10.6	PQL	pg/L	
	1,2,3,7,8-PECDD	JQ	0.260	10.6	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.248	10.6	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.594	10.6	PQL	pg/L	
	OCDD	JB	3.86	21.3	PQL	pg/L	
	OCDF	JBQ	0.743	21.3	PQL	pg/L	
EB-SA6-SB-100611	1,2,3,4,6,7,8-HPCDD	JB	2.42	9.55	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	1.19	9.55	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JB	0.295	9.55	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.274	9.55	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	J	0.354	9.55	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JBQ	0.279	9.55	PQL	pg/L	
	1,2,3,7,8-PECDF	JB	0.157	9.55	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.259	9.55	PQL	pg/L	
	2,3,4,7,8-PECDF	JBQ	0.358	9.55	PQL	pg/L	
	OCDD	JB	5.46	19.1	PQL	pg/L	
	OCDF	JB	1.12	19.1	PQL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA6-QC-100511	1,2,3,4,6,7,8-HPCDD	JB	1.43	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.319	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0604	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0870	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.108	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0550	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0904	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0579	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0422	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0608	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0648	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0451	5.35	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0399	1.07	PQL	ng/Kg	
	OCDF	JB	0.880	10.7	PQL	ng/Kg	
SL-009-SA3-SB-4.0-5.0	1,2,3,4,7,8,9-HPCDF	JB	1.29	5.39	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.602	5.39	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.11	5.39	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.85	5.39	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.38	5.39	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.720	5.39	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.560	5.39	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.27	5.39	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	5.33	5.39	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0717	1.08	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-046-SA7-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.630	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.151	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0398	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0313	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0390	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0723	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0365	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0672	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0455	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0660	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0300	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0671	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0733	5.09	PQL	ng/Kg	
	OCDD	JB	3.82	10.2	PQL	ng/Kg	
	OCDF	JBQ	0.276	10.2	PQL	ng/Kg	
SL-049-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	1.02	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0862	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.171	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.186	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.352	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.167	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.276	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.125	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.258	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.336	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.142	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.259	5.14	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0573	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.114	1.03	PQL	ng/Kg	
	OCDF	JB	2.31	10.3	PQL	ng/Kg	
SL-112-SA7-SB-0.0-1.0	1,2,3,4,6,7,8-HPCDF	JB	4.93	5.30	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.531	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.547	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.658	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.70	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.515	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.29	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.258	5.30	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.525	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.663	5.30	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.523	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.15	5.30	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.137	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.519	1.06	PQL	ng/Kg	
	OCDF	JB	10.4	10.6	PQL	ng/Kg	
SL-137-SA7-SB-0.0-1.0	1,2,3,4,7,8,9-HPCDF	JB	4.61	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	3.74	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.95	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.18	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.559	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	1.94	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.817	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	3.78	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.925	5.13	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.241	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.268	1.03	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX148 | Laboratory: LL

EDD Filename: DX148_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-138-SA7-SB-1.5-2.5	1,2,3,4,7,8,9-HPCDF	JB	3.73	5.91	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	3.53	5.91	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.62	5.91	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.77	5.91	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.538	5.91	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	1.82	5.91	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.846	5.91	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	3.31	5.91	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.07	5.91	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.166	1.18	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.244	1.18	PQL	ng/Kg	
SL-147-SA7-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.303	5.33	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0737	5.33	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0356	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0494	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.262	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.187	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.377	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.122	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0361	5.33	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0394	5.33	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0351	5.33	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0496	5.33	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0343	1.07	PQL	ng/Kg	
	OCDD	JB	0.495	10.7	PQL	ng/Kg	
	OCDF	JBQ	0.125	10.7	PQL	ng/Kg	
SL-155-SA7-SB-1.5-2.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.292	5.19	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.122	5.19	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0326	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0301	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0334	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0272	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0465	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0355	5.19	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JBQ	0.0395	5.19	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0447	5.19	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0634	5.19	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0419	1.04	PQL	ng/Kg	
	OCDD	JB	1.11	10.4	PQL	ng/Kg	
	OCDF	JBQ	0.173	10.4	PQL	ng/Kg	
SL-159-SA7-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.334	5.20	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.101	5.20	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0416	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0672	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0590	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0497	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0741	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0671	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0643	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0892	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0419	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.123	5.20	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0296	1.04	PQL	ng/Kg	
	OCDD	JB	0.615	10.4	PQL	ng/Kg	
	OCDF	JB	0.0980	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-162-SA7-SB-0.0-1.0	1,2,3,4,6,7,8-HPCDF	JB	4.04	5.05	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.375	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.392	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.301	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	1.02	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.209	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.697	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.126	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.385	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.308	5.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.307	5.05	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.328	5.05	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0823	1.01	PQL	ng/Kg	
	OCDF	JB	9.98	10.1	PQL	ng/Kg	
SL-166-SA7-SB-1.0-2.0	1,2,3,4,7,8-HxCDD	J	4.14	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HXCDF	JB	2.06	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.41	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.544	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	1.76	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.645	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	4.65	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.861	5.09	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.116	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.250	1.02	PQL	ng/Kg	
SL-167-SA7-SB-0.5-1.5	1,2,3,4,7,8,9-HPCDF	JB	0.779	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.765	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.645	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.70	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.447	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.50	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.169	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.450	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.199	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.655	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.439	5.13	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.138	1.03	PQL	ng/Kg	
SL-169-SA7-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.749	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.270	5.17	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0638	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0331	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.130	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.124	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0708	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.139	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0908	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0522	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.240	5.17	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0784	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.138	5.17	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0809	1.03	PQL	ng/Kg	
	OCDD	JB	4.64	10.3	PQL	ng/Kg	
	OCDF	JB	0.471	10.3	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX148 **Laboratory: LL**

EDD Filename: DX148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-265-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.836	5.22	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.170	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0550	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0246	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0509	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0662	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0370	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDD	JBQ	0.0835	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0336	5.22	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0898	5.22	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0481	1.04	PQL	ng/Kg	
	OCDD	JB	6.83	10.4	PQL	ng/Kg	
	OCDF	JB	0.322	10.4	PQL	ng/Kg	
SL-268-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	1.93	5.02	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.467	5.02	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0839	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0497	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.150	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.146	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0979	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.134	5.02	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0445	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0873	5.02	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.222	5.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0871	5.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.177	5.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0933	1.00	PQL	ng/Kg	
	OCDF	JB	0.703	10.0	PQL	ng/Kg	
SL-301-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.892	5.27	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.188	5.27	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0539	5.27	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0432	5.27	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0840	5.27	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0924	5.27	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0680	5.27	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.136	5.27	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.102	5.27	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0784	5.27	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0946	5.27	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0749	5.27	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0757	5.27	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0408	1.05	PQL	ng/Kg	
	OCDD	JB	8.34	10.5	PQL	ng/Kg	
	OCDF	JB	0.455	10.5	PQL	ng/Kg	
SL-319-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.977	5.35	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.243	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0384	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0511	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0541	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0518	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0619	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JBQ	0.0286	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0333	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0606	5.35	PQL	ng/Kg	
	OCDD	JB	9.80	10.7	PQL	ng/Kg	
	OCDF	JB	0.535	10.7	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

DX156

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-Nov-2011	SL-285-SA6-SS-0.0-0.5	6487664	N	METHOD	1613B	III
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	6487665	N	METHOD	1613B	III
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	6487666	N	METHOD	1613B	III
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	6487676	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	6487669	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	6487670	MS	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	6487671	MSD	METHOD	1613B	III
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	6487677	N	METHOD	1613B	III
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	6487678	N	METHOD	1613B	III
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	6487679	N	METHOD	1613B	III
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	6487680	N	METHOD	1613B	III
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	6487667	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	6487672	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	6487673	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	6487674	N	METHOD	1613B	III
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	6487675	N	METHOD	1613B	III
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	6487668	N	METHOD	1613B	III
01-Dec-2011	DUP17-SA6-QC-120111	6487694	FD	METHOD	1613B	III
01-Dec-2011	SL-023-SA8S-SB-4.0-5.0	6487695	N	METHOD	1613B	III
01-Dec-2011	SL-023-SA8S-SB-9.0-10.0	6487696	N	METHOD	1613B	III
01-Dec-2011	EB-SA6-SB-120111	6487699	EB	METHOD	1613B	III
01-Dec-2011	SL-022-SA8S-SB-4.0-5.0	6487697	N	METHOD	1613B	III
01-Dec-2011	SL-022-SA8S-SB-8.0-9.0	6487698	N	METHOD	1613B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** AQ

Sample ID: EB-SA6-SB-120111 *Collected:* 12/1/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	4.07	JB	0.439	MDL	11.3	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	2.74	JB	0.223	MDL	11.3	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.318	JBQ	0.259	MDL	11.3	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	1.01	JBQ	0.274	MDL	11.3	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.534	JBQ	0.388	MDL	11.3	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.475	JB	0.261	MDL	11.3	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.834	JBQ	0.256	MDL	11.3	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.883	JBQ	0.222	MDL	11.3	PQL	pg/L	U	B
OCDD	5.86	JB	0.382	MDL	22.5	PQL	pg/L	U	B
OCDF	2.46	JB	0.579	MDL	22.5	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: DUP17-SA6-QC-120111 *Collected:* 12/1/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.24	JB	0.0237	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.857	JB	0.0387	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.783	JB	0.0298	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.87	JB	0.0412	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.551	JB	0.0296	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.06	JB	0.0411	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.249	JB	0.0298	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.299	JB	0.0263	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	1.44	JB	0.0254	MDL	5.25	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.684	JB	0.0292	MDL	5.25	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.313	JBQ	0.0231	MDL	5.25	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.124	JBQ	0.0125	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.159	JBQ	0.0338	MDL	1.05	PQL	ng/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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-022-SA8S-SB-4.0-5.0 *Collected:* 12/1/2011 2:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.276	JB	0.0107	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0888	JBQ	0.00439	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0318	JBQ	0.00664	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0181	JB	0.00877	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0318	JB	0.00619	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0272	JB	0.00911	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0284	JB	0.00517	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0329	JBQ	0.00855	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0344	JB	0.00641	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0331	JBQ	0.0103	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0343	JBQ	0.00517	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0370	JB	0.00551	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0748	JB	0.00506	MDL	5.51	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0172	JBQ	0.00911	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0185	JBQ	0.0124	MDL	1.10	PQL	ng/Kg	U	B
OCDD	0.745	JB	0.00979	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.133	JB	0.0105	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-022-SA8S-SB-8.0-9.0 *Collected:* 12/1/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.242	JB	0.0107	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0857	JB	0.00511	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0319	JB	0.00761	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0147	JBQ	0.00966	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0391	JBQ	0.00591	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0316	JB	0.00977	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0263	JB	0.00500	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0302	JBQ	0.00955	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0255	JBQ	0.00602	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0244	JBQ	0.00852	MDL	5.41	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0201	JB	0.00557	MDL	5.41	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0367	JB	0.00557	MDL	5.41	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0569	JB	0.00523	MDL	5.41	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-022-SA8S-SB-8.0-9.0 *Collected:* 12/1/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDD	0.0113	JB	0.0106	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0201	JBQ	0.0108	MDL	1.08	PQL	ng/Kg	U	B
OCDD	0.519	JB	0.0103	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.125	JB	0.0101	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: SL-023-SA8S-SB-4.0-5.0 *Collected:* 12/1/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.363	JB	0.0113	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0967	JBQ	0.00682	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0504	JBQ	0.0105	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0201	JB	0.0103	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0444	JB	0.00625	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0349	JB	0.0111	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0306	JB	0.00523	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0346	JBQ	0.0100	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0357	JB	0.00614	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0222	JBQ	0.00875	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0333	JBQ	0.00466	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0396	JB	0.00557	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0701	JB	0.00477	MDL	5.60	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0118	JB	0.00955	MDL	1.12	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0156	JBQ	0.0106	MDL	1.12	PQL	ng/Kg	U	B
OCDD	1.37	JB	0.0103	MDL	11.2	PQL	ng/Kg	U	B
OCDF	0.150	JB	0.0115	MDL	11.2	PQL	ng/Kg	U	B

Sample ID: SL-023-SA8S-SB-9.0-10.0 *Collected:* 12/1/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.277	JB	0.00997	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0998	JB	0.00598	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0371	JBQ	0.00797	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0140	JBQ	0.0104	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0386	JB	0.00653	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0308	JBQ	0.0105	MDL	5.48	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-023-SA8S-SB-9.0-10.0 *Collected:* 12/1/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	0.0327	JBQ	0.00554	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0336	JBQ	0.0103	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0419	JB	0.00598	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0272	JBQ	0.0106	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0271	JBQ	0.00609	MDL	5.48	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0394	JB	0.00554	MDL	5.48	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0637	JBQ	0.00520	MDL	5.48	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0266	JBQ	0.0111	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0227	JB	0.0123	MDL	1.10	PQL	ng/Kg	U	B
OCDD	0.609	JB	0.00997	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.118	JBQ	0.00886	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-282-SA6-SB-2.5-3.5 *Collected:* 11/30/2011 3:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.588	JB	0.0155	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.134	JB	0.0140	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0942	JBQ	0.0218	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0329	JBQ	0.0105	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.102	JB	0.0116	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0472	JBQ	0.0103	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0499	JB	0.00983	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0486	JBQ	0.0108	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0830	JB	0.0114	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0501	JBQ	0.0115	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0926	JBQ	0.00667	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0500	JBQ	0.0106	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0682	JB	0.00723	MDL	5.42	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0160	JBQ	0.0118	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0125	JB	0.0101	MDL	1.08	PQL	ng/Kg	U	B
OCDD	3.43	JB	0.0127	MDL	10.8	PQL	ng/Kg	J	Z
OCDF	0.237	JBQ	0.0139	MDL	10.8	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-282-SA6-SS-0.0-0.5 *Collected:* 11/30/2011 12:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.01	JB	0.0254	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.419	JB	0.0296	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.949	JB	0.0282	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.45	JB	0.0304	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.312	JB	0.0261	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.594	JB	0.0299	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.158	JB	0.0251	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.170	JBQ	0.0176	MDL	5.23	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.579	JB	0.0244	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.425	JB	0.0269	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.193	JB	0.0220	MDL	5.23	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0763	JB	0.0115	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.173	JB	0.0441	MDL	1.05	PQL	ng/Kg	J	Z

Sample ID: SL-283-SA6-SB-14.0-15.0 *Collected:* 11/30/2011 1:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.256	JB	0.0133	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0998	JB	0.00582	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0408	JB	0.00900	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0202	JB	0.0108	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0551	JBQ	0.00966	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0415	JB	0.0109	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0429	JBQ	0.00790	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0404	JB	0.0105	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0611	JBQ	0.00856	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0359	JBQ	0.0125	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0367	JB	0.00681	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0499	JBQ	0.00779	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0687	JBQ	0.00703	MDL	5.42	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0322	JBQ	0.0138	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0184	JBQ	0.0120	MDL	1.08	PQL	ng/Kg	U	B
OCDD	0.540	JB	0.0157	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.160	JBQ	0.0179	MDL	10.8	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-283-SA6-SB-18.0-19.0 *Collected:* 11/30/2011 1:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.274	JBQ	0.0139	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.105	JB	0.00586	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0433	JB	0.00906	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0221	JBQ	0.0107	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0551	JBQ	0.00895	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0417	JB	0.0114	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0422	JB	0.00773	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0368	JB	0.0108	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0554	JBQ	0.00829	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0362	JBQ	0.0127	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0347	JB	0.00751	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0488	JBQ	0.00751	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0728	JBQ	0.00740	MDL	5.51	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0186	JBQ	0.0151	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0216	JB	0.0127	MDL	1.10	PQL	ng/Kg	U	B
OCDD	0.675	JB	0.0148	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.139	JB	0.0166	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-283-SA6-SB-4.0-5.0 *Collected:* 11/30/2011 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.463	JB	0.0164	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.239	JB	0.00720	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.111	JB	0.0119	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.219	JB	0.0153	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.318	JB	0.0112	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.253	JB	0.0150	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.302	JB	0.0101	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.325	JB	0.0151	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.330	JB	0.0112	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.386	JB	0.0177	MDL	5.31	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.461	JB	0.00924	MDL	5.31	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.222	JB	0.0104	MDL	5.31	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.401	JB	0.00924	MDL	5.31	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-283-SA6-SB-4.0-5.0 *Collected:* 11/30/2011 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDD	0.106	JB	0.0132	MDL	1.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.114	JB	0.0132	MDL	1.06	PQL	ng/Kg	U	B
OCDD	0.690	JB	0.0130	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.213	JB	0.0201	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: SL-283-SA6-SB-9.0-10.0 *Collected:* 11/30/2011 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.321	JB	0.0166	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.156	JB	0.00700	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0509	JB	0.0115	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0499	JBQ	0.0138	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0678	JB	0.0105	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0542	JB	0.0144	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0659	JBQ	0.00919	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0654	JBQ	0.0136	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0800	JB	0.0107	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0944	JBQ	0.0153	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0747	JBQ	0.00864	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0745	JB	0.0103	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.103	JB	0.00853	MDL	5.42	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0345	JB	0.0137	MDL	1.08	PQL	ng/Kg	U	B
OCDD	0.837	JB	0.0167	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.178	JBQ	0.0190	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: SL-283-SA6-SS-0.0-0.5 *Collected:* 11/30/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.22	JB	0.0297	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.899	JB	0.0311	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.32	JB	0.0263	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.33	JB	0.0321	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.816	JB	0.0244	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.63	JB	0.0314	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.299	JB	0.0269	MDL	5.10	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-283-SA6-SS-0.0-0.5 *Collected:* 11/30/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDD	0.491	JB	0.0223	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.24	JB	0.0276	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.913	JB	0.0239	MDL	5.10	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.462	JB	0.0246	MDL	5.10	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.100	JB	0.00990	MDL	1.02	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.335	JB	0.0469	MDL	1.02	PQL	ng/Kg	J	Z

Sample ID: SL-284-SA6-SB-14.0-15.0 *Collected:* 11/30/2011 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
1,2,3,4,6,7,8-HPCDD	0.391	JB	0.0128	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.157	JB	0.00573	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0607	JB	0.00854	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0423	JB	0.0131	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0922	JBQ	0.0111	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0759	JBQ	0.0138	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0859	JB	0.00899	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0633	JBQ	0.0134	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0919	JB	0.0100	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0904	JBQ	0.0133	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.108	JB	0.00708	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0756	JB	0.00944	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.117	JB	0.00674	MDL	5.42	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0376	JBQ	0.0129	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0155	JBQ	0.0119	MDL	1.08	PQL	ng/Kg	U	B
OCDD	1.12	JB	0.0116	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.189	JBQ	0.0122	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: SL-284-SA6-SB-15.5-16.5 *Collected:* 11/30/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.418	JB	0.0143	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.202	JB	0.00543	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0668	JB	0.00769	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.115	JB	0.0145	MDL	5.54	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-284-SA6-SB-15.5-16.5 *Collected:* 11/30/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	0.176	JB	0.0110	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.132	JB	0.0149	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.191	JB	0.00995	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.121	JB	0.0145	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.139	JB	0.0105	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.222	JB	0.0133	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.247	JB	0.00724	MDL	5.54	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.123	JBQ	0.0106	MDL	5.54	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.239	JB	0.00679	MDL	5.54	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0458	JB	0.00973	MDL	1.11	PQL	ng/Kg	U	B
OCDD	1.99	JB	0.0123	MDL	11.1	PQL	ng/Kg	U	B
OCDF	0.183	JBQ	0.0136	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: SL-284-SA6-SB-4.0-5.0 *Collected:* 11/30/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.408	JB	0.0137	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.114	JBQ	0.00613	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0430	JBQ	0.00997	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0227	JBQ	0.0133	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0456	JBQ	0.00909	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0955	JB	0.0141	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0644	JB	0.00767	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0922	JB	0.0129	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0628	JBQ	0.00909	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0300	JB	0.0117	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0477	JBQ	0.00690	MDL	5.36	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0555	JB	0.00811	MDL	5.36	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0811	JB	0.00679	MDL	5.36	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0251	JB	0.0114	MDL	1.07	PQL	ng/Kg	U	B
OCDD	1.06	JB	0.0153	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.181	JB	0.0140	MDL	10.7	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-284-SA6-SB-9.0-10.0 *Collected:* 11/30/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.364	JB	0.0125	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.116	JB	0.00478	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0423	JB	0.00871	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0267	JBQ	0.0113	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0449	JBQ	0.00797	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0582	JBQ	0.0115	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0374	JB	0.00691	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0434	JB	0.0115	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0370	JB	0.00786	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0448	JBQ	0.0101	MDL	5.29	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0359	JBQ	0.00595	MDL	5.29	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0552	JBQ	0.00744	MDL	5.29	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0716	JBQ	0.00595	MDL	5.29	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0160	JBQ	0.0114	MDL	1.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0150	JB	0.00978	MDL	1.06	PQL	ng/Kg	U	B
OCDD	1.21	JB	0.0137	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.217	JB	0.0152	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: SL-284-SA6-SS-0.0-0.5 *Collected:* 11/30/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.52	JB	0.0272	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.930	JB	0.0363	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.900	JB	0.0239	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.38	JB	0.0386	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.583	JB	0.0234	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.28	JB	0.0353	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.354	JB	0.0234	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.275	JB	0.0235	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	1.01	JB	0.0216	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.772	JB	0.0230	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.268	JB	0.0204	MDL	5.38	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0985	JB	0.0118	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.117	JB	0.0302	MDL	1.08	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-285-SA6-SB-4.0-5.0 *Collected:* 11/29/2011 3:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.296	JB	0.0114	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.118	JB	0.00697	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0499	JB	0.0124	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0254	JB	0.0101	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0563	JB	0.00843	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0392	JB	0.0102	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0314	JB	0.00697	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0511	JBQ	0.00957	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0496	JB	0.00874	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0503	JBQ	0.0119	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0599	JBQ	0.00656	MDL	5.05	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0521	JB	0.00770	MDL	5.05	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0700	JBQ	0.00645	MDL	5.05	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0272	JBQ	0.0128	MDL	1.01	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0209	JBQ	0.0122	MDL	1.01	PQL	ng/Kg	U	B
OCDD	0.860	JB	0.0130	MDL	10.1	PQL	ng/Kg	U	B
OCDF	0.171	JB	0.0131	MDL	10.1	PQL	ng/Kg	U	B

Sample ID: SL-285-SA6-SB-6.0-7.0 *Collected:* 11/29/2011 3:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.553	JB	0.0103	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.160	JB	0.00521	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0413	JB	0.00808	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0295	JBQ	0.0131	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.123	JB	0.0116	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.159	JB	0.0135	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0582	JBQ	0.0101	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.227	JB	0.0130	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0674	JBQ	0.0115	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0425	JB	0.0117	MDL	5.16	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.110	JB	0.0109	MDL	5.16	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0436	JB	0.0109	MDL	5.16	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0631	JB	0.0107	MDL	5.16	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: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-285-SA6-SB-6.0-7.0 *Collected:* 11/29/2011 3:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.0147	JBQ	0.0128	MDL	1.03	PQL	ng/Kg	U	B
OCDD	3.35	JB	0.00956	MDL	10.3	PQL	ng/Kg	J	Z
OCDF	0.276	JB	0.0121	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: SL-285-SA6-SS-0.0-0.5 *Collected:* 11/29/2011 1:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.03	JB	0.0210	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.400	JB	0.0337	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.26	JB	0.0419	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.41	JB	0.0350	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.622	JB	0.0405	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.634	JB	0.0336	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.292	JB	0.0389	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.217	JB	0.0284	MDL	5.30	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.826	JB	0.0397	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.398	JB	0.0516	MDL	5.30	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0387	JB	0.0142	MDL	1.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.325	JB	0.0881	MDL	1.06	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
Q	Matrix Spike Lower Rejection
Z	Reporting Limit Trace Value

* denotes a non-reportable result

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

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DX156

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK3390B370451	12/9/2011 4:51:00 AM	1,2,3,4,6,7,8-HPCDD	3.79 pg/L	EB-SA6-SB-120111
		1,2,3,4,6,7,8-HPCDF	3.73 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.384 pg/L	
		1,2,3,4,7,8-HXCDF	0.975 pg/L	
		1,2,3,6,7,8-HXCDD	0.498 pg/L	
		1,2,3,6,7,8-HXCDF	0.664 pg/L	
		1,2,3,7,8,9-HXCDD	0.726 pg/L	
		1,2,3,7,8,9-HXCDF	0.327 pg/L	
		1,2,3,7,8-PECDF	0.230 pg/L	
		2,3,4,6,7,8-HXCDF	1.06 pg/L	
		2,3,4,7,8-PECDF	0.598 pg/L	
		OCDD	6.63 pg/L	
		OCDF	2.25 pg/L	

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB-SA6-SB-120111(RES)	1,2,3,4,6,7,8-HPCDD	4.07 pg/L	4.07U pg/L
EB-SA6-SB-120111(RES)	1,2,3,4,6,7,8-HPCDF	2.74 pg/L	2.74U pg/L
EB-SA6-SB-120111(RES)	1,2,3,4,7,8,9-HPCDF	0.318 pg/L	0.318U pg/L
EB-SA6-SB-120111(RES)	1,2,3,4,7,8-HXCDF	1.01 pg/L	1.01U pg/L
EB-SA6-SB-120111(RES)	1,2,3,6,7,8-HXCDD	0.534 pg/L	0.534U pg/L
EB-SA6-SB-120111(RES)	1,2,3,6,7,8-HXCDF	0.475 pg/L	0.475U pg/L
EB-SA6-SB-120111(RES)	2,3,4,6,7,8-HXCDF	0.834 pg/L	0.834U pg/L
EB-SA6-SB-120111(RES)	2,3,4,7,8-PECDF	0.883 pg/L	0.883U pg/L
EB-SA6-SB-120111(RES)	OCDD	5.86 pg/L	5.86U pg/L
EB-SA6-SB-120111(RES)	OCDF	2.46 pg/L	2.46U pg/L

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK3420B370528	12/15/2011 5:28:00 AM	1,2,3,4,6,7,8-HPCDD	0.248 ng/Kg	DUP17-SA6-QC-120111
		1,2,3,4,6,7,8-HPCDF	0.117 ng/Kg	SL-022-SA8S-SB-4.0-5.0
		1,2,3,4,7,8,9-HPCDF	0.0904 ng/Kg	SL-022-SA8S-SB-8.0-9.0
		1,2,3,4,7,8-HxCDD	0.0576 ng/Kg	SL-023-SA8S-SB-4.0-5.0
		1,2,3,4,7,8-HXCDF	0.0750 ng/Kg	SL-023-SA8S-SB-9.0-10.0
		1,2,3,6,7,8-HXCDD	0.0571 ng/Kg	SL-282-SA6-SB-2.5-3.5
		1,2,3,6,7,8-HXCDF	0.0647 ng/Kg	SL-282-SA6-SS-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0703 ng/Kg	SL-283-SA6-SB-14.0-15.0
		1,2,3,7,8,9-HXCDF	0.111 ng/Kg	SL-283-SA6-SB-18.0-19.0
		1,2,3,7,8-PECDD	0.0899 ng/Kg	SL-283-SA6-SB-4.0-5.0
		1,2,3,7,8-PECDF	0.0765 ng/Kg	SL-283-SA6-SB-9.0-10.0
		2,3,4,6,7,8-HXCDF	0.0820 ng/Kg	SL-283-SA6-SS-0.0-0.5
		2,3,4,7,8-PECDF	0.118 ng/Kg	SL-284-SA6-SB-14.0-15.0
		2,3,7,8-TCDD	0.0313 ng/Kg	SL-284-SA6-SB-15.5-16.5
		2,3,7,8-TCDF	0.0290 ng/Kg	SL-284-SA6-SB-4.0-5.0
		OCDD	0.403 ng/Kg	SL-284-SA6-SB-9.0-10.0
		OCDF	0.207 ng/Kg	SL-284-SA6-SS-0.0-0.5
				SL-285-SA6-SB-4.0-5.0
				SL-285-SA6-SB-6.0-7.0
				SL-285-SA6-SS-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP17-SA6-QC-120111(RES)	1,2,3,7,8,9-HXCDF	0.249 ng/Kg	0.249U ng/Kg
DUP17-SA6-QC-120111(RES)	1,2,3,7,8-PECDD	0.299 ng/Kg	0.299U ng/Kg
DUP17-SA6-QC-120111(RES)	2,3,4,7,8-PECDF	0.313 ng/Kg	0.313U ng/Kg
DUP17-SA6-QC-120111(RES)	2,3,7,8-TCDD	0.124 ng/Kg	0.124U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.276 ng/Kg	0.276U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0888 ng/Kg	0.0888U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0318 ng/Kg	0.0318U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0181 ng/Kg	0.0181U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0318 ng/Kg	0.0318U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0272 ng/Kg	0.0272U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0284 ng/Kg	0.0284U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0329 ng/Kg	0.0329U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0344 ng/Kg	0.0344U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0331 ng/Kg	0.0331U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0343 ng/Kg	0.0343U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0370 ng/Kg	0.0370U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0748 ng/Kg	0.0748U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0172 ng/Kg	0.0172U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0185 ng/Kg	0.0185U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	OCDD	0.745 ng/Kg	0.745U ng/Kg
SL-022-SA8S-SB-4.0-5.0(RES)	OCDF	0.133 ng/Kg	0.133U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,4,6,7,8-HPCDD	0.242 ng/Kg	0.242U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0857 ng/Kg	0.0857U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0319 ng/Kg	0.0319U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,4,7,8-HxCDD	0.0147 ng/Kg	0.0147U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,4,7,8-HXCDF	0.0391 ng/Kg	0.0391U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,6,7,8-HXCDD	0.0316 ng/Kg	0.0316U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,6,7,8-HXCDF	0.0263 ng/Kg	0.0263U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,7,8,9-HXCDD	0.0302 ng/Kg	0.0302U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,7,8,9-HXCDF	0.0255 ng/Kg	0.0255U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,7,8-PECDD	0.0244 ng/Kg	0.0244U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	1,2,3,7,8-PECDF	0.0201 ng/Kg	0.0201U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	2,3,4,6,7,8-HXCDF	0.0367 ng/Kg	0.0367U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	2,3,4,7,8-PECDF	0.0569 ng/Kg	0.0569U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	2,3,7,8-TCDD	0.0113 ng/Kg	0.0113U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	2,3,7,8-TCDF	0.0201 ng/Kg	0.0201U ng/Kg
SL-022-SA8S-SB-8.0-9.0(RES)	OCDD	0.519 ng/Kg	0.519U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-022-SA8S-SB-8.0-9.0(RES)	OCDF	0.125 ng/Kg	0.125U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.363 ng/Kg	0.363U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0967 ng/Kg	0.0967U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0504 ng/Kg	0.0504U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0201 ng/Kg	0.0201U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0444 ng/Kg	0.0444U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0349 ng/Kg	0.0349U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0306 ng/Kg	0.0306U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0346 ng/Kg	0.0346U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0222 ng/Kg	0.0222U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0333 ng/Kg	0.0333U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0396 ng/Kg	0.0396U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0701 ng/Kg	0.0701U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0118 ng/Kg	0.0118U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0156 ng/Kg	0.0156U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	OCDD	1.37 ng/Kg	1.37U ng/Kg
SL-023-SA8S-SB-4.0-5.0(RES)	OCDF	0.150 ng/Kg	0.150U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.277 ng/Kg	0.277U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0998 ng/Kg	0.0998U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0371 ng/Kg	0.0371U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0140 ng/Kg	0.0140U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0386 ng/Kg	0.0386U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0308 ng/Kg	0.0308U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0327 ng/Kg	0.0327U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0336 ng/Kg	0.0336U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0419 ng/Kg	0.0419U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0272 ng/Kg	0.0272U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0271 ng/Kg	0.0271U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0394 ng/Kg	0.0394U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0637 ng/Kg	0.0637U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0266 ng/Kg	0.0266U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0227 ng/Kg	0.0227U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	OCDD	0.609 ng/Kg	0.609U ng/Kg
SL-023-SA8S-SB-9.0-10.0(RES)	OCDF	0.118 ng/Kg	0.118U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.588 ng/Kg	0.588U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.134 ng/Kg	0.134U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0942 ng/Kg	0.0942U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0329 ng/Kg	0.0329U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.102 ng/Kg	0.102U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0472 ng/Kg	0.0472U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0499 ng/Kg	0.0499U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0486 ng/Kg	0.0486U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.0830 ng/Kg	0.0830U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0501 ng/Kg	0.0501U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0926 ng/Kg	0.0926U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0500 ng/Kg	0.0500U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0682 ng/Kg	0.0682U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	2,3,7,8-TCDD	0.0160 ng/Kg	0.0160U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	2,3,7,8-TCDF	0.0125 ng/Kg	0.0125U ng/Kg
SL-282-SA6-SB-2.5-3.5(RES)	OCDF	0.237 ng/Kg	0.237U ng/Kg
SL-282-SA6-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.312 ng/Kg	0.312U ng/Kg
SL-282-SA6-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.158 ng/Kg	0.158U ng/Kg
SL-282-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.170 ng/Kg	0.170U ng/Kg
SL-282-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.193 ng/Kg	0.193U ng/Kg
SL-282-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0763 ng/Kg	0.0763U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,4,6,7,8-HPCDD	0.256 ng/Kg	0.256U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0998 ng/Kg	0.0998U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0408 ng/Kg	0.0408U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8-HxCDD	0.0202 ng/Kg	0.0202U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8-HXCDF	0.0551 ng/Kg	0.0551U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,6,7,8-HXCDD	0.0415 ng/Kg	0.0415U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,6,7,8-HXCDF	0.0429 ng/Kg	0.0429U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,7,8,9-HXCDD	0.0404 ng/Kg	0.0404U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,7,8,9-HXCDF	0.0611 ng/Kg	0.0611U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,7,8-PECDD	0.0359 ng/Kg	0.0359U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	1,2,3,7,8-PECDF	0.0367 ng/Kg	0.0367U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	2,3,4,6,7,8-HXCDF	0.0499 ng/Kg	0.0499U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	2,3,4,7,8-PECDF	0.0687 ng/Kg	0.0687U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	2,3,7,8-TCDD	0.0322 ng/Kg	0.0322U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	2,3,7,8-TCDF	0.0184 ng/Kg	0.0184U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	OCDD	0.540 ng/Kg	0.540U ng/Kg
SL-283-SA6-SB-14.0-15.0(RES)	OCDF	0.160 ng/Kg	0.160U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,4,6,7,8-HPCDD	0.274 ng/Kg	0.274U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,4,6,7,8-HPCDF	0.105 ng/Kg	0.105U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0433 ng/Kg	0.0433U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,4,7,8-HxCDD	0.0221 ng/Kg	0.0221U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,4,7,8-HXCDF	0.0551 ng/Kg	0.0551U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,6,7,8-HXCDD	0.0417 ng/Kg	0.0417U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,6,7,8-HXCDF	0.0422 ng/Kg	0.0422U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,7,8,9-HXCDD	0.0368 ng/Kg	0.0368U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,7,8,9-HXCDF	0.0554 ng/Kg	0.0554U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,7,8-PECDD	0.0362 ng/Kg	0.0362U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	1,2,3,7,8-PECDF	0.0347 ng/Kg	0.0347U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	2,3,4,6,7,8-HXCDF	0.0488 ng/Kg	0.0488U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	2,3,4,7,8-PECDF	0.0728 ng/Kg	0.0728U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	2,3,7,8-TCDD	0.0186 ng/Kg	0.0186U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	2,3,7,8-TCDF	0.0216 ng/Kg	0.0216U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	OCDD	0.675 ng/Kg	0.675U ng/Kg
SL-283-SA6-SB-18.0-19.0(RES)	OCDF	0.139 ng/Kg	0.139U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.463 ng/Kg	0.463U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.239 ng/Kg	0.239U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.111 ng/Kg	0.111U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.219 ng/Kg	0.219U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.318 ng/Kg	0.318U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.253 ng/Kg	0.253U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.302 ng/Kg	0.302U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.325 ng/Kg	0.325U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.330 ng/Kg	0.330U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.386 ng/Kg	0.386U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.222 ng/Kg	0.222U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.401 ng/Kg	0.401U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.106 ng/Kg	0.106U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.114 ng/Kg	0.114U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	OCDD	0.690 ng/Kg	0.690U ng/Kg
SL-283-SA6-SB-4.0-5.0(RES)	OCDF	0.213 ng/Kg	0.213U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.321 ng/Kg	0.321U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.156 ng/Kg	0.156U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0509 ng/Kg	0.0509U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0499 ng/Kg	0.0499U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0678 ng/Kg	0.0678U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0542 ng/Kg	0.0542U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0659 ng/Kg	0.0659U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0654 ng/Kg	0.0654U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0800 ng/Kg	0.0800U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0944 ng/Kg	0.0944U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0747 ng/Kg	0.0747U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0745 ng/Kg	0.0745U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.103 ng/Kg	0.103U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0345 ng/Kg	0.0345U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	OCDD	0.837 ng/Kg	0.837U ng/Kg
SL-283-SA6-SB-9.0-10.0(RES)	OCDF	0.178 ng/Kg	0.178U ng/Kg
SL-283-SA6-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.299 ng/Kg	0.299U ng/Kg
SL-283-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.462 ng/Kg	0.462U ng/Kg
SL-283-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.100 ng/Kg	0.100U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,4,6,7,8-HPCDD	0.391 ng/Kg	0.391U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,4,6,7,8-HPCDF	0.157 ng/Kg	0.157U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0607 ng/Kg	0.0607U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8-HxCDD	0.0423 ng/Kg	0.0423U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,4,7,8-HXCDF	0.0922 ng/Kg	0.0922U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,6,7,8-HXCDD	0.0759 ng/Kg	0.0759U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,6,7,8-HXCDF	0.0859 ng/Kg	0.0859U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,7,8,9-HXCDD	0.0633 ng/Kg	0.0633U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,7,8,9-HXCDF	0.0919 ng/Kg	0.0919U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,7,8-PECDD	0.0904 ng/Kg	0.0904U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	1,2,3,7,8-PECDF	0.108 ng/Kg	0.108U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	2,3,4,6,7,8-HXCDF	0.0756 ng/Kg	0.0756U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	2,3,4,7,8-PECDF	0.117 ng/Kg	0.117U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	2,3,7,8-TCDD	0.0376 ng/Kg	0.0376U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	2,3,7,8-TCDF	0.0155 ng/Kg	0.0155U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	OCDD	1.12 ng/Kg	1.12U ng/Kg
SL-284-SA6-SB-14.0-15.0(RES)	OCDF	0.189 ng/Kg	0.189U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,4,6,7,8-HPCDD	0.418 ng/Kg	0.418U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,4,6,7,8-HPCDF	0.202 ng/Kg	0.202U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0668 ng/Kg	0.0668U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,4,7,8-HxCDD	0.115 ng/Kg	0.115U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,4,7,8-HXCDF	0.176 ng/Kg	0.176U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,6,7,8-HXCDD	0.132 ng/Kg	0.132U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,6,7,8-HXCDF	0.191 ng/Kg	0.191U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,7,8,9-HXCDD	0.121 ng/Kg	0.121U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,7,8,9-HXCDF	0.139 ng/Kg	0.139U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,7,8-PECDD	0.222 ng/Kg	0.222U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	1,2,3,7,8-PECDF	0.247 ng/Kg	0.247U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	2,3,4,6,7,8-HXCDF	0.123 ng/Kg	0.123U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	2,3,4,7,8-PECDF	0.239 ng/Kg	0.239U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	2,3,7,8-TCDF	0.0458 ng/Kg	0.0458U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	OCDD	1.99 ng/Kg	1.99U ng/Kg
SL-284-SA6-SB-15.5-16.5(RES)	OCDF	0.183 ng/Kg	0.183U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.408 ng/Kg	0.408U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.114 ng/Kg	0.114U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0430 ng/Kg	0.0430U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0227 ng/Kg	0.0227U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0456 ng/Kg	0.0456U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0955 ng/Kg	0.0955U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0644 ng/Kg	0.0644U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0922 ng/Kg	0.0922U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0628 ng/Kg	0.0628U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0300 ng/Kg	0.0300U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0477 ng/Kg	0.0477U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0555 ng/Kg	0.0555U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0811 ng/Kg	0.0811U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0251 ng/Kg	0.0251U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	OCDD	1.06 ng/Kg	1.06U ng/Kg
SL-284-SA6-SB-4.0-5.0(RES)	OCDF	0.181 ng/Kg	0.181U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.364 ng/Kg	0.364U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.116 ng/Kg	0.116U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0423 ng/Kg	0.0423U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0267 ng/Kg	0.0267U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0449 ng/Kg	0.0449U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0582 ng/Kg	0.0582U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0374 ng/Kg	0.0374U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0434 ng/Kg	0.0434U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0370 ng/Kg	0.0370U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0448 ng/Kg	0.0448U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0359 ng/Kg	0.0359U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-284-SA6-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0552 ng/Kg	0.0552U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0716 ng/Kg	0.0716U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0160 ng/Kg	0.0160U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0150 ng/Kg	0.0150U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	OCDD	1.21 ng/Kg	1.21U ng/Kg
SL-284-SA6-SB-9.0-10.0(RES)	OCDF	0.217 ng/Kg	0.217U ng/Kg
SL-284-SA6-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.354 ng/Kg	0.354U ng/Kg
SL-284-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.275 ng/Kg	0.275U ng/Kg
SL-284-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.268 ng/Kg	0.268U ng/Kg
SL-284-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0985 ng/Kg	0.0985U ng/Kg
SL-284-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.117 ng/Kg	0.117U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.296 ng/Kg	0.296U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.118 ng/Kg	0.118U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0499 ng/Kg	0.0499U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0254 ng/Kg	0.0254U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0563 ng/Kg	0.0563U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0392 ng/Kg	0.0392U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0314 ng/Kg	0.0314U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0511 ng/Kg	0.0511U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0496 ng/Kg	0.0496U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0503 ng/Kg	0.0503U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0599 ng/Kg	0.0599U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0521 ng/Kg	0.0521U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0700 ng/Kg	0.0700U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0272 ng/Kg	0.0272U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0209 ng/Kg	0.0209U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	OCDD	0.860 ng/Kg	0.860U ng/Kg
SL-285-SA6-SB-4.0-5.0(RES)	OCDF	0.171 ng/Kg	0.171U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,4,6,7,8-HPCDD	0.553 ng/Kg	0.553U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,4,6,7,8-HPCDF	0.160 ng/Kg	0.160U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0413 ng/Kg	0.0413U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,4,7,8-HxCDD	0.0295 ng/Kg	0.0295U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,4,7,8-HXCDF	0.123 ng/Kg	0.123U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,6,7,8-HXCDD	0.159 ng/Kg	0.159U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,6,7,8-HXCDF	0.0582 ng/Kg	0.0582U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,7,8,9-HXCDD	0.227 ng/Kg	0.227U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,7,8,9-HXCDF	0.0674 ng/Kg	0.0674U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,7,8-PECDD	0.0425 ng/Kg	0.0425U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	1,2,3,7,8-PECDF	0.110 ng/Kg	0.110U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	2,3,4,6,7,8-HXCDF	0.0436 ng/Kg	0.0436U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	2,3,4,7,8-PECDF	0.0631 ng/Kg	0.0631U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	2,3,7,8-TCDF	0.0147 ng/Kg	0.0147U ng/Kg
SL-285-SA6-SB-6.0-7.0(RES)	OCDF	0.276 ng/Kg	0.276U ng/Kg
SL-285-SA6-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.292 ng/Kg	0.292U ng/Kg
SL-285-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.217 ng/Kg	0.217U ng/Kg
SL-285-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.398 ng/Kg	0.398U ng/Kg
SL-285-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0387 ng/Kg	0.0387U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DX156 Laboratory: LL

EDD Filename: DX156_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-283-SA6-SS-0.0-0.5MS SL-283-SA6-SS-0.0-0.5MSD (SL-283-SA6-SS-0.0-0.5)	OCDD	-135	-33	40.00-135.00	-	OCDD	No Qual, >4x

Field Duplicate RPD Report

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
MOISTURE	8.7	7.5	15		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
1,2,3,4,6,7,8-HPCDD	145	125	15	50.00	
1,2,3,4,6,7,8-HPCDF	15.0	12.5	18	50.00	
1,2,3,4,7,8,9-HPCDF	1.52	1.24	20	50.00	
1,2,3,4,7,8-HxCDD	0.930	0.857	8	50.00	
1,2,3,4,7,8-HXCDF	0.900	0.783	14	50.00	
1,2,3,6,7,8-HXCDD	3.38	2.87	16	50.00	
1,2,3,6,7,8-HXCDF	0.583	0.551	6	50.00	
1,2,3,7,8,9-HXCDD	1.28	1.06	19	50.00	
1,2,3,7,8,9-HXCDF	0.354	0.249	35	50.00	No Qualifiers Applied
1,2,3,7,8-PECDD	0.275	0.299	8	50.00	
1,2,3,7,8-PECDF	1.01	1.44	35	50.00	
2,3,4,6,7,8-HXCDF	0.772	0.684	12	50.00	
2,3,4,7,8-PECDF	0.268	0.313	15	50.00	
2,3,7,8-TCDD	0.0985	0.124	23	50.00	
2,3,7,8-TCDF	0.117	0.159	30	50.00	
OCDD	1820	1990	9	50.00	
OCDF	44.0	37.2	17	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-120111	1,2,3,4,6,7,8-HPCDD	JB	4.07	11.3	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	2.74	11.3	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.318	11.3	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	1.01	11.3	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.534	11.3	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.475	11.3	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.834	11.3	PQL	pg/L	
	2,3,4,7,8-PECDF	JBQ	0.883	11.3	PQL	pg/L	
	OCDD	JB	5.86	22.5	PQL	pg/L	
	OCDF	JB	2.46	22.5	PQL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP17-SA6-QC-120111	1,2,3,4,7,8,9-HPCDF	JB	1.24	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	0.857	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.783	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.87	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.551	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.06	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.249	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.299	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.44	5.25	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.684	5.25	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.313	5.25	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.124	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.159	1.05	PQL	ng/Kg	
SL-022-SA8S-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.276	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0888	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0318	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0181	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0318	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0272	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0284	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0329	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0344	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0331	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0343	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0370	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0748	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0172	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0185	1.10	PQL	ng/Kg	
	OCDD	JB	0.745	11.0	PQL	ng/Kg	
	OCDF	JB	0.133	11.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA8S-SB-8.0-9.0	1,2,3,4,6,7,8-HPCDD	JB	0.242	5.41	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0857	5.41	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0319	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0147	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0391	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0316	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0263	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0302	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0255	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0244	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0201	5.41	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0367	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0569	5.41	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0113	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0201	1.08	PQL	ng/Kg	
	OCDD	JB	0.519	10.8	PQL	ng/Kg	
	OCDF	JB	0.125	10.8	PQL	ng/Kg	
SL-023-SA8S-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.363	5.60	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0967	5.60	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0504	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0201	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0444	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0349	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0306	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0346	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0357	5.60	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0222	5.60	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0333	5.60	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0396	5.60	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0701	5.60	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0118	1.12	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0156	1.12	PQL	ng/Kg	
	OCDD	JB	1.37	11.2	PQL	ng/Kg	
	OCDF	JB	0.150	11.2	PQL	ng/Kg	
SL-023-SA8S-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.277	5.48	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0998	5.48	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0371	5.48	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0140	5.48	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0386	5.48	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0308	5.48	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0327	5.48	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0336	5.48	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0419	5.48	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0272	5.48	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0271	5.48	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0394	5.48	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0637	5.48	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0266	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0227	1.10	PQL	ng/Kg	
	OCDD	JB	0.609	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.118	11.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-282-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	0.588	5.42	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.134	5.42	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0942	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0329	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.102	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0472	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0499	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0486	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0830	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0501	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0926	5.42	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0500	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0682	5.42	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0160	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0125	1.08	PQL	ng/Kg	
	OCDD	JB	3.43	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.237	10.8	PQL	ng/Kg	
SL-282-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.01	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.419	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.949	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.45	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.312	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.594	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.158	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.170	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.579	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.425	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.193	5.23	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0763	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.173	1.05	PQL	ng/Kg	
SL-283-SA6-SB-14.0-15.0	1,2,3,4,6,7,8-HPCDD	JB	0.256	5.42	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0998	5.42	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0408	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0202	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0551	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0415	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0429	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0404	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0611	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0359	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0367	5.42	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0499	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0687	5.42	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0322	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0184	1.08	PQL	ng/Kg	
	OCDD	JB	0.540	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.160	10.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-283-SA6-SB-18.0-19.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.274	5.51	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.105	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0433	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0221	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0551	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0417	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0422	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0368	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0554	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0362	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0347	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0488	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0728	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0186	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0216	1.10	PQL	ng/Kg	
	OCDD	JB	0.675	11.0	PQL	ng/Kg	
	OCDF	JB	0.139	11.0	PQL	ng/Kg	
SL-283-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.463	5.31	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.239	5.31	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.111	5.31	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.219	5.31	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.318	5.31	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.253	5.31	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.302	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.325	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.330	5.31	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.386	5.31	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.461	5.31	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.222	5.31	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.401	5.31	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.106	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.114	1.06	PQL	ng/Kg	
	OCDD	JB	0.690	10.6	PQL	ng/Kg	
	OCDF	JB	0.213	10.6	PQL	ng/Kg	
SL-283-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.321	5.42	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.156	5.42	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0509	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0499	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0678	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0542	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0659	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0654	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0800	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0944	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0747	5.42	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0745	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.103	5.42	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0345	1.08	PQL	ng/Kg	
	OCDD	JB	0.837	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.178	10.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-283-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.22	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.899	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.32	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.33	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.816	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.63	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.299	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.491	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.24	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.913	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.462	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.100	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.335	1.02	PQL	ng/Kg	
SL-284-SA6-SB-14.0-15.0	1,2,3,4,6,7,8-HPCDD	JB	0.391	5.42	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.157	5.42	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0607	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0423	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0922	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0759	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0859	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0633	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0919	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0904	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.108	5.42	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0756	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.117	5.42	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0376	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0155	1.08	PQL	ng/Kg	
	OCDD	JB	1.12	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.189	10.8	PQL	ng/Kg	
SL-284-SA6-SB-15.5-16.5	1,2,3,4,6,7,8-HPCDD	JB	0.418	5.54	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.202	5.54	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0668	5.54	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.115	5.54	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.176	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.132	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.191	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.121	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.139	5.54	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.222	5.54	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.247	5.54	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.123	5.54	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.239	5.54	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0458	1.11	PQL	ng/Kg	
	OCDD	JB	1.99	11.1	PQL	ng/Kg	
	OCDF	JBQ	0.183	11.1	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-284-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.408	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.114	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0430	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0227	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0456	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0955	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0644	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0922	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0628	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0300	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0477	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0555	5.36	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0811	5.36	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0251	1.07	PQL	ng/Kg	
	OCDD	JB	1.06	10.7	PQL	ng/Kg	
	OCDF	JB	0.181	10.7	PQL	ng/Kg	
SL-284-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.364	5.29	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.116	5.29	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0423	5.29	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0267	5.29	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0449	5.29	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0582	5.29	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0374	5.29	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0434	5.29	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0370	5.29	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0448	5.29	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0359	5.29	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0552	5.29	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0716	5.29	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0160	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0150	1.06	PQL	ng/Kg	
	OCDD	JB	1.21	10.6	PQL	ng/Kg	
	OCDF	JB	0.217	10.6	PQL	ng/Kg	
SL-284-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.52	5.38	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	0.930	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.900	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.38	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.583	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.28	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.354	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.275	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.01	5.38	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.772	5.38	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.268	5.38	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0985	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.117	1.08	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX156 **Laboratory: LL**

EDD Filename: DX156_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-285-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.296	5.05	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.118	5.05	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0499	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0254	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0563	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0392	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0314	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0511	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0496	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0503	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0599	5.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0521	5.05	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0700	5.05	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0272	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0209	1.01	PQL	ng/Kg	
	OCDD	JB	0.860	10.1	PQL	ng/Kg	
	OCDF	JB	0.171	10.1	PQL	ng/Kg	
SL-285-SA6-SB-6.0-7.0	1,2,3,4,6,7,8-HPCDD	JB	0.553	5.16	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.160	5.16	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0413	5.16	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0295	5.16	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.123	5.16	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.159	5.16	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0582	5.16	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.227	5.16	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0674	5.16	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0425	5.16	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.110	5.16	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0436	5.16	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0631	5.16	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0147	1.03	PQL	ng/Kg	
	OCDD	JB	3.35	10.3	PQL	ng/Kg	
	OCDF	JB	0.276	10.3	PQL	ng/Kg	
SL-285-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.03	5.30	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	0.400	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.26	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.41	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.622	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.634	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.292	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.217	5.30	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.826	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.398	5.30	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0387	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.325	1.06	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

11L003

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-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	3550B	8081A	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	3550B	8082	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	7471A	7471A	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	300.0	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	314.0	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	6020	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	8015B	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	8015M	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	8151A	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01	N	GEN PREP	9014	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01R	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01T	N	3550B	8015B EFH	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01T	N	3550B	8081A	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01W	N	3550B	8270C	IV
29-Nov-2011	SL-285-SA6-SS-0.0-0.5	L003-01W	N	3550B	8270C SIM	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	3550B	8015B EFH	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	3550B	8082	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	3550B	8270C	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	3550B	8270C SIM	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	7471A	7471A	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	300.0	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	314.0	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	6020	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	8015B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	8015M	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	8330A	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	8332	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03	N	GEN PREP	9014	IV
29-Nov-2011	SL-285-SA6-SB-4.0-5.0	L003-03R	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SB-4.5	L003-02	N	5035	8015B GRO	IV
29-Nov-2011	SL-285-SA6-SB-4.5	L003-02	N	5035	8260B	IV
29-Nov-2011	SL-285-SA6-SB-4.5	L003-02	N	5035	8260B SIM	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	3550B	8015B EFH	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	3550B	8082	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	3550B	8270C	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	3550B	8270C SIM	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	7471A	7471A	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	300.0	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	314.0	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	6020	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	8015B	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	8015M	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	8330A	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	8332	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05	N	GEN PREP	9014	IV
29-Nov-2011	SL-285-SA6-SB-6.0-7.0	L003-05R	N	GEN PREP	7199	IV
29-Nov-2011	SL-285-SA6-SB-7.5	L003-04	N	5035	8015B GRO	IV
29-Nov-2011	SL-285-SA6-SB-7.5	L003-04	N	5035	8260B	IV
29-Nov-2011	SL-285-SA6-SB-7.5	L003-04	N	5035	8260B SIM	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	TB-113011	L003-27	TB	5030B	8015B GRO	IV
30-Nov-2011	TB-113011	L003-27	TB	5030B	8260B	IV
30-Nov-2011	TB-113011	L003-27	TB	5030B	8260B SIM	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	3550B	8081A	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	3550B	8082	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	3550B	8270C	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	3550B	8270C SIM	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	300.0	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	314.0	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	6020	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	8015B	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	8015M	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	8151A	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18	N	GEN PREP	9014	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18R	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18T	N	3550B	8015B EFH	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18T	N	3550B	8081A	IV
30-Nov-2011	SL-284-SA6-SS-0.0-0.5	L003-18T	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	3550B	8081A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	6020	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	8151A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09	N	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5DUP	L003-09D	DUP	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5DUP	L003-09D	DUP	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09G	MS	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09G1	MS	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09H	MSD	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09H1	MSD	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	3550B	8081A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	8151A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M	MS	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MS	L003-09M1	MS	GEN PREP	7199	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09R	N	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09R	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	3550B	8081A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	8151A	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S	MSD	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5MSD	L003-09S1	MSD	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09T	N	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SS-0.0-0.5	L003-09T	N	3550B	8081A	IV
30-Nov-2011	SL-284-SA6-SB-4.5	L003-19	N	5035	8015B GRO	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	3550B	8015B EFH	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	3550B	8082	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	3550B	8270C	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	3550B	8270C SIM	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	7471A	7471A	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	300.0	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	314.0	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	6020	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	8015B	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	8015M	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20	N	GEN PREP	9014	IV
30-Nov-2011	SL-284-SA6-SB-4.0-5.0	L003-20R	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-9.5	L003-21	N	5035	8015B GRO	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	3550B	8082	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	3550B	8270C	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	3550B	8270C SIM	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	7471A	7471A	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	300.0	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	314.0	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	6020	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	8015B	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	8015M	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22	N	GEN PREP	9014	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-284-SA6-SB-9.0-10.0	L003-22R	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-14.5	L003-23	N	5035	8015B GRO	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	3550B	8082	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	3550B	8270C	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	3550B	8270C SIM	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	7471A	7471A	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	300.0	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	314.0	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	6020	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	8015B	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	8015M	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24	N	GEN PREP	9014	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-284-SA6-SB-14.0-15.0	L003-24R	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-16.0	L003-25	N	5035	8015B GRO	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	3550B	8081A	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	3550B	8082	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	3550B	8270C	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	3550B	8270C SIM	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	7471A	7471A	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	300.0	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	314.0	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	6020	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	8015B	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	8015M	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	8151A	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26	N	GEN PREP	9014	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26R	N	GEN PREP	7199	IV
30-Nov-2011	SL-284-SA6-SB-15.5-16.5	L003-26T	N	3550B	8081A	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	3550B	8081A	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	3550B	8082	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	3550B	8270C	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	3550B	8270C SIM	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	7471A	7471A	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	300.0	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	314.0	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	6020	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	7199	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	8015B	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	8015M	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	8151A	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06	N	GEN PREP	9014	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06R	N	GEN PREP	7199	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06T	N	3550B	8015B EFH	IV
30-Nov-2011	SL-282-SA6-SS-0.0-0.5	L003-06T	N	3550B	8081A	IV
30-Nov-2011	SL-283-SA6-SB-4.5	L003-10	N	5035	8015B GRO	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	7199	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11	N	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11R	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SB-4.0-5.0	L003-11W	N	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SB-9.5	L003-12	N	5035	8015B GRO	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13	N	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13R	N	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13R	N	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SB-9.0-10.0	L003-13R	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SB-14.5	L003-14	N	5035	8015B GRO	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	7199	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15	N	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15R	N	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SB-14.0-15.0	L003-15R	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SB-18.5	L003-16	N	5035	8015B GRO	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	3550B	8082	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	3550B	8270C	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	3550B	8270C SIM	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	5035	8015B GRO	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	7471A	7471A	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	300.0	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	314.0	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	6020	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	7199	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	8015B	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	8015M	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	8330A	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	8332	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17	N	GEN PREP	9014	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-283-SA6-SB-18.0-19.0	L003-17R	N	GEN PREP	7199	IV
30-Nov-2011	SL-282-SA6-SB-3.0	L003-07	N	5035	8015B GRO	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	3550B	8082	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	3550B	8270C	IV

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	3550B	8270C SIM	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	7471A	7471A	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	300.0	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	314.0	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	6020	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	7199	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	8015B	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	8015M	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08	N	GEN PREP	9014	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08R	N	3550B	8015B EFH	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08R	N	GEN PREP	7199	IV
30-Nov-2011	SL-282-SA6-SB-2.5-3.5	L003-08T	N	GEN PREP	6020	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	3550B	8081A	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	3550B	8082	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	3550B	8270C	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	3550B	8270C SIM	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	7471A	7471A	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	300.0	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	314.0	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	6020	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	7199	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	8015B	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	8015M	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	8151A	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02	FD	GEN PREP	9014	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02R	FD	GEN PREP	7199	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Dec-2011	DUP17-SA6-QC-120111	L011-02T	FD	3550B	8015B EFH	IV
01-Dec-2011	DUP17-SA6-QC-120111	L011-02T	FD	3550B	8081A	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	3520C	8015B EFH	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	3520C	8081A	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	3520C	8082	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	3520C	8270C	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	5030B	8015B GRO	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	5030B	8260B	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	7470A	7470A	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	300.0	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	314.0	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	6020	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	7199	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	8015B	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	8015M	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	8151A	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	8330A	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	8332	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01	EB	GEN PREP	9014	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01R	EB	5030B	8260B SIM	IV
01-Dec-2011	EB-SA6-SB-120111	L011-01R	EB	GEN PREP	7199	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: GENCHEM

Method: 300.0 **Matrix: AQ**

Sample ID: **EB-SA6-SB-120111** ***Collected:*** **12/1/2011 2:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	0.284	J	0.222	MDL	0.443	PQL	MG/L	J	Z

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: **SL-282-SA6-SB-2.5-3.5** ***Collected:*** **11/30/2011 3:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.08	J	0.562	MDL	1.12	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.774	J	0.556	MDL	1.11	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-4.0-5.0** ***Collected:*** **11/30/2011 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.686	J	0.540	MDL	1.08	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-9.0-10.0** ***Collected:*** **11/30/2011 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.578	J	0.550	MDL	1.10	PQL	MG/KG	J	Z

Sample ID: **SL-284-SA6-SB-15.5-16.5** ***Collected:*** **11/30/2011 10:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.590	J	0.568	MDL	1.14	PQL	MG/KG	J	Z

Sample ID: **SL-285-SA6-SB-4.0-5.0** ***Collected:*** **11/29/2011 3:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.832	J	0.524	MDL	1.05	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: **SL-285-SA6-SB-6.0-7.0** ***Collected:*** **11/29/2011 3:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrite-NO2	1.47	J	0.799	MDL	1.60	PQL	MG/KG	J	Z

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: **EB-SA6-SB-120111** ***Collected:*** **12/1/2011 2:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	0.0254	J	0.0200	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000858	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **DUP17-SA6-QC-120111** ***Collected:*** **12/1/2011 8:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.201	J	0.106	MDL	0.211	PQL	MG/KG	J	Z, Q
BARIUM	75.3		0.211	MDL	0.422	PQL	MG/KG	J	Q
CHROMIUM	14.7		0.211	MDL	0.422	PQL	MG/KG	J	Q, E
NICKEL	9.28		0.211	MDL	0.422	PQL	MG/KG	J	Q, E
THALLIUM	0.248		0.0528	MDL	0.106	PQL	MG/KG	U	B

Sample ID: **SL-282-SA6-SB-2.5-3.5** ***Collected:*** **11/30/2011 3:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.337		0.109	MDL	0.218	PQL	MG/KG	J	Q
BARIUM	105		0.218	MDL	0.437	PQL	MG/KG	J	Q
CALCIUM	3950		10.9	MDL	21.8	PQL	MG/KG	J	I
CHROMIUM	24.0		0.218	MDL	0.437	PQL	MG/KG	J	Q, E, I
COPPER	10.8		0.218	MDL	0.437	PQL	MG/KG	J	I
IRON	36200		10.9	MDL	21.8	PQL	MG/KG	J	I
NICKEL	13.8		0.218	MDL	0.437	PQL	MG/KG	J	Q, E, I
POTASSIUM	2800		32.8	MDL	65.5	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-282-SA6-SB-2.5-3.5** ***Collected:*** **11/30/2011 3:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	170		54.6	MDL	109	PQL	MG/KG	J	I
THALLIUM	0.528		0.0546	MDL	0.109	PQL	MG/KG	U	B
TITANIUM	1760		2.73	MDL	5.46	PQL	MG/KG		Z
VANADIUM	53.3		0.0546	MDL	0.109	PQL	MG/KG	J	I

Sample ID: **SL-282-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 12:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.219		0.104	MDL	0.208	PQL	MG/KG	J	Q
BARIUM	86.8		0.208	MDL	0.415	PQL	MG/KG	J	Q
CALCIUM	6530		10.4	MDL	20.8	PQL	MG/KG	J	I
CHROMIUM	16.1		0.208	MDL	0.415	PQL	MG/KG	J	Q, E
IRON	20400		10.4	MDL	20.8	PQL	MG/KG	J	I
NICKEL	10.0		0.208	MDL	0.415	PQL	MG/KG	J	Q, E
SILVER	0.0842	J	0.0519	MDL	0.104	PQL	MG/KG	J	Z
SODIUM	127		51.9	MDL	104	PQL	MG/KG	J	I
THALLIUM	0.210		0.0519	MDL	0.104	PQL	MG/KG	U	B
Zirconium	3.19	J	2.60	MDL	5.19	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 1:20:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.943**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.144	J	0.105	MDL	0.210	PQL	MG/KG	J	Z, Q
BARIUM	78.3		0.210	MDL	0.419	PQL	MG/KG	J	Q
CHROMIUM	17.8		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
NICKEL	9.42		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
SODIUM	101	J	52.4	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.241		0.0524	MDL	0.105	PQL	MG/KG	U	B

Sample ID: **SL-283-SA6-SB-18.0-19.0** ***Collected:*** **11/30/2011 1:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.150	J	0.112	MDL	0.224	PQL	MG/KG	J	Z, Q
BARIUM	68.1		0.224	MDL	0.448	PQL	MG/KG	J	Q
CALCIUM	2380		11.2	MDL	22.4	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-283-SA6-SB-18.0-19.0** ***Collected:*** **11/30/2011 1:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.985**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	16.7		0.224	MDL	0.448	PQL	MG/KG	J	Q, E, I
COPPER	6.32		0.224	MDL	0.448	PQL	MG/KG	J	I
IRON	20300		11.2	MDL	22.4	PQL	MG/KG	J	I
NICKEL	7.86		0.224	MDL	0.448	PQL	MG/KG	J	Q, E, I
POTASSIUM	1580		33.6	MDL	67.2	PQL	MG/KG	J	I
SODIUM	159		56.0	MDL	112	PQL	MG/KG	J	I
THALLIUM	0.218		0.0560	MDL	0.112	PQL	MG/KG	U	B
VANADIUM	35.1		0.0560	MDL	0.112	PQL	MG/KG	J	I

Sample ID: **SL-283-SA6-SB-4.0-5.0** ***Collected:*** **11/30/2011 1:10:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.214		0.105	MDL	0.210	PQL	MG/KG	J	Q
BARIUM	96.3		0.210	MDL	0.419	PQL	MG/KG	J	Q
CALCIUM	1520		10.5	MDL	21.0	PQL	MG/KG	J	I
CHROMIUM	18.4		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
IRON	20500		10.5	MDL	21.0	PQL	MG/KG	J	I
NICKEL	9.90		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
SODIUM	137		52.4	MDL	105	PQL	MG/KG	J	I
THALLIUM	0.253		0.0524	MDL	0.105	PQL	MG/KG	U	B

Sample ID: **SL-283-SA6-SB-9.0-10.0** ***Collected:*** **11/30/2011 1:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.935**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.166	J	0.103	MDL	0.206	PQL	MG/KG	J	Z, Q
BARIUM	100		0.206	MDL	0.411	PQL	MG/KG	J	Q
CALCIUM	2020		10.3	MDL	20.6	PQL	MG/KG	J	I
CHROMIUM	18.9		0.206	MDL	0.411	PQL	MG/KG	J	Q, E
IRON	21400		10.3	MDL	20.6	PQL	MG/KG	J	I
NICKEL	10.9		0.206	MDL	0.411	PQL	MG/KG	J	Q, E
SODIUM	95.0	J	51.4	MDL	103	PQL	MG/KG	J	Z, I
THALLIUM	0.255		0.0514	MDL	0.103	PQL	MG/KG	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-283-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 10:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.257		0.105	MDL	0.210	PQL	MG/KG	J	Q
BARIUM	87.3		0.210	MDL	0.419	PQL	MG/KG	J	Q
CHROMIUM	17.5		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
NICKEL	11.1		0.210	MDL	0.419	PQL	MG/KG	J	Q, E
THALLIUM	0.388		0.0524	MDL	0.105	PQL	MG/KG	U	B

Sample ID: **SL-284-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 10:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.957**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.108	MDL	0.217	PQL	MG/KG	J	Z, Q
BARIUM	101		0.217	MDL	0.434	PQL	MG/KG	J	Q
CHROMIUM	15.6		0.217	MDL	0.434	PQL	MG/KG	J	Q, E
NICKEL	7.85		0.217	MDL	0.434	PQL	MG/KG	J	Q, E
SILVER	0.0552	J	0.0542	MDL	0.108	PQL	MG/KG	J	Z
THALLIUM	0.247		0.0542	MDL	0.108	PQL	MG/KG	U	B

Sample ID: **SL-284-SA6-SB-15.5-16.5** ***Collected:*** **11/30/2011 10:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.966**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.112	J	0.110	MDL	0.220	PQL	MG/KG	J	Z, Q
BARIUM	81.6		0.220	MDL	0.439	PQL	MG/KG	J	Q
CHROMIUM	15.9		0.220	MDL	0.439	PQL	MG/KG	J	Q, E
NICKEL	7.89		0.220	MDL	0.439	PQL	MG/KG	J	Q, E
THALLIUM	0.217		0.0549	MDL	0.110	PQL	MG/KG	U	B

Sample ID: **SL-284-SA6-SB-4.0-5.0** ***Collected:*** **11/30/2011 10:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.952**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.134	J	0.104	MDL	0.208	PQL	MG/KG	J	Z, Q
BARIUM	71.0		0.208	MDL	0.417	PQL	MG/KG	J	Q
CALCIUM	2350		10.4	MDL	20.8	PQL	MG/KG	J	I
CHROMIUM	15.1		0.208	MDL	0.417	PQL	MG/KG	J	Q, E
IRON	18800		10.4	MDL	20.8	PQL	MG/KG	J	I
NICKEL	8.79		0.208	MDL	0.417	PQL	MG/KG	J	Q, E
SODIUM	154		52.1	MDL	104	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-284-SA6-SB-4.0-5.0** ***Collected:*** **11/30/2011 10:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.952**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.235		0.0521	MDL	0.104	PQL	MG/KG	U	B

Sample ID: **SL-284-SA6-SB-9.0-10.0** ***Collected:*** **11/30/2011 10:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.208	U	0.104	MDL	0.208	PQL	MG/KG	UJ	Q
BARIUM	63.8		0.208	MDL	0.415	PQL	MG/KG	J	Q
CALCIUM	6180		10.4	MDL	20.8	PQL	MG/KG	J	I
CHROMIUM	11.5		0.208	MDL	0.415	PQL	MG/KG	J	Q, E
IRON	16900		10.4	MDL	20.8	PQL	MG/KG	J	I
NICKEL	6.40		0.208	MDL	0.415	PQL	MG/KG	J	Q, E
SODIUM	105		51.9	MDL	104	PQL	MG/KG	J	I
THALLIUM	0.204		0.0519	MDL	0.104	PQL	MG/KG	U	B

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.948**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.271		0.104	MDL	0.208	PQL	MG/KG	J	Q
BARIUM	87.1		0.208	MDL	0.416	PQL	MG/KG	J	Q
CALCIUM	5000		10.4	MDL	20.8	PQL	MG/KG	J	I
CHROMIUM	15.5		0.208	MDL	0.416	PQL	MG/KG	J	Q, E
IRON	18300		10.4	MDL	20.8	PQL	MG/KG	J	I
NICKEL	9.60		0.208	MDL	0.416	PQL	MG/KG	J	Q, E
SODIUM	179		52.0	MDL	104	PQL	MG/KG	J	I
THALLIUM	0.215		0.0520	MDL	0.104	PQL	MG/KG	U	B

Sample ID: **SL-285-SA6-SB-4.0-5.0** ***Collected:*** **11/29/2011 3:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.957**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.200	U	0.100	MDL	0.200	PQL	MG/KG	UJ	Q
BARIUM	61.6		0.200	MDL	0.401	PQL	MG/KG	J	Q
CALCIUM	8670		10.0	MDL	20.0	PQL	MG/KG	J	I
CHROMIUM	11.9		0.200	MDL	0.401	PQL	MG/KG	J	Q, E
IRON	16600		10.0	MDL	20.0	PQL	MG/KG	J	I
NICKEL	6.48		0.200	MDL	0.401	PQL	MG/KG	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-285-SA6-SB-4.0-5.0** ***Collected:*** **11/29/2011 3:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.957**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	86.2	J	50.1	MDL	100	PQL	MG/KG	J	Z, I
THALLIUM	0.221		0.0501	MDL	0.100	PQL	MG/KG	U	B

Sample ID: **SL-285-SA6-SB-6.0-7.0** ***Collected:*** **11/29/2011 3:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.948**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.107	J	0.101	MDL	0.202	PQL	MG/KG	J	Z, Q
BARIUM	49.2		0.202	MDL	0.404	PQL	MG/KG	J	Q
CADMIUM	0.0976	J	0.0505	MDL	0.101	PQL	MG/KG	J	Z
CALCIUM	3160		10.1	MDL	20.2	PQL	MG/KG	J	I
CHROMIUM	11.4		0.202	MDL	0.404	PQL	MG/KG	J	Q, E
IRON	15800		10.1	MDL	20.2	PQL	MG/KG	J	I
NICKEL	5.54		0.202	MDL	0.404	PQL	MG/KG	J	Q, E
SELENIUM	0.209	J	0.202	MDL	0.404	PQL	MG/KG	J	Z
SODIUM	151		50.5	MDL	101	PQL	MG/KG	J	I
THALLIUM	0.222		0.0505	MDL	0.101	PQL	MG/KG	U	B

Sample ID: **SL-285-SA6-SS-0.0-0.5** ***Collected:*** **11/29/2011 1:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.962**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.281		0.103	MDL	0.205	PQL	MG/KG	J	Q
BARIUM	74.9		0.205	MDL	0.411	PQL	MG/KG	J	Q
CALCIUM	5460		10.3	MDL	20.5	PQL	MG/KG	J	I
CHROMIUM	55.6		0.205	MDL	0.411	PQL	MG/KG	J	Q, E
IRON	18700		10.3	MDL	20.5	PQL	MG/KG	J	I
NICKEL	29.8		0.205	MDL	0.411	PQL	MG/KG	J	Q, E
SODIUM	155		51.3	MDL	103	PQL	MG/KG	J	I
THALLIUM	0.234		0.0513	MDL	0.103	PQL	MG/KG	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: **SL-282-SA6-SB-2.5-3.5** ***Collected:*** **11/30/2011 3:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.85	J	0.56	MDL	1.1	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.85	J	0.56	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 1:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.70	J	0.56	MDL	1.1	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.70	J	0.56	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-18.0-19.0** ***Collected:*** **11/30/2011 1:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.63	J	0.57	MDL	1.1	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.63	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-283-SA6-SB-9.0-10.0** ***Collected:*** **11/30/2011 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	0.63	J	0.55	MDL	1.1	PQL	MG/KG	J	Z
EFH(C8-C11)	0.98	J	0.55	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-284-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 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
EFH(C8-C11)	0.89	J	0.57	MDL	1.1	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.89	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-284-SA6-SB-15.5-16.5** ***Collected:*** **11/30/2011 10:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	0.64	J	0.57	MDL	1.1	PQL	MG/KG	J	Z
EFH(C8-C11)	0.78	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: **SL-284-SA6-SB-4.0-5.0** *Collected:* **11/30/2011 10:40:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	0.60	J	0.55	MDL	1.1	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.60	J	0.55	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-284-SA6-SB-9.0-10.0** *Collected:* **11/30/2011 10:45:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.59	J	0.53	MDL	1.1	PQL	MG/KG	J	Z

Sample ID: **SL-285-SA6-SB-4.0-5.0** *Collected:* **11/29/2011 3:25:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.78	J	0.52	MDL	1.0	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	0.78	J	0.52	MDL	1.0	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8081A **Matrix: AQ**

Sample ID: **EB-SA6-SB-120111** *Collected:* **12/1/2011 2:00:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1.12**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.11	U	0.011	MDL	0.11	PQL	UG/L	UJ	C
METHOXYCHLOR	1.1	U	0.11	MDL	1.1	PQL	UG/L	UJ	C

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: **DUP17-SA6-QC-120111** *Collected:* **12/1/2011 8:25:00** *Analysis Type:* **DL1-BASE/NEUTRAL** *Dilution:* **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	2.6		0.92	MDL	1.8	PQL	UG/KG	J	*XIII

Sample ID: **DUP17-SA6-QC-120111** *Collected:* **12/1/2011 8:25:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.37	U	0.18	MDL	0.37	PQL	UG/KG	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: **DUP17-SA6-QC-120111** ***Collected:*** **12/1/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.37	U	0.18	MDL	0.37	PQL	UG/KG	UJ	C
ALDRIN	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
ALPHA-BHC	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
BETA-BHC	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
DELTA-BHC	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
DIELDRIN	0.37	U	0.18	MDL	0.37	PQL	UG/KG	UJ	C
ENDRIN	0.37	U	0.18	MDL	0.37	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR EPOXIDE	0.18	U	0.092	MDL	0.18	PQL	UG/KG	UJ	C
METHOXYCHLOR	1.8	U	0.92	MDL	1.8	PQL	UG/KG	UJ	C

Sample ID: **SL-282-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 12:35:00** ***Analysis Type:*** **DL1-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	4.6		0.36	MDL	0.72	PQL	UG/KG	J	*XIII

Sample ID: **SL-282-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 12:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
4,4'-DDE	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
ALDRIN	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
ALPHA-BHC	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
BETA-BHC	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
DELTA-BHC	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
DIELDRIN	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
ENDRIN	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR EPOXIDE	0.18	U	0.090	MDL	0.18	PQL	UG/KG	UJ	C
METHOXYCHLOR	1.8	U	0.90	MDL	1.8	PQL	UG/KG	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: **SL-283-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 10:00:00** ***Analysis Type:*** **DL1-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	6.2		0.36	MDL	0.73	PQL	UG/KG	J	*XIII

Sample ID: **SL-283-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 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
4,4'-DDD	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
4,4'-DDE	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
ALDRIN	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
ALPHA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
BETA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
DELTA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
DIELDRIN	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
ENDRIN	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR EPOXIDE	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
METHOXYCHLOR	1.8	U	0.91	MDL	1.8	PQL	UG/KG	UJ	C

Sample ID: **SL-284-SA6-SB-15.5-16.5** ***Collected:*** **11/30/2011 10:55:00** ***Analysis Type:*** **DL1-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALPHA-BHC	0.39	U	0.19	MDL	0.39	PQL	UG/KG	UJ	C
DELTA-BHC	0.39	U	0.19	MDL	0.39	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.39	U	0.19	MDL	0.39	PQL	UG/KG	UJ	C
METHOXYCHLOR	3.9	U	1.9	MDL	3.9	PQL	UG/KG	UJ	C

Sample ID: **SL-284-SA6-SB-15.5-16.5** ***Collected:*** **11/30/2011 10:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALPHA-BHC	0.19	U	0.097	MDL	0.19	PQL	UG/KG	UJ	C
BETA-BHC	0.19	U	0.097	MDL	0.19	PQL	UG/KG	UJ	C
DELTA-BHC	0.19	U	0.097	MDL	0.19	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.19	U	0.097	MDL	0.19	PQL	UG/KG	UJ	C
METHOXYCHLOR	1.9	U	0.97	MDL	1.9	PQL	UG/KG	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **DL1-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	3.6		0.93	MDL	1.9	PQL	UG/KG	J	*XIII

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.37	U	0.19	MDL	0.37	PQL	UG/KG	UJ	C
4,4'-DDE	0.37	U	0.19	MDL	0.37	PQL	UG/KG	UJ	C
ALDRIN	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
ALPHA-BHC	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
BETA-BHC	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
DELTA-BHC	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
DIELDRIN	0.37	U	0.19	MDL	0.37	PQL	UG/KG	UJ	C
ENDRIN	0.37	U	0.19	MDL	0.37	PQL	UG/KG	UJ	C
gamma-BHC (Lindane)	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
HEPTACHLOR	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
HEPTACHLOR EPOXIDE	0.19	U	0.093	MDL	0.19	PQL	UG/KG	UJ	C
METHOXYCHLOR	1.9	U	0.93	MDL	1.9	PQL	UG/KG	UJ	C

Sample ID: **SL-285-SA6-SS-0.0-0.5** ***Collected:*** **11/29/2011 1:35:00** ***Analysis Type:*** **DL1-BASE/NEUTRAL** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	16		0.91	MDL	1.8	PQL	UG/KG	J	*XIII
DIELDRIN	4.1		0.91	MDL	1.8	PQL	UG/KG	J	*XIII, Z

Sample ID: **SL-285-SA6-SS-0.0-0.5** ***Collected:*** **11/29/2011 1:35:00** ***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'-DDD	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
4,4'-DDE	0.36	U	0.18	MDL	0.36	PQL	UG/KG	UJ	C
ALDRIN	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
ALPHA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
BETA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
DELTA-BHC	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
ENDRIN	2.2		0.18	MDL	0.36	PQL	UG/KG	J	S, C
gamma-BHC (Lindane)	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA
Method: 8061A **Matrix: SO**

Sample ID: **SL-285-SA6-SS-0.0-0.5** ***Collected:*** **11/29/2011 1:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEPTACHLOR	0.18	U	0.091	MDL	0.18	PQL	UG/KG	UJ	C
HEPTACHLOR EPOXIDE	1.1		0.091	MDL	0.18	PQL	UG/KG	J	S, C, *XIII
METHOXYCHLOR	1.8	U	0.91	MDL	1.8	PQL	UG/KG	UJ	C
MIREX	2.4		0.18	MDL	0.36	PQL	UG/KG	J	S, *XIII

Method Category: SVOA
Method: 8082 **Matrix: SO**

Sample ID: **DUP17-SA6-QC-120111** ***Collected:*** **12/1/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	20		0.92	MDL	1.8	PQL	UG/KG	J	FD

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	4.6		0.93	MDL	1.9	PQL	UG/KG	J	FD

Method Category: SVOA
Method: 8270C **Matrix: AQ**

Sample ID: **EB-SA6-SB-120111** ***Collected:*** **12/1/2011 2:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1.08**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	11	U	5.4	MDL	11	PQL	UG/L	UJ	E

Method Category: SVOA
Method: 8270C **Matrix: SO**

Sample ID: **SL-283-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 10:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1100	U	530	MDL	1100	PQL	UG/KG	R	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

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

Sample ID: **DUP17-SA6-QC-120111** ***Collected:*** **12/1/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	4.7		1.8	MDL	3.7	PQL	UG/KG	J	FD
BENZO(A)PYRENE	5.1		1.8	MDL	3.7	PQL	UG/KG	J	FD
BENZO(B)FLUORANTHENE	9.7		1.8	MDL	3.7	PQL	UG/KG	J	FD
BENZO(G,H,I)PERYLENE	14		1.8	MDL	3.7	PQL	UG/KG	J	FD
BENZO(K)FLUORANTHENE	2.0	J	1.8	MDL	3.7	PQL	UG/KG	J	Z, FD
BIS(2-ETHYLHEXYL)PHTHALATE	47		18	MDL	36	PQL	UG/KG	J	FD
CHRYSENE	3.1	J	1.8	MDL	3.7	PQL	UG/KG	J	Z, FD
DIBENZO(A,H)ANTHRACENE	4.6		1.8	MDL	3.7	PQL	UG/KG	J	FD
Di-n-butylphthalate	79		18	MDL	36	PQL	UG/KG	J	FD
FLUORANTHENE	5.4		1.8	MDL	3.7	PQL	UG/KG	J	FD
INDENO(1,2,3-CD)PYRENE	3.9		1.8	MDL	3.7	PQL	UG/KG	J	FD
PYRENE	5.5		1.8	MDL	3.7	PQL	UG/KG	J	FD

Sample ID: **SL-283-SA6-SB-4.0-5.0** ***Collected:*** **11/30/2011 1:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	11	J	9.1	MDL	18	PQL	UG/KG	J	Z
Di-n-butylphthalate	9.4	J	9.1	MDL	18	PQL	UG/KG	J	Z

Sample ID: **SL-284-SA6-SB-14.0-15.0** ***Collected:*** **11/30/2011 10:50:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.1	J	0.96	MDL	1.9	PQL	UG/KG	J	Z

Sample ID: **SL-284-SA6-SB-9.0-10.0** ***Collected:*** **11/30/2011 10:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	12	J	9.0	MDL	18	PQL	UG/KG	J	Z

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
BENZO(A)PYRENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
BENZO(B)FLUORANTHENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method Category: SVOA

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

Sample ID: **SL-284-SA6-SS-0.0-0.5** ***Collected:*** **11/30/2011 8:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
BENZO(K)FLUORANTHENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
BIS(2-ETHYLHEXYL)PHTHALATE	37	U	18	MDL	37	PQL	UG/KG	UJ	FD
CHRYSENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
DIBENZO(A,H)ANTHRACENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
Di-n-butylphthalate	37	U	18	MDL	37	PQL	UG/KG	UJ	FD
FLUORANTHENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
INDENO(1,2,3-CD)PYRENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD
PYRENE	3.7	U	1.9	MDL	3.7	PQL	UG/KG	UJ	FD

Sample ID: **SL-285-SA6-SB-6.0-7.0** ***Collected:*** **11/29/2011 3:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.0	J	0.91	MDL	1.8	PQL	UG/KG	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: **EB-SA6-SB-120111** ***Collected:*** **12/1/2011 2:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	29	J	10	MDL	50	PQL	UG/L	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: **SL-285-SA6-SB-7.5** ***Collected:*** **11/29/2011 3:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.94**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE (MEK)	5.1	J	4.9	MDL	9.9	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Data Qualifier Summary

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Reason Code Legend

Reason Code	*Description*
*XIII	RPD between Columns
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Percent Difference Lower Estimation
E	Matrix Spike Precision
FD	Field Duplicate Precision
I	Internal Standard Estimation
L	Laboratory Control Precision
E	Laboratory Control Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting 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

11L003

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-283-SA6-SS-0.0-0.5MS (TOT) SL-283-SA6-SS-0.0-0.5MSD (TOT) (DUP17-SA6-QC-120111 SL-282-SA6-SB-2.5-3.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-285-SA6-SS-0.0-0.5)	MANGANESE TITANIUM	41 -70	17 -107	75.00-125.00 75.00-125.00	- -	MANGANESE TITANIUM	No Qual, >4x
SL-283-SA6-SS-0.0-0.5MS (TOT) SL-283-SA6-SS-0.0-0.5MSD (TOT) (DUP17-SA6-QC-120111 SL-282-SA6-SB-2.5-3.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-285-SA6-SS-0.0-0.5)	ALUMINUM ANTIMONY BARIUM CHROMIUM IRON NICKEL	- 67 66 - 43 -	53 67 72 172 47 155	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - 43 (20.00) - 43 (20.00)	ALUMINUM ANTIMONY BARIUM CHROMIUM IRON NICKEL	J(all detects) UJ(all non-detects) Al, Fe, No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-283-SA6-SS-0.0-0.5MS SL-283-SA6-SS-0.0-0.5MSD (SL-283-SA6-SS-0.0-0.5)	BENZIDINE	0	0	20.00-150.00	-	BENZIDINE	J(all detects) R(all non-detects)

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SVL006WC (EB-SA6-SB-120111)	FLUORANTHENE	-	-	50.00-130.00	32 (30.00)	FLUORANTHENE	J (all detects) UJ (all non-detects)

Surrogate Outlier Report

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 8015B EFH
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
DUP17-SA6-QC-120111	BROMOBENZENE Hexacosane	0 0	50.00-150.00 50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-282-SA6-SS-0.0-0.5	BROMOBENZENE Hexacosane	0 0	50.00-150.00 50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-283-SA6-SS-0.0-0.5	BROMOBENZENE Hexacosane	0 0	50.00-150.00 50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-284-SA6-SS-0.0-0.5	BROMOBENZENE Hexacosane	0 0	50.00-150.00 50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-285-SA6-SS-0.0-0.5	BROMOBENZENE Hexacosane	0 0	50.00-150.00 50.00-150.00	All Target Analytes	No Qual, Diluted Out

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-285-SA6-SS-0.0-0.5	TETRACHLORO-M-XYLENE	137	50.00-130.00	All Target Analytes	J(all detects)

Method: 8270C
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-282-SA6-SB-2.5-3.5	2-FLUOROBIPHENYL	43.8	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-283-SA6-SB-14.0-15.0	2-FLUOROBIPHENYL	44.8	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-283-SA6-SB-18.0-19.0	2-FLUOROBIPHENYL	43.2	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-285-SA6-SS-0.0-0.5	2-FLUOROBIPHENYL	40.6	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-282-SA6-SB-2.5-3.5	2-FLUOROBIPHENYL	44.3	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-283-SA6-SB-14.0-15.0	2-FLUOROBIPHENYL	42.5	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-283-SA6-SB-18.0-19.0	2-FLUOROBIPHENYL	41.9	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)
SL-285-SA6-SS-0.0-0.5	2-FLUOROBIPHENYL	41.9	45.00-130.00	No Affected Compounds	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 300.0
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
FLUORIDE	1.97	2.34	17	50.00	No Qualifiers Applied

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5 (TOT)	DUP17-SA6-QC-120111 (TOT)			
ALUMINUM	10500	10300	2	50.00	
ANTIMONY	0.271	0.201	30	50.00	
ARSENIC	3.90	3.58	9	50.00	
BARIUM	87.1	75.3	15	50.00	
BERYLLIUM	0.465	0.462	1	50.00	
CADMIUM	0.327	0.269	19	50.00	
CALCIUM	5000	3790	28	50.00	
CHROMIUM	15.5	14.7	5	50.00	
COBALT	5.05	5.19	3	50.00	
COPPER	9.88	8.21	18	50.00	
IRON	18300	17500	4	50.00	
LEAD	10.3	15.6	41	50.00	
LITHIUM	18.5	19.3	4	50.00	
MAGNESIUM	3960	3920	1	50.00	No Qualifiers Applied
MANGANESE	238	252	6	50.00	
MOLYBDENUM	2.55	1.92	28	50.00	
NICKEL	9.60	9.28	3	50.00	
PHOSPHORUS	470	364	25	50.00	
POTASSIUM	2460	2370	4	50.00	
SELENIUM	0.609	0.469	26	50.00	
SODIUM	179	211	16	50.00	
STRONTIUM	27.2	23.7	14	50.00	
THALLIUM	0.215	0.248	14	50.00	
TITANIUM	775	812	5	50.00	
VANADIUM	31.6	30.2	5	50.00	
ZINC	93.2	102	9	50.00	

Method: 7471A
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5 (TOT)	DUP17-SA6-QC-120111 (TOT)			
MERCURY	2.85	1.75	48	50.00	No Qualifiers Applied

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
EFH(C21-C30)	38	31	20	50.00	
EFH(C30-C40)	45	49	9	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	83	80	4	50.00	

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Field Duplicate RPD Report

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 8081A
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
4,4'-DDT	3.6	2.6	32	50.00	No Qualifiers Applied

Method: 8082
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Aroclor 5460	9.4	6.3	39	50.00	No Qualifiers Applied
AROCLOR 1260	4.6	20	125	50.00	J(all detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
BENZO(A)ANTHRACENE	3.7 U	4.7	200	50.00	
BENZO(A)PYRENE	3.7 U	5.1	200	50.00	
BENZO(B)FLUORANTHENE	3.7 U	9.7	200	50.00	
BENZO(G,H,I)PERYLENE	3.7 U	14	200	50.00	
BENZO(K)FLUORANTHENE	3.7 U	2.0	200	50.00	
BIS(2-ETHYLHEXYL)PHTHALATE	37 U	47	200	50.00	J(all detects)
CHRYSENE	3.7 U	3.1	200	50.00	UJ(all non-detects)
DIBENZO(A,H)ANTHRACENE	3.7 U	4.6	200	50.00	
Di-n-butylphthalate	37 U	79	200	50.00	
FLUORANTHENE	3.7 U	5.4	200	50.00	
INDENO(1,2,3-CD)PYRENE	3.7 U	3.9	200	50.00	
PYRENE	3.7 U	5.5	200	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
PH	8.54	8.70	2		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 300.0
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-120111	Nitrate-NO3	J	0.284	0.443	PQL	MG/L	J (all detects)

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-120111	ALUMINUM	J	0.0254	0.100	PQL	MG/L	J (all detects)
	COPPER	J	0.000858	0.00100	PQL	MG/L	

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-SA6-SB-120111	GASOLINE RANGE ORGANICS (C5-C12)	J	29	50	PQL	UG/L	J (all detects)

Method: 300.0
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-282-SA6-SB-2.5-3.5	FLUORIDE	J	1.08	1.12	PQL	MG/KG	J (all detects)
SL-283-SA6-SB-14.0-15.0	FLUORIDE	J	0.774	1.11	PQL	MG/KG	J (all detects)
SL-283-SA6-SB-4.0-5.0	FLUORIDE	J	0.686	1.08	PQL	MG/KG	J (all detects)
SL-283-SA6-SB-9.0-10.0	FLUORIDE	J	0.578	1.10	PQL	MG/KG	J (all detects)
SL-284-SA6-SB-15.5-16.5	FLUORIDE	J	0.590	1.14	PQL	MG/KG	J (all detects)
SL-285-SA6-SB-4.0-5.0	FLUORIDE	J	0.832	1.05	PQL	MG/KG	J (all detects)
SL-285-SA6-SB-6.0-7.0	Nitrite-NO2	J	1.47	1.60	PQL	MG/KG	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP17-SA6-QC-120111	ANTIMONY	J	0.201	0.211	PQL	MG/KG	J (all detects)
SL-282-SA6-SB-2.5-3.5	THALLIUM	J	0.510	0.546	PQL	MG/KG	J (all detects)
SL-282-SA6-SS-0.0-0.5	SILVER	J	0.0842	0.104	PQL	MG/KG	J (all detects)
	Zirconium	J	3.19	5.19	PQL	MG/KG	
SL-283-SA6-SB-14.0-15.0	ANTIMONY	J	0.144	0.210	PQL	MG/KG	J (all detects)
	SODIUM	J	101	105	PQL	MG/KG	

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING

Reporting Limit Outliers

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-283-SA6-SB-18.0-19.0	ANTIMONY	J	0.150	0.224	PQL	MG/KG	J (all detects)
SL-283-SA6-SB-9.0-10.0	ANTIMONY SODIUM	J J	0.166 95.0	0.206 103	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-14.0-15.0	ANTIMONY SILVER	J J	0.116 0.0552	0.217 0.108	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-15.5-16.5	ANTIMONY	J	0.112	0.220	PQL	MG/KG	J (all detects)
SL-284-SA6-SB-4.0-5.0	ANTIMONY	J	0.134	0.208	PQL	MG/KG	J (all detects)
SL-285-SA6-SB-4.0-5.0	SODIUM	J	86.2	100	PQL	MG/KG	J (all detects)
SL-285-SA6-SB-6.0-7.0	ANTIMONY CADMIUM SELENIUM	J J J	0.107 0.0976 0.209	0.202 0.101 0.404	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-282-SA6-SB-2.5-3.5	EFH(C8-C11) TOTAL EFH(C8-C40)	J J	0.85 0.85	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-283-SA6-SB-14.0-15.0	EFH(C8-C11) TOTAL EFH(C8-C40)	J J	0.70 0.70	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-283-SA6-SB-18.0-19.0	EFH(C8-C11) TOTAL EFH(C8-C40)	J J	0.63 0.63	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-283-SA6-SB-9.0-10.0	EFH(C30-C40) EFH(C8-C11)	J J	0.63 0.98	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-14.0-15.0	EFH(C8-C11) TOTAL EFH(C8-C40)	J J	0.89 0.89	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-15.5-16.5	EFH(C21-C30) EFH(C8-C11)	J J	0.64 0.78	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-4.0-5.0	EFH(C21-C30) TOTAL EFH(C8-C40)	J J	0.60 0.60	1.1 1.1	PQL PQL	MG/KG MG/KG	J (all detects)
SL-284-SA6-SB-9.0-10.0	EFH(C8-C11)	J	0.59	1.1	PQL	MG/KG	J (all detects)
SL-285-SA6-SB-4.0-5.0	EFH(C8-C11) TOTAL EFH(C8-C40)	J J	0.78 0.78	1.0 1.0	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8260B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-285-SA6-SB-7.5	2-BUTANONE (MEK)	J	5.1	9.9	PQL	UG/KG	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 11L003 **Laboratory: EMXT**

EDD Filename: 11L003 **eQAPP Name: CDM_SSFL_111101**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP17-SA6-QC-120111	BENZO(K)FLUORANTHENE CHRYSENE	J J	2.0 3.1	3.7 3.7	PQL PQL	UG/KG UG/KG	J (all detects)
SL-283-SA6-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	J J	11 9.4	18 18	PQL PQL	UG/KG UG/KG	J (all detects)
SL-284-SA6-SB-14.0-15.0	NAPHTHALENE	J	1.1	1.9	PQL	UG/KG	J (all detects)
SL-284-SA6-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	12	18	PQL	UG/KG	J (all detects)
SL-285-SA6-SB-6.0-7.0	BENZO(B)FLUORANTHENE	J	1.0	1.8	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:	November 29 through December 1, 2011
LDC Report Date:	February 23, 2012
Matrix:	Soil/Water
Parameters:	Volatiles
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11L003

Sample Identification

SL-285-SA6-SB-4.5
SL-285-SA6-SB-7.5
TB-113011
EB-SA6-SB-120111

Introduction

This data review covers 2 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK2S	12/1/11	Methylene chloride	2.4 ug/Kg	All soil samples in SDG 11L003

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

Sample TB-113011 was identified as a trip blank. No volatile contaminants were found.

Sample EB-SA6-SB-120111 was identified as an equipment blank. No volatile contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-SA6-SB-120111	12/1/11	Methylene chloride	1.4 ug/L	No associated samples in this SDG

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SB-4.5 SL-285-SA6-SB-7.5 TB-113011 EB-SA6-SB-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B1a

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 2/23/12

SDG #: 11L003

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer: F

2nd Reviewer: A

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: 11/29 – 12/01/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤25
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	*TB = 3 EB = 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	SL-285-SA6-SB-4.5	11	MBLK1W	21		31	
2	SL-285-SA6-SB-7.5	12	MBLK1S	22		32	
3	TB-113011 W	13	MBLK2S	23		33	
4	EB-SA6-SB-120111 W	14	MBLK3S	24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

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?	✓			

DC #: 27103B1c

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: A

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. Dibromomethene	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 #: 27163B1e

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT
2nd Reviewer:

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

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

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

Blank analysis date: 12/01/11
Conc. units: ug/kg Associated Samples: All soils (ND

Compound	Blank ID	Sample Identification								
	MBLK25									
E	2.4									
CRQL										

Blank analysis date:
Conc. units: Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

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

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

LDC #: 27103B/2

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer: A

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

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

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

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

Sampling date: 12/01/11

Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: none

Compound	Blank ID	Sample Identification								
	4									
E	1-4									
CRQL										

Blank units: **Associated sample units:**

Sampling date:

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

Compound	Blank ID	Sample Identification								
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 27103B/a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 7
Reviewer: FT
2nd Reviewer: A

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V001J31	10/31/11	C (1st internal standard)	0.515	0.515	0.461	0.461	7.36	7.36
			V (2nd internal standard)	1.714	1.714	1.767	1.767	3.77	3.77
			JJJ (3rd internal standard)	1.581	1.581	1.561	1.561	2.0	2.0
			(4th internal standard)	(50)	(50)				
2	V003K02	11/02/11	C (1st internal standard)	0.276	0.276	0.281	0.281	2.84	2.84
			V (2nd internal standard)	1.344	1.344	1.391	1.391	10.66	10.66
			JJJ (3rd internal standard)	1.364	1.364	1.391	1.391	8.81	8.81
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

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

LDC #: 27103B/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RLV003	12/2/11	C (1st internal standard)	0.461	0.479	0.479	3.9	3.9
			V (2nd internal standard)	1.767	1.676	1.676	5.1	5.1
			JJJ (3rd internal standard)	1.561	1.543	1.543	1.2	1.2
			(4th internal standard)					
2	RLB022	12/1/11	C (1st internal standard)	0.281	0.274	0.274	2.5	2.5
			V (2nd internal standard)	1.391	1.365	1.365	1.9	1.9
			JJJ (3rd internal standard)	1.391	1.486	1.486	6.8	6.8
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

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

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET

Surrogate Results Verification

Page: [illegible] of [illegible]

Reviewer: FT

2nd reviewer: [illegible]

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: #2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50	46.30	92.6	92.6	0
1,2-Dichloroethane-d4	↓	47.56	95.1	95.1	↓
Toluene-d8	↓	48.35	96.7	96.7	↓
Bromofluorobenzene	↓	55.13	110	110	↓

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 #: 27103B1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: A

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

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

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

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

LCS ID: 301D

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	50.0	50.0	43.8	41.6	88	88	83	83	5	5
Trichloroethene	↓	↓	47.5	44.6	95	95	89	89	6	6
Benzene			46.6	44.8	93	93	90	90	4	4
Toluene			47.2	45.4	94	94	91	91	4	4
Chlorobenzene			48.1	46.5	96	96	93	93	3	3

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

LDC #: 27103B1e

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

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

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

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

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

RRF = Relative response factor of the calibration standard.

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

Df = Dilution factor.

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

Example:

Sample I.D. #2, Acetone

Conc. = $\frac{(97884)(50)(5)}{(2810048)(0.103)(5.34)(0.95)}$ =

17 ug/kg

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

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	November 29 through December 1, 2011
LDC Report Date:	February 23, 2012
Matrix:	Soil/Water
Parameters:	1,4-Dioxane
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11L003

Sample Identification

SL-285-SA6-SB-4.5
SL-285-SA6-SB-7.5
TB-113011
EB-SA6-SB-120111

Introduction

This data review covers 2 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Sample TB-113011 was identified as a trip blank. No 1,4-dioxane was found.

Sample EB-SA6-SB-120111 was identified as an equipment blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SB-4.5 SL-285-SA6-SB-7.5 TB-113011 EB-SA6-SB-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B1b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/28/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

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: 11/29/11 - 12/01/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤20 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 3 EB = 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	SL-285-SA6-SB-4.5	11	MB1K1W	21		31	
2	SL-285-SA6-SB-7.5	12		22		32	
3	TB-113011 W	13		23		33	
4	EB-SA6-SB-120111 W	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

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) $\geq$ 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 at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 27103B16

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 #: 27103B1b

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 (20 std)	Recalculated RRF (20 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	VOF5K03	11/3/11	1,4-Dioxane (1st internal standard)	1.168	1.168	1.231	1.231	13.19	13.19
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)	20	20				
2	VOF5J31	10/31/11	↓ (1st internal standard)	1.163	1.163	1.145	1.145	7.02	7.02
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

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

LDC #: 27103B1b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RLY029	12/6/11	1,4-Dioxane (1st internal standard)	1.231	1.196	1.196	2.8	2.8
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
2	RLY003	12/2/11	↓ (1st internal standard)	1.145	1.133	1.133	1.0	1.0
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

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

Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

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: #2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	20	18.34	91.7	91.70	0
Toluene-d8					
Bromofluorobenzene					

Sample ID:

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

Sample ID:

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

Sample ID:

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

Sample ID:

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

LDC #: 27103B16

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

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

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

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

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

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

LCS ID: lcs ID 8011

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										
1,4-Dioxane	200	200	202	181	101	101	91	91	11	11

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 #: 27102B16

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

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

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

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

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

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

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

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

RRF = Relative response factor of the calibration standard.

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

Df = Dilution factor.

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

Example:

Sample I.D. _____ , _____:

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

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

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-283-SA6-SS-0.0-0.5MS/MSD (SL-283-SA6-SS-0.0-0.5)	Benzidine	0 (10-150)	0 (10-150)	-	J (all detects) R (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

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

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
SVL006WL/WC (All water samples in SDG 11L003)	Fluoranthene	-	-	32 (≤30)	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 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No semivolatiles were detected in any of the samples.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-283-SA6-SS-0.0-0.5	Benzidine	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11L003	EB-SA6-SB-120111	Fluoranthene	J (all detects) UJ (all non-detects)	A	Laboratory control samples (RPD) (E)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B2a **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	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 = 16 | 17
XVII.	Field blanks	ND	EB = 16

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

Validated Samples: soil + water

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21	MBLK1W	31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22	MBLK2S	32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23	MBLK2S	33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

LDC #: 27103B2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

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

LDC #: 27103B2a

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 #: 27103B2q

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: [illegible]

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

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

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		1	TBP	40.6 (45-130)	no qual
				( )	
		5	↓	43.8 (↓)	↓
				( )	
		9	↓	44.8 (↓)	↓
				( )	
		10	↓	43.2 (↓)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116
S3 (TPH) = Terphenyl-d14	18-137	33-141
S4 (PHL) = Phenol-d5	24-113	10-94
S5 (2FP)= 2-Fluorophenol	25-121	21-100
S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 27163B2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

Y N N/A 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
		18 + 19	SSS	0 (10-150)	0 (10-150)	( )	#6	J/R/A (Q)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC #: 27103B22

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

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

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

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

Y N N/A Was a LCS required?

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

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		SYL006WL/WC	YY	( )	3 ( )	32 (30)	All water	J/UJ/P (E)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 27103B2a

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 (X std)	Recalculated RRF (X std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	SVE7k16	11/16/11	Phenol (1st internal standard)	1.301	1.301	1.321	1.321	2.99	2.99
			Naphthalene (2nd internal standard)	0.962	0.962	0.980	0.980	3.20	3.20
			Fluorene (3rd internal standard)	1.331	1.331	1.344	1.344	3.24	3.24
			Pentachlorophenol (4th internal standard)	0.160	0.160	0.150	0.150	11.45	11.45
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.388	0.388	0.384	0.384	6.21	6.21
			Benzo(a)pyrene (6th internal standard)	1.034	1.034	1.040	1.041	2.78	2.78
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 #: 27103B29

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	RLH003	12/12/11	Phenol (1st internal standard)	1.321	1.249	1.249	5.5	5.5
			Naphthalene (2nd internal standard)	0.980	0.957	0.957	2.3	2.3
			Fluorene (3rd internal standard)	1.344	1.314	1.314	2.2	2.2
			Pentachlorophenol (4th internal standard)	0.150	0.140	0.140	6.7	6.7
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.695	0.631	0.631	9.2	9.2
			Benzo(a)pyrene (6th internal standard)	1.040	1.011	1.011	2.8	2.8
2	RLH041	12/13/11	Phenol (1st internal standard)		1.314	1.314	0.5	0.5
			Naphthalene (2nd internal standard)		0.960	0.960	2.0	2.0
			Fluorene (3rd internal standard)		1.332	1.332	0.9	0.9
			Pentachlorophenol (4th internal standard)		0.157	0.157	4.7	4.7
			Bis(2-ethylhexyl)phthalate (5th internal standard)		0.692	0.692	0.4	0.4
			Benzo(a)pyrene (6th internal standard)		1.045	1.045	0.5	0.5
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

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

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 17 2X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	2.99	59.8	59.8	0
2-Fluorobiphenyl	↓	3.43	68.5	68.5	
Terphenyl-d14	↓	4.55	90.9	90.9	↓
Phenol-d5	30	9.64	64.3	64.3	↓
2-Fluorophenol	↓	9.35	62.3	62.3	↓
2,4,6-Tribromophenol	↓	11.21	74.7	74.7	↓
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 #: 27103B29

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 = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 18 + 19

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	713	713	ND	607	564	85	85	79	79	7	7
N-Nitroso-di-n-propylamine	↓	↓	↓	616	554	86	86	78	78	11	11
4-Chloro-3-methylphenol				652	649	91	91	91	91	0	0
Acenaphthene				663	626	93	93	88	88	6	6
Pentachlorophenol				627	641	88	88	90	90	2	2
Pyrene	↓	↓	↓	729	737	102	102	103	103	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 #: 27103B29

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

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

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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: SVL0105L/SC

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	667	667	307	324	46	46	49	49	5	5
N-Nitroso-di-n-propylamine	↓	↓	287	303	43	43	45	45	5	5
4-Chloro-3-methylphenol			327	363	49	49	54	54	10	10
Acenaphthene			373	402	56	56	60	60	7	7
Pentachlorophenol			550	612	82	82	92	92	11	11
Pyrene			610	664	92	92	100	100	8	8

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 #: 27103B2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

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

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

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

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____ , _____:

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

= ND

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

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

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 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Bis(2-ethylhexyl)phthalate	37U	47	200 (≤50)	J (all detects) UJ (all non-detects)	A
Di-n-butylphthalate	37U	79	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(a)anthracene	3.7U	4.7	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(a)pyrene	3.7U	5.1	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(b)fluoranthene	3.7U	9.7	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(g,h,i)perylene	3.7U	14	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(k)fluoranthene	3.7U	2.0	200 (≤50)	J (all detects) UJ (all non-detects)	A
Chrysene	3.7U	3.1	200 (≤50)	J (all detects) UJ (all non-detects)	A
Dibenzo(a,h)anthracene	3.7U	4.6	200 (≤50)	J (all detects) UJ (all non-detects)	A
Fluoranthene	3.7U	5.4	200 (≤50)	J (all detects) UJ (all non-detects)	A
Indeno(1,2,3-cd)pyrene	3.7U	3.9	200 (≤50)	J (all detects) UJ (all non-detects)	A
Pyrene	3.7U	5.5	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 DUP17-SA6-QC-120111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11L003	SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	Bis(2-ethylhexyl)phthalate Di-n-butylphthalate Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Pyrene	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

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: 11/29 - 12/01/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30 r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	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	SW	D = 11, 16
XVII.	Field blanks	N	

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

Validated Samples: SOIL

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21	MBLK1S	31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22	MBLK2S	32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23		33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	DUP17-SA6-QC-120111	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	SL-283-SA6-SS-0.0-0.5MS	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MSD	28		38	
9	SL-283-SA6-SB-14.0-15.0	19		29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

LDC #: 27103B2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

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

LDC #: 27103B2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

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

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

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

LDC#: 27103B2b **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: F7
2nd Reviewer: A

METHOD: GC/MS PAH (EPA SW 846 Method 8270D-SIM)

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

Compound	Concentration (ug/kg)		≤50 RPD	
	11	16		
Bis(2-ethylhexyl)phthalte	37U	47	200	J/UJ/A
Di-n-butylphthalate	37U	79	200	
Benzo(a)anthracene	3.7U	4.7	200	
Benzo(a)pyrene	3.7U	5.1	200	
Benzo(b)fluoranthene	3.7U	9.7	200	
Benzo(g,h,i)perylene	3.7U	14	200	
Benzo(k)fluoranthene	3.7U	2.0	200	
Chrysene	3.7U	3.1	200	
Dibenzo(a,h)anthracene	3.7U	4.6	200	
Fluoranthene	3.7U	5.4	200	
Indeno(1,2,3-cd)pyrene	3.7U	3.9	200	
Pyrene	3.7U	5.5	200	↓

LDC #: 27103B2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	SVE7F165	11/16/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	3.839	3.839	3.661	3.661	4.30	4.30
			~~Fluorene~~ PYRENE (3rd internal standard)	1.26	1.26	1.161	1.161	7.30	7.30
			~~Pentachlorophenol~~ Benzo(a)pyrene (4th internal standard)	1.070	1.070	0.942	0.942	12.43	12.43
			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 #: 27103B2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
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	RLH003	12/12/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.661	3.460	3.460	5.5	5.5
			~~Fluorene~~ Pyrene (3rd internal standard)	1.161	1.190	1.190	2.5	2.5
			~~Pentachlorophenol~~ Benzo(a)pyrene (4th internal standard)	0.942	0.995	0.995	5.6	5.6
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	RLH041	12/13/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	↓	3.487	3.487	4.8	4.8
			~~Fluorene~~ Pyrene (3rd internal standard)		1.169	1.169	0.7	0.7
			~~Pentachlorophenol~~ Benzo(a) Pyrene (4th internal standard)		1.032	1.032	9.6	9.6
			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 #: 71038B4 v

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #3

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	5.0	50.0	50.0	0
2-Fluorobiphenyl	↓	4.92	49.2	49.2	↓
Terphenyl-d14	↓	10.15	101	101	↓
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 27103132b

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: 17 + 18

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/Kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	356	356	ND	269	295	75	75	83	83	9	9
Pentachlorophenol											
Pyrene	↓	↓	ND	334	389	94	94	109	109	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 #: 27103326

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: 1015/D (MB1415)

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	333	333	245	256	74	74	86	86	15	15
Pentachlorophenol										
Pyrene	↓	↓	332	340	100	100	102	102	3	3

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 #: 27103B2J

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. #3, Benzo(b)fluoranthene

Conc. = $\frac{(1127)(40)(1)(100)}{(158549)(0.99)(30.1)(0.939)}$

= 1.01 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: November 29 through December 1, 2011

LDC Report Date: February 24, 2012

Matrix: Soil/Water

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SS-0.0-0.5DL
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SS-0.0-0.5DL
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SS-0.0-0.5DL
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SS-0.0-0.5DL
SL-284-SA6-SB-15.5-16.5
SL-284-SA6-SB-15.5-16.5DL
EB-SA6-SB-120111
DUP17-SA6-QC-120111
DUP17-SA6-QC-120111DL
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 14 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

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
12/8/11	SL07025A	RTX-CLPI	4,4'-DDT Methoxychlor	22 24	All water samples in SDG 11L003	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
12/13/11	ML13004A	RTX-CLPI	alpha-BHC gamma-BHC beta-BHC delta-BHC	29 27 24 27	SL-284-SA6-SB-15.5-16.5 MBLK1S	J (all detects) UJ (all non-detects)	A
12/13/11	ML13004A	RTX-CLPII	Methoxychlor	22	SL-284-SA6-SB-15.5-16.5 MBLK1S	J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
12/13/11	ML13013A	RTX-CLPI	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide 4,4'-DDE Dieldrin Endrin 4,4'-DDD 4,4'-DDT Methoxychlor	37 34 33 40 27 25 22 25 22 27 30 25 24	SL-285-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	J (all detects) UJ (all non-detects)	P
12/13/11	ML13013B	RTX-CLPII	Methoxychlor	30	SL-285-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	J (all detects) UJ (all non-detects)	A
12/15/11	ML15004A	RTX-CLPI	alpha-BHC gamma-BHC delta-BHC	24 22 22	SL-285-SA6-SS-0.0-0.5DL SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5DL SL-284-SA6-SB-15.5-16.5DL DUP17-SA6-QC-120111DL SL-283-SA6-SS-0.0-0.5MS SL-283-SA6-SS-0.0-0.5MSD	J (all detects) UJ (all non-detects)	A
12/15/11	ML15004A	RTX-CLPII	Methoxychlor	21	SL-285-SA6-SS-0.0-0.5DL SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5DL SL-284-SA6-SB-15.5-16.5DL DUP17-SA6-QC-120111DL SL-283-SA6-SS-0.0-0.5MS SL-283-SA6-SS-0.0-0.5MSD	J (all detects) UJ (all non-detects)	A

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

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

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

V. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No chlorinated pesticide contaminants were found.

VI. Surrogate Spikes

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-285-SA6-SS-0.0-0.5	RTX-CLPESTII	Tetrachloro-m-xylene	137 (50-130)	All TCL compounds	J (all detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

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

Sample	Compound	RPD	Flag	A or P
SL-285-SA6-SS-0.0-0.5	Heptachlor epoxide Dieldrin 4,4'-DDT Mirex	86 82 90 108	J (all detects) J (all detects) J (all detects) J (all detects)	A
SL-285-SA6-SS-0.0-0.5DL	Dieldrin 4,4'-DDT	44 86	J (all detects) J (all detects)	A
SL-282-SA6-SS-0.0-0.5	4,4'-DDT	44	J (all detects)	A
SL-282-SA6-SS-0.0-0.5DL	4,4'-DDT	52	J (all detects)	A
SL-283-SA6-SS-0.0-0.5DL	4,4'-DDT	92	J (all detects)	A
SL-284-SA6-SS-0.0-0.5	4,4'-DDT	140	J (all detects)	A
SL-284-SA6-SS-0.0-0.5DL	4,4'-DDT	48	J (all detects)	A
DUP17-SA6-QC-120111	4,4'-DDT	44	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
SL-285-SA6-SS-0.0-0.5	Dieldrin 4,4'-DDT	R R	A
SL-285-SA6-SS-0.0-0.5DL	All TCL compounds except Dieldrin 4,4'-DDT	R	A
SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	4,4'-DDT	R	A

Sample	Compound	Flag	A or P
SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5DL DUP17-SA6-QC-120111DL	All TCL compounds except 4,4'-DDT	R	A
SL-284-SA6-SB-15.5-16.5DL	All TCL compounds	R	A

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

XV. Field Duplicates

Samples SL-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 and samples SL-284-SA6-SS-0.0-0.5DL and DUP17-SA6-QC-120111DL were identified as field duplicates. No chlorinated pesticides were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
4,4'-DDT	3.3	2.2	40 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5DL	DUP17-SA6-QC-120111DL			
4,4'-DDT	3.6	2.6	32 (≤50)	-	-

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	EB-SA6-SB-120111	4,4'-DDT Methoxychlor	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
11L003	SL-284-SA6-SB-15.5-16.5	alpha-BHC gamma-BHC beta-BHC delta-BHC Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
11L003	SL-285-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	alpha-BHC gamma-BHC beta-BHC delta-BHC Heptachlor Aldrin Heptachlor epoxide 4,4'-DDE Dieldrin Endrin 4,4'-DDD 4,4'-DDT Methoxychlor	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D) (C)
11L003	SL-285-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
11L003	SL-285-SA6-SS-0.0-0.5DL SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5DL SL-284-SA6-SB-15.5-16.5DL DUP17-SA6-QC-120111DL	alpha-BHC gamma-BHC delta-BHC Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
11L003	SL-285-SA6-SS-0.0-0.5	All TCL compounds	J (all detects)	A	Surrogate spikes (%R) (S)
11L003	SL-285-SA6-SS-0.0-0.5	Heptachlor epoxide Dieldrin 4,4'-DDT Mirex	J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
11L003	SL-285-SA6-SS-0.0-0.5DL	Dieldrin 4,4'-DDT	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
11L003	SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5DL DUP17-SA6-QC-120111	4,4'-DDT	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SS-0.0-0.5DL SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5DL SL-284-SA6-SB-15.5-16.5 SL-284-SA6-SB-15.5-16.5DL EB-SA6-SB-120111 DUP17-SA6-QC-120111 DUP17-SA6-QC-120111DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11L003	SL-285-SA6-SS-0.0-0.5	Dieldrin 4,4'-DDT	R R	A	Overall assessment of data
11L003	SL-285-SA6-SS-0.0-0.5DL	All TCL compounds except Dieldrin 4,4'-DDT	R	A	Overall assessment of data
11L003	SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	4,4'-DDT	R	A	Overall assessment of data
11L003	SL-282-SA6-SS-0.0-0.5DL SL-283-SA6-SS-0.0-0.5DL SL-284-SA6-SS-0.0-0.5DL DUP17-SA6-QC-120111DL	All TCL compounds except 4,4'-DDT	R	A	Overall assessment of data
11L003	SL-284-SA6-SB-15.5-16.5DL	All TCL compounds	R	A	Overall assessment of data

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B3a

SDG #: 11L003

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 2/24/12

Page: 1 of 1

Reviewer: F

2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29/11 – 12/01/11
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	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	SW	
XV.	Field duplicates	SW	D = 7 + 12 8 + 13
XVI.	Field blanks	ND	EB = 11

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

Validated Samples: soil & water

1	SL-285-SA6-SS-0.0-0.5	11	EB-SA6-SB-120111 W1	21	MBLKIW	31	
2	SL-285-SA6-SS-0.0-0.5DL	12	DUP17-SA6-QC-120111 D	22	MBLKIS	32	
3	SL-282-SA6-SS-0.0-0.5	13	DUP17-SA6-QC-120111DL D1	23		33	
4	SL-282-SA6-SS-0.0-0.5DL	14	SL-283-SA6-SS-0.0-0.5MS	24		34	
5	SL-283-SA6-SS-0.0-0.5	15	SL-283-SA6-SS-0.0-0.5MSD	25		35	
6	SL-283-SA6-SS-0.0-0.5DL	16		26		36	
7	SL-284-SA6-SS-0.0-0.5 D	17		27		37	
8	SL-284-SA6-SS-0.0-0.5DL D1	18		28		38	
9	SL-284-SA6-SB-15.5-16.5	19		29		39	
10	SL-284-SA6-SB-15.5-16.5DL	20		30		40	

Notes:

LDC #: 27103B3a
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: EM
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) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ___%D or ___%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns ≤ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ ~~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 #: 27103B3a
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. Mirex	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 27102B3a

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
	12/8/11	SL070x5A	RTX CLP I	O	22	( )	All water	J/UJ/A (C)
				P	24	( )	↓	↓
						( )		
						( )		
	12/13/11	ML13004A	RTX CLP I	A	29	( )	MBLK1S, 9	
				D	27	( )	↓	↓
				B	24	( )		
				C	27	( )		
			RTX CLP II	P	22	( )	↓	↓
						( )		
						( )		
	12/13/11	ML13013A	RTX CLP I	A	37	( )	1, 3, 5, 7, ~~9~~ 12, ~~13~~	J/UJ/A (C)
				D	34	( )	↓	↓
				B	33	( )		
				C	40	( )		
				E	27	( )		
				F	25	( )		
				G	22	( )		
				~~H~~ J	25	( )		
				I	22	( )		
				K	27	( )		
				M	30	( )		
				O	25	( )		
				P	24	( )	↓	↓

LDC #: 27103B3a

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
	12/13/11	ML13013B	RTX-CLP2	P	30	( )	1, 3, 5, 7, 1~~3~~ 9	J/UJ/A(C)
						( )	12	
						( )		
						( )		
	12/15/11	ML15004A	RTX-CLP1	A	24	( )	2, 4, 6, 8, ~~13~~ 10	J/UJ/A(C)
				D	22	( )	13, 14, 15	
				C	22	( )	↓	↓
			RTX-CLP2	P	21	( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
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						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 27163B3a

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: [signature]

METHOD: ✓ GC __ HPLC
Are surrogates required by the method? Yes___ or No___.
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Were surrogates spiked into all samples and blanks?
Y (N) N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	1	RTX-CLPEST II	Y	137 (50-130)	J/A det (s)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 27103B3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC / HPLC

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

Level IV/D Only

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

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

#	Compound Name	%RPD Bet 2 column Finding ≤40	Associated Samples	Qualifications
	G	86	1	J/A dit * XIII
	I	82		
	θ	90		
	EE	108		
	I	44	2	
	θ	86		
	θ	44	3	
	θ	52	4	
	θ	92	6	
	θ	140	7	

Comments: See sample calculation verification worksheet for recalculations

LDC #: 27103B3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer:

METHOD: GC / HPLC

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

Level IV/D Only

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

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

#	Compound Name	% RPD Bet 2 col Finding ≤40	Associated Samples	Qualifications
	a	48	8	J/A * XIII
	a	44	12	↓ ↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 27/03B3a

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

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".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	I, O	lower Result, SS out	1	R/A *SIV
	all except I, O	diluted	2	R/A
	O	lower result	3, 5, 7, 12	R/A
	all except O	diluted	4, 6, 8, 13	R/A
	All TCL	diluted	10	R/A

Comments: _____

LDC #: 27103B3c

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC __ HPLC

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

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

Compound	Concentration (ng/kg)		%RPD Limit ≤50	Qualification Parent only / All Samples
	7	12		
θ	3.3	2.2	40	

Compound	Concentration (ng/kg)		%RPD Limit ≤50	Qualification Parent only / All Samples
	8	13		
θ	3.6	2.6	32	

LDC #: 27103B3a
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JMG
2nd Reviewer: [signature]

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (10/10 std)	Recalculated CF (10/10 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/30/11	endosulfan I RTX CVP I	26602	26602	26808.5	26808.5	7.0	7.0
			methoxychlor	7068	7068	6762.5	6762.5	9.1	9.1
2			↓ RTX CVP II	40103	40103	39508.3	39508.3	8.7	8.7
			↓	10694	10694	11056.2	11056.2	19.9	19.9
3	ICAL	9/01/11	↓	518720	518720	529187.4	529187.4	4.9	4.9
			↓	24443	24443	25324.8	25324.8	8.9	8.9
4			↓	342811	342811	364223.3	364223.3	9.3	9.3
			↓	135020	135020	138569.5	138569.5	9.6	9.6

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 #: 27103B3c
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	SL070xA	12/8/11	endosulfan I RTX cvP1	20.0	19.03	19.03	5	5
			methoxychlor	200.0	248.08	248.08	24	24
			RTX cvP2		18.41	18.41	8	8
2			↓	↓	207.27	207.27	4	4
	ML1300fA	12/13/11	↓	20.0	21.22	21.22	6	6
			↓	200.0	230.50	230.50	15	15
3			↓	↓	21.16	21.16	6	6
			↓	↓	244.20	244.20	22	22
	ML13013A	12/13/11	↓	20	23.48	23.48	17	17
4			↓	200.0	247.05	247.05	24	24
			↓	20	21.85	21.85	9	9
			↓	200	259.97	259.97	30	30

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 #: 27103B3c
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [signature]

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	ML150047A	12/15/11	endosulfan I RTX CVP 1	20	20.08	20.08	0	0
			methoxychlor ↓	2000	232.09	232.09	16	16
			RTX CVP 2		18.76	18.76	6	6
2			↓	↓	242.82	242.82	21	21
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 #: 0 1105B0 \
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of ___
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	CLP II	40	54.94	137	137	0
Decachlorobiphenyl	CLP I	↓	44.24	111	111	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 #: 27103B39
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: 1
2nd Reviewer: 8

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

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

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

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

RPD = I MS - MSD I * 2/(MS + MSD)

MS = Matrix spike percent recovery
MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 14 + 15

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC	2.86	2.86	ND	2.75	2.55	96	96	89	89	8	8
4,4'-DDT	↓	↓	6.2	10	8.86	133	133	93	93	12	12

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

LDC #: 27103133
SDG #: all cover

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

Page: 6 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

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

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

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

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

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

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

LCS/LCSD samples: LCS ID 8011

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	2.67	2.67	2.83	2.95	106	106	110	110	4	4
4,4'-DDT	~~3.32~~ ↓	↓	3.32	3.42	124	124	128	128	3	3

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

LDC #: 27103B39
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [signature]
2nd reviewer: [signature]

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 Dieldrin

$$\text{Conc.} = \frac{(6765698)(4)}{(388069.1)(30.1)(0.937)}$$

=

2.5 ug/kg

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

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 24, 2012

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

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

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

V. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

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

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 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No polychlorinated biphenyl contaminants were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Aroclor-1260	4.6	20	125 (≤50)	J (all detects)	A
Aroclor-5460	9.4	6.3	39 (≤50)	-	-

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
11L003	SL-284-SA6-SS-0.0-0.5 DUP17-SA6-QC-120111	Aroclor-1260	J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B3b

VALIDATION COMPLETENESS WORKSHEET

SDG #: 11L003

Level IV

Laboratory: EMAX Laboratories, Inc.

Date: 2/24/12

Page: 1 of 1

Reviewer: D

2nd Reviewer: A

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29/11 - 12/01/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	%D RSD ≤ 20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 11, 17
XVI.	Field blanks	ND	EB = 16

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

Validated Samples: Soil

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21		31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22		32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23		33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

Notes: _____

LDC #: 27103B3b
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

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

LDC #: 27103B3b
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 #: 27103B3b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer: C

METHOD: ✓ GC __ HPLC

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

Compound	Concentration (ug/kg)		%RPD Limit ≤50	Qualification Parent only / All Samples
	11	17		
Aroclor ~~BB~~ 1260	4.6	20	125	J/A dut (FD)
Aroclor 5460	9.4	6.3	39	—

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

LDC #: 27103B3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (20 std)	Recalculated CF (20 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	09/01/11	PCB 1260-1 ZB-1	509805	509805	4706.103	4706.103	9.9	9.9
			ZB-2	17519	17519	16502.1	16502.1	18.3	18.3
2									
3									
4									

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

LDC #: 27103B3b
SDG #: pw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	KL07002A	12/7/11	PCB 1260 ZB-1	500.0	426.056	426.056	15	15
			ZB-2	500.0	429.349	429.349	14	14
2	KL09002A	12/09/11	↓	↓	452.361	452.361	10	10
					435.045	435.045	13	13
3	KL09018A	12/10/11	↓	↓	462.665	462.665	7	7
					423.310	423.310	15	15
4	KL12002A	12/12/11	↓	↓	516.382	516.382	3	3
					494.879	494.879	1	1

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

LDC #: 27103B36
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: 4

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
DCB	RTX CLP1	40	33.39	83.5	83.5	0
TCMX	↓	↓	39.25	98.1	98.1	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 #: 21105B35
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: ✓ GC __HPLC

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 18 + 19

Compound	Spike Added (ug/kg)		Sample Conc (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Aroclor 1260	71.3	71.3	ND	69.6	67.0	98	98	94	94	4	4

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

LDC #: 27103B3b
SDG #: see cover

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

Reviewer: F2
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: 1265/0 soil

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Aroclor 1260	66.7	66.7	70.6	72.4	106	106	109	109	3	3

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

LDC #: 27103133b
SDG #: pu cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

$$\text{Concentration} = \frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$$

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. #4 Compound Name Aroclor 1260

final Concentration = $\frac{85.96\ (4)}{(30)\ (0.944)}$

= 12 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	1260-1 = 354159 / 165002.1	= 21.46	1260-1 =	21.46	
			2 =	15.39	
			3 =	31.42	
			4 =	7.95	
			5 =	9.74	
				85.96	

Comments: ______

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 14, 2012

Matrix: Soil/Water

Parameters: Metals

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003/11L011

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020, 7470A, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

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

III. Calibration

An initial calibration was performed.

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

IV. Blanks

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

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Thallium	0.215 ug/L	All soil samples in SDG 11L003/11L011
ICB/CCB	Thallium	0.215 ug/L	All water samples in SDG 11L003/11L011

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-285-SA6-SS-0.0-0.5	Thallium	0.234 mg/Kg	0.234U mg/Kg
SL-285-SA6-SB-4.0-5.0	Thallium	0.221 mg/Kg	0.221U mg/Kg
SL-285-SA6-SB-6.0-7.0	Thallium	0.222 mg/Kg	0.222U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-282-SA6-SS-0.0-0.5	Thallium	0.210 mg/Kg	0.210U mg/Kg
SL-282-SA6-SB-2.5-3.5	Thallium	0.528 mg/Kg	0.528U mg/Kg
SL-283-SA6-SS-0.0-0.5	Thallium	0.388 mg/Kg	0.388U mg/Kg
SL-283-SA6-SB-4.0-5.0	Thallium	0.253 mg/Kg	0.253U mg/Kg
SL-283-SA6-SB-9.0-10.0	Thallium	0.255 mg/Kg	0.255U mg/Kg
SL-283-SA6-SB-14.0-15.0	Thallium	0.241 mg/Kg	0.241U mg/Kg
SL-283-SA6-SB-18.0-19.0	Thallium	0.218 mg/Kg	0.218U mg/Kg
SL-284-SA6-SS-0.0-0.5	Thallium	0.215 mg/Kg	0.215U mg/Kg
SL-284-SA6-SB-4.0-5.0	Thallium	0.235 mg/Kg	0.235U mg/Kg
SL-284-SA6-SB-9.0-10.0	Thallium	0.204 mg/Kg	0.204U mg/Kg
SL-284-SA6-SB-14.0-15.0	Thallium	0.247 mg/Kg	0.247U mg/Kg
SL-284-SA6-SB-15.5-16.5	Thallium	0.217 mg/Kg	0.217U mg/Kg
DUP17-SA6-QC-120111	Thallium	0.248 mg/Kg	0.248U mg/Kg

Sample EB-SA6-SB-120111 was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-SA6-SB-120111	12/1/11	Aluminum Copper	0.0254 mg/L 0.000858 mg/L	SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SB-15.5-16.5 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 DUP17-SA6-QC-120111

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-283-SA6-SS-0.0-0.5MS/MSD (All soil samples in SDG 11L003/11L011)	Antimony Barium Chromium Nickel	67 (75-125) 66 (75-125) - -	67 (75-125) 72 (75-125) - -	- - 43 (≤20) 43 (≤20)	J (all detects) UJ (all non-detects)	A
SL-283-SA6-SS-0.0-0.5MS/MSD (All soil samples in SDG 11L003/11L011)	Chromium Nickel	- -	172 (75-125) 155 (75-125)	- -	J (all detects) J (all detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

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

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
SL-285-SA6-SS-0.0-0.5	Scandium^{45} (Tune 1)	121.0 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
SL-285-SA6-SB-4.0-5.0	Scandium^{45} (Tune 1)	123.5 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-285-SA6-SB-6.0-7.0	Scandium^{45} (Tune 1)	120.2 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-282-SA6-SS-0.0-0.5	Scandium^{45} (Tune 1)	120.2 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-282-SA6-SB-2.5-3.5	Scandium^{45} (Tune 1) Scandium^{45} (Tune 2)	122.9 (30-120) 123.0 (30-120)	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-283-SA6-SB-4.0-5.0	Scandium^{45} (Tune 1)	121.2 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-283-SA6-SB-9.0-10.0	Scandium^{45} (Tune 1)	122.0 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-283-SA6-SB-18.0-19.0	Scandium^{45} (Tune 1) Scandium^{45} (Tune 2)	121.4 (30-120) 120.2 (30-120)	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-284-SA6-SS-0.0-0.5	Scandium^{45} (Tune 1)	122.0 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-284-SA6-SB-4.0-5.0	Scandium^{45} (Tune 1)	122.4 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P
SL-284-SA6-SB-9.0-10.0	Scandium^{45} (Tune 1)	120.2 (30-120)	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11L003/11L011	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 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-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Aluminum	10500	10300	2 (≤50)	-	-
Antimony	0.271	0.201	30 (≤50)	-	-
Arsenic	3.90	3.58	9 (≤50)	-	-
Barium	87.1	75.3	15 (≤50)	-	-
Beryllium	0.465	0.462	1 (≤50)	-	-
Cadmium	0.327	0.269	19 (≤50)	-	-
Calcium	5000	3790	28 (≤50)	-	-
Chromium	15.5	14.7	5 (≤50)	-	-
Cobalt	5.05	5.19	3 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Copper	9.88	8.21	18 (≤50)	-	-
Iron	18300	17500	4 (≤50)	-	-
Lead	10.3	15.6	41 (≤50)	-	-
Magnesium	3960	3920	1 (≤50)	-	-
Manganese	238	252	6 (≤50)	-	-
Molybdenum	2.55	1.92	28 (≤50)	-	-
Nickel	9.60	9.28	3 (≤50)	-	-
Potassium	2460	2370	4 (≤50)	-	-
Selenium	0.609	0.469	26 (≤50)	-	-
Sodium	179	211	16 (≤50)	-	-
Strontium	27.2	23.7	14 (≤50)	-	-
Thallium	0.215	0.248	14 (≤50)	-	-
Titanium	775	812	5 (≤50)	-	-
Vanadium	31.6	30.2	5 (≤50)	-	-
Zinc	93.2	102	9 (≤50)	-	-
Lithium	18.5	19.3	4 (≤50)	-	-
Phosphorus	470	364	25 (≤50)	-	-
Mercury	2.85	1.75	48 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG 11L003/11L011

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 DUP17-SA6-QC-120111	Antimony Barium	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 DUP17-SA6-QC-120111	Chromium Nickel	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (RPD) (E)
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 DUP17-SA6-QC-120111	Chromium Nickel	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0	Sodium Calcium Iron	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (*IX)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11L003/ 11L011	SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SB-18.0-19.0	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (*IX)
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG 11L003/11L011

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
11L003/ 11L011	SL-285-SA6-SS-0.0-0.5	Thallium	0.234U mg/Kg	A	B
11L003/ 11L011	SL-285-SA6-SB-4.0-5.0	Thallium	0.221U mg/Kg	A	B
11L003/ 11L011	SL-285-SA6-SB-6.0-7.0	Thallium	0.222U mg/Kg	A	B
11L003/ 11L011	SL-282-SA6-SS-0.0-0.5	Thallium	0.210U mg/Kg	A	B
11L003/ 11L011	SL-282-SA6-SB-2.5-3.5	Thallium	0.528U mg/Kg	A	B
11L003/ 11L011	SL-283-SA6-SS-0.0-0.5	Thallium	0.388U mg/Kg	A	B
11L003/ 11L011	SL-283-SA6-SB-4.0-5.0	Thallium	0.253U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
11L003/ 11L011	SL-283-SA6-SB-9.0-10.0	Thallium	0.255U mg/Kg	A	B
11L003/ 11L011	SL-283-SA6-SB-14.0-15.0	Thallium	0.241U mg/Kg	A	B
11L003/ 11L011	SL-283-SA6-SB-18.0-19.0	Thallium	0.218U mg/Kg	A	B
11L003/ 11L011	SL-284-SA6-SS-0.0-0.5	Thallium	0.215U mg/Kg	A	B
11L003/ 11L011	SL-284-SA6-SB-4.0-5.0	Thallium	0.235U mg/Kg	A	B
11L003/ 11L011	SL-284-SA6-SB-9.0-10.0	Thallium	0.204U mg/Kg	A	B
11L003/ 11L011	SL-284-SA6-SB-14.0-15.0	Thallium	0.247U mg/Kg	A	B
11L003/ 11L011	SL-284-SA6-SB-15.5-16.5	Thallium	0.217U mg/Kg	A	B
11L003/ 11L011	DUP17-SA6-QC-120111	Thallium	0.248U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG 11L003/11L011

No Sample Data Qualified in this SDG

LDC #: 27103B4 **VALIDATION COMPLETENESS WORKSHEET** Date: 2-14-12

SDG #: 11L003 ~~1L042~~ / 11L011 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: 02

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method ~~6010B~~/6020~~A~~/~~7000~~ 7470A/7471A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29-12/1/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	SW	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(11,17)
XV	Field Blanks	SW	EB=16

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

Validated Samples: soil/water

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21		31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22		32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23		33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

Notes:

LDC #: 27103B4

VALIDATION FINDINGS CHECKLIST

Reviewer: GR
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?	✓			

LDC #: 22603B4

VALIDATION FINDINGS CHECKLIST

Reviewer: ER
2nd Reviewer: L

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 #: 27103B4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

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

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-17		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
QC18,19		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
Analysis Method		
ICP		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
ICP-MS		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr

Comments: Mercury by CVAA if performed

LDC #: 27103B4

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 10xdil
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17
Tl			0.215	1.075	0.234	0.221	0.222	0.210	0.528	0.388	0.253	0.255	0.241	0.218	0.215	0.235	0.204	0.247	0.217	0.248

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
Tl			0.215	1.075										

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 #: 27103B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)
Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/1/11 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: 4-15, 17

Analyte	Blank ID	Sample Identification										
	16	Action Level	No Qualifiers									
Al	0.0254	12.7										
Cu	0.000858	0.429										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27103B4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: SR
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
	18/19	S	Sb	67	67		All Soil	J/UJ/A (Q)
			Ba	66	72			↓ ↓
			Cr		172			Jdet/A (Q)
			Cr			43		J/UJ/A (E)
			Ni		155			Jdet/A (Q)
			Ni			43		J/UJ/A (E)

Comments:

LDC #: 27103B4

VALIDATION FINDINGS WORKSHEET
Internal Standards (ICP-MS)

Page: 1 of 1
Reviewer: CR
2nd Reviewer:

METHOD: Metals (EPA Method 200.8/6020)

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

(Y) N N/A Were all internal standard percent recoveries within 60-125% (200.8) or 30-120% (6020) of the intensity of the internal standard in the initial calibration standard ?

Y (N) N/A If the response to the above question is no, were the samples reanalyzed as required ?

#	Date	Internal Standard	Associated Metals	%R (Limits)	Associated Samples	Qualifications
		Scandium 45 (Tune1)	Na, Ca, Fe	121.0 (30-120)	1	J/UJ/P (*1X)
				123.5	2	
				120.2	3	
				120.2	4	
				122.9	5	
		(Tune2)	K, V, Cr, Ni, Cu	123.0	5	
		(Tune1)	Na, Ca, Fe	121.2	7	
				122.0	8	
				121.4	10	
		(Tune2)	K, V, Cr, Ni, Cu	120.2	10	
		(Tune1)	Na, Ca, Fe	122.0	11	
				122.4	12	
				120.2	13	

LDC#: 27103B4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: CV
2nd Reviewer: V

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	11	17		
Aluminum	10500	10300	2	
Antimony	0.271	0.201	30	
Arsenic	3.90	3.58	9	
Barium	87.1	75.3	15	
Beryllium	0.465	0.462	1	
Cadmium	0.327	0.269	19	
Calcium	5000	3790	28	
Chromium	15.5	14.7	5	
Cobalt	5.05	5.19	3	
Copper	9.88	8.21	18	
Iron	18300	17500	4	
Lead	10.3	15.6	41	
Magnesium	3960	3920	1	
Manganese	238	252	6	
Molybdenum	2.55	1.92	28	
Nickel	9.60	9.28	3	
Potassium	2460	2370	4	
Selenium	0.609	0.469	26	
Sodium	179	211	16	

LDC#: 27103B4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualify Parents Only
	11	17		
Strontium	27.2	23.7	14	
Thallium	0.215	0.248	14	
Titanium	775	812	5	
Vanadium	31.6	30.2	5	
Zinc	93.2	102	9	
Lithium	18.5	19.3	4	
Phosphorus	470	364	25	
Mercury	2.85	1.75	48	

LDC #: 27103B4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: L

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

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

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
ICV	ICP/MS (Initial calibration)	Co	29.34	30	98	98	Y
↓	CVAA (Initial calibration)	Hg	2.08	2	104	-	↓
	ICP (Continuing calibration)						
CCV4	ICP/MS (Continuing calibration)	Sn	24.66	25	99	99	
CCV2	CVAA (Continuing calibration)	Hg	5.53	5	111	-	
	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 #: 27103B4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

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

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

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

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

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

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

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

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

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Sb	19.39	20	97	97	Y
LCS	Laboratory control sample	Mn	24.4	25	98	98	
18	Matrix spike	Se	(SSR-SR) 25.7	26.6	96	96	
18/19	Duplicate	Sr	46.9	46.5	1	1	
6	ICP serial dilution	P	369	367	1	1	

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

LDC #: 27038B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: CR
2nd reviewer: [signature]

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

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

Y N N/A 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:

$$\frac{(100mL)(1.15g)(10)}{0.937(2.08g)(1000)} = 0.590 mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	10200	10200	Y
		Sb	0.281	0.281	
		As	4.07	4.07	
		Ba	74.9	74.9	
		Be	0.481	0.481	
		Cd	0.590	0.590	
		Ca	5460	5460	
		Cr	55.6	55.6	
		Co	5.65	5.65	
		Cu	14.9	14.9	
		Fe	18700	18700	
		Pb	28.8	28.8	
		Mg	4260	4260	
		Mn	258	258	
		Mo	2.09	2.09	
		Ni	29.8	29.8	
		K	2580	2580	
		Ag	0.123	0.123	
		Na	155	155	
		Sr	22.0	22.0	

Note:

LDC #: 27038B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 2 of 3
Reviewer: CR
2nd reviewer: [illegible]

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

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

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

Detected analyte results for S6 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:

$$\frac{100mL(10)(29.94\mu g/L)}{0.955(20.9g)(1000)} = 15.0mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Tl	0.234	0.234	Y
		Ti	840	840	
		V	30.3	30.3	
		Zn	115	115	
		Li	20.9	20.9	
		P	346	346	
		As	0.876	0.876	
	2	Al	7870	7870	
		As	3.51	3.51	
		Ba	61.6	61.6	
		Be	0.378	0.378	
		Cd	0.123	0.123	
		Ca	8670	8670	
		Cr	11.9	11.9	
		Co	4.22	4.22	
		Cu	4.67	4.67	
		Fe	16600	16600	
		Pb	2.93	2.93	
		Mg	4410	4410	
		Mn	237	237	

Note: _____

LDC #: 27038B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CR
2nd reviewer:

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

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

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

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

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

Recalculation:

See Previous Page

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

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	2	Mo	0.238	0.238	Y
		Ni	6.48	6.48	
		K	2850	2850	
		Na	86.2	86.2	
		Sr	15.0	15.0	
		Tl	0.221	0.221	
		Ti	.888	888	
		V	25.3	25.3	
		Zn	51.0	51.0	
		Li	28.6	28.6	
		P	321	321	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Herbicides

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-282-SA6-SS-0.0-0.5
SL-283-SA6-SS-0.0-0.5
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 8 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

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

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

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

IV. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No herbicide contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicate

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

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 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No herbicides were detected in any of the samples.

Santa Susana Field Laboratory
Herbicides - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason
11L003	SL-285-SA6-SS-0.0-0.5 SL-282-SA6-SS-0.0-0.5 SL-283-SA6-SS-0.0-0.5 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B5 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: D
2nd Reviewer: A

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II	Initial calibration	A	0/0 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 = 42 7
XIII.	Field blanks	ND	EB = 6

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

Validated Samples: soil + water

1	SL-285-SA6-SS-0.0-0.5	11	MBLKIW	21		31	
2	SL-282-SA6-SS-0.0-0.5	12	MBLKIS	22		32	
3	SL-283-SA6-SS-0.0-0.5	13		23		33	
4	SL-284-SA6-SS-0.0-0.5	14		24		34	
5	SL-284-SA6-SB-15.5-16.5	15		25		35	
6	EB-SA6-SB-120111	16		26		36	
7	DUP17-SA6-QC-120111	17		27		37	
8	SL-283-SA6-SS-0.0-0.5MS	18		28		38	
9	SL-283-SA6-SS-0.0-0.5MSD	19		29		39	
10		20		30		40	

Notes: _____

LDC #: 27103B5
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

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

LDC #: 27103B5
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.		✓		

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. Sulfotep		
			U. Tokuthion		

Notes: _____

LDC #: 27103B5

VALIDATION FINDINGS WORKSHEET

Continuing Calibration

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
	12/13/1	WL13022A/B	STX-CLPEST I	H	26	( )	1→4, 7→9	J/UJ/A (C)
				E	27	( )		
			STX-CLPEST II	H	41	( )		
				G	21	( )		
						( )		
						( )		
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LDC #: 27103B5
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (160 std)	Recalculated CF (160 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL STX-CLPEST	11/4/11	2,4-D	787	787	706	706	811.3	14.0
2	STX-CLPEST II	11/4/11	↓	1597	1597	1574.2	1574.2	11.5	11.5
				(100)	(100)	~~753.9~~			
3	ICAL STX-CLPEST	11/4/11	↓	740	740	~~648~~	753.9	11.4	11.4
4	STX-CLPEST II	11/4/11	↓	1332	1332	1360	1360	13.2	13.2

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

LDC #: 27163BJ
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	WL090021A	12/9/11	2,4-D SW CLPEST	60	52.13	52.13	13	13
			CLPEST II	60	49.43	49.43	18	18
2	WL090034A	12/9/11	↓	100	94.24	94.24	6	6
			↓	100	83.88	83.88	16	16
3	WL130114A	12/13/11	↓	60	51.85	51.85	14	14
			↓	60	59.90	59.90	0	0
4	WL130224A	12/13/11	↓	↓	56.71	56.71	5	5
			↓	↓	60 76	60.76	1	1

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

LDC #: 27103B5
SDG #: see cover

METHOD: GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 7

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4 - DCPA	ch A	600	582	97.0	97.0	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 #: 27103B5
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: __ GC __HPLC

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 8 a 9

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)	16.0	16.0	ND	13.3	13.3	83	83	83	83	0	0
Dinoseb (8151)	↓	↓	ND	13.7	13.5	85	85	84	84	1	1
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 #: 27103B5
SDG #: pc cover

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

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: LCS1D 8011

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)	15.0	15.0	14.6	14.4	97	97	96	96	1	1
Dinoseb (8151)	↓	↓	4.22	4.59	28	28	31	31	8	8
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 #: 27103B5
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 =_____

MP

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 14, 2012

Matrix: Soil/Water

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD
SL-283-SA6-SS-0.0-0.5DUP

Introduction

This data review covers 19 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 9010A and 9014 for Cyanide, EPA Method 300.0 for Nitrate, Nitrite, and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

III. Calibration Verification

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

IV. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No contaminant concentrations were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-SA6-SB-120111	12/1/11	Nitrate	0.284 mg/L	SL-283-SA6-SB-18.0-19.0

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

V. Matrix Spike/Matrix Spike Duplicates

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

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

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

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Fluoride	1.97	2.34	17 (≤50)	-	-

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG 11L003

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 2-14-12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Cyanide (EPA SW846 Method 9010A/9014), Nitrate-N, Nitrite-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/1/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/D
V	Duplicates	A	D,P
VI.	Laboratory control samples	A	LCS/D
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(11,17)
X	Field blanks	SW	EB=16

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

Validated Samples: Soil/water

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21		31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22		32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23		33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20	SL-283-SA6-SS-0.0-0.5DUP	30		40	

Notes:

LDC #: 27635B6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: IV

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓	✓	
Were the performance evaluation (PE) samples within the acceptance limits?				

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
X. Field blanks				
Field blanks were identified in this SDG.	✓			
Target analytes were detected in the field blanks.	✓			

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: [illegible]
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-15,17	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
2,3,10	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
16	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC:18,19	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
20	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 27103B6

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Inorganics, EPA Method See Cover
Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/1/11 Soil factor applied 3x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: 10

Analyte	Blank ID	Action Limit	Sample Identification							
[illegible]	16		No Qualifiers							
NO3	0.284	4.26								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC# 27103B6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [signature]
2nd Reviewer: [signature]

Inorganics, Method See Cover

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	11	17		
Fluoride	1.97	2.34	17	

V:\FIELD DUPLICATES\FD_inorganic\27103B6.wpd

LDC #: 27038B6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: [illegible]

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of F was recalculated. Calibration date: 9/30/11

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

%R = Found X 100 / True

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

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

Type of analysis	Analyte	Standard	Conc. (ug/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	F	s1	0.1	2.41700	*0.999964*	0.999963	Y
		s2	0.2	5.01400			
		s3	0.5	13.40000			
		s4	1	28.03000			
		s5	2	58.89000			
		s6	5	148.60000			
Calibration verification	Cl2	CCV	30	32,562	109	109	
Calibration verification	SO4	↓	2	1,834	92	92	
Calibration verification	CN	↓	0.1	0.102	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 #: 27103B8

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

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

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

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

RPD = |S-D| / (S+D)/2 x 100 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	F	2.02	2	101	101	Y
18	Matrix spike sample	Cl	(SSR-SR) 246	267	92	92	
18/19	Duplicate sample	Cl	122	113	8	8	✓

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 #: 27603B6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: Inorganics, Method See cover

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

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

Compound (analyte) results for F / NO3 reported with a positive detect were recalculated and verified using the following equation:

Concentration = $F = 0.0333906(Area) + 0.039963$

Recalculation: $\frac{0.0333906(17.656) + 0.039963(60mL)}{0.937\ (20.0022g)} = 2.02\ mg/kg$

$NO_3N = 0.0219574(Area) + 0.0522169$

$\frac{0.0219574(42.111) + 0.0522169(60mL)}{0.955\ (20.0062g)} \times \left(\frac{62}{14}\right) = 13.6\ mg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	F	2.02	2.02	Y
	2	F	0.832	0.832	Y
		NO3	13.6	13.6	Y

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SB-4.5
SL-285-SA6-SB-7.5
SL-282-SA6-SB-3.0
SL-283-SA6-SB-4.5
SL-283-SA6-SB-9.5
SL-283-SA6-SB-14.5
SL-283-SA6-SB-18.5
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SB-4.5
SL-284-SA6-SB-9.5
SL-284-SA6-SB-14.5
SL-284-SA6-SB-16.0
TB-113011
EB-SA6-SB-120111

Introduction

This data review covers 12 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as 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-113011 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample EB-SA6-SB-120111 was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-SA6-SB-120111	12/1/11	Gasoline range organics	29 ug/L	No associated samples 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 11L003	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SB-4.5 SL-285-SA6-SB-7.5 SL-282-SA6-SB-3.0 SL-283-SA6-SB-4.5 SL-283-SA6-SB-9.5 SL-283-SA6-SB-14.5 SL-283-SA6-SB-18.5 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SB-4.5 SL-284-SA6-SB-9.5 SL-284-SA6-SB-14.5 SL-284-SA6-SB-16.0 TB-113011 EB-SA6-SB-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B7 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II	Initial calibration	A	%RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specific
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	SW	*TB = 13 EB = 14

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

Validated Samples: Soil + water

1	SL-285-SA6-SB-4.5	11	SL-284-SA6-SB-14.5	21	MBLK1S	31	
2	SL-285-SA6-SB-7.5	12	SL-284-SA6-SB-16.0	22	MBLK1W	32	
3	SL-282-SA6-SB-3.0	13	TB-113011 W	23		33	
4	SL-283-SA6-SB-4.5	14	EB-SA6-SB-120111 ↓	24		34	
5	SL-283-SA6-SB-9.5	15		25		35	
6	SL-283-SA6-SB-14.5	16		26		36	
7	SL-283-SA6-SB-18.5	17		27		37	
8	SL-283-SA6-SB-18.0-19.0	18		28		38	
9	SL-284-SA6-SB-4.5	19		29		39	
10	SL-284-SA6-SB-9.5	20		30		40	

Notes: _____

LDC #: 27103B7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
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 #: 27103B7
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 #: 27103137

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer: A

METHOD: __ GC __ HPLC
Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:**_____
Sampling date: 12/01/11
Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: EB

Associated Samples: mmk

Compound	Blank ID	Blank ID	Sample Identification							
	14									
gasoline Range organics	29									
CRQL										

Blank units:_____ **Associated sample units:**_____
Sampling date:_____
Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:_____

Associated Samples:_____

Compound	Blank ID	Blank ID	Sample Identification							
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with compound concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 27103B7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (500 std)	Recalculated CF (500 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	10/17/11	GRO C5-C12	17193	17193	17076.9	17076.9	1.9	1.9
2									
3									
4									

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

LDC #: 27103B7
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	EL01002A	12/01/11	GRO C5-C12	1000	1024.46	1024.46	2	2
	EL01035A	12/02/11	↓	↓	897.70	897.70	10	10
2								
	EL01047A	12/02/11	↓	1000	899.26	899.26	10	10
3	EL01071A	12/03/11	↓	1000	885.91	885.91	11	11
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 #: 27103B7
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: #4

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
4BFB	PB-5	40	32.32	80.8	80.8	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 #: 27103B7
SDG #: all cores

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

Reviewer: F
2nd Reviewer: A

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: res ID water

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	500	500	489	509	98	98	102	102	4	4
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to 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 #: 27103B7
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. #14 Compound Name GRO

Concentration = $\frac{499074}{17076.9}$

= 29 ug/L

#	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: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

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

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

Sample EB-SA6-SB-120111 was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Since the samples were diluted out, no data were qualified.

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 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 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-284-SA6-SS-0.0-0.5	DUP17-SA6-QC-120111			
Extractable fuel hydrocarbons (C21-C30)	38	31	20 (≤50)	-	-
Extractable fuel hydrocarbons (C30-C40)	45	49	9 (≤50)	-	-
Total extractable fuel hydrocarbons (C8-C40)	83	80	4 (≤50)	-	-

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B8 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II	Initial calibration	A	%D ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A SW	
VI.	Matrix spike/Matrix spike duplicates	A	
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	SW	D = 6,17 11, 17
XIII.	Field blanks	ND	EB = 16

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

Validated Samples:

SOIL

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21	MBLK1S	31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22	MBLK2S	32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23	MBLK1W	33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

Notes: _____

LDC #: 27103B8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FM
2nd Reviewer: A

Method: ✓ GC _____ HPLC

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

LDC #: 27103BX
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 #: 27103J

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
	1, 4, 6, 11	surrogate diluted out		( )	no qual > 5x DL
	17			( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	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#: 27103B8 **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

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

METHOD: GC GRO(EPA SW 846 Method 8015B)

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

Compound	Concentration ~~(ug/kg)~~ mg/kg		SD RPD	
	11	17		
EFH (C21-C30)	38	31	20	
EFH (C30-C40)	45	49	9	
Total EFH (C8-C40)	83	80	4	

V:\FIELD DUPLICATES\templates\27103B8.wpd

LDC #: 27103138
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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 (100std)	Recalculated CF (100std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/30/11	EFH (C8 - C11)	23821	23821	22358.3	22358.3	11.2	11.2
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 #: 27103B8
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	LL08003A	12/8/11	Total EPH (C_8-C_{40})	500.0	470.52	470.52	6	6
	LL08046A	12/9/11	↓	↓	549.01	549.01	10	10
2								
	LL08058A	12/9/11	↓	↓	513.53	513.53	3	3
3	LL08068A	12/9/11	↓	500	496.59	496.59	1	1
	LL13003A	12/13/11	↓	500	509.52	509.52	2	2
4								
	LL13016A	12/13/11	↓	500	521.10	521.10	4	4

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

LDC #: 27103BJ
SDG #: see cover
METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: ✓

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #12

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Bromobenzene	DB-5	100	52.050	52	52	0
Hexacosane	↓	25	27.540	110	110	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 #: 27103BJ
SDG #: pw comer

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
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: 18 & 19

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (C8 - C40)	53.5	53.5	209	243	245	64	64	67	67	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 #: 27103B8
SDG #: fu cover

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

Reviewer: FO
2nd Reviewer: [signature]

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: DSL0095L/SC

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)										
Total EFH (C8-C40)	50	50	47.9	51.2	96	96	102	102	7	7

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

LDC #: 27103B8
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 TFH (21-30)

Concentration = $\frac{523098 \quad (3) \quad (10)}{22358.3 (30.02) (0.937)}$

= 25 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	November 29 through December 1, 2011
LDC Report Date:	February 23, 2012
Matrix:	Soil/Water
Parameters:	Nitroglycerine & PETN
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11L003

Sample Identification

SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-283-SA6-SB-18.0-19.0
EB-SA6-SB-120111

Introduction

This data review covers 3 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 8332 for Nitroglycerine and PETN.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

Triplicate injections of the initial calibration were performed.

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

Retention time windows were evaluated and considered technically acceptable.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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

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

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No nitroglycerine or PETN was found in the method blanks.

Sample EB-SA6-SB-120111 was identified as an equipment blank. No nitroglycerine or PETN was found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	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
Nitroglycerine & PETN - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-283-SA6-SB-18.0-19.0 EB-SA6-SB-120111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Nitroglycerine & PETN - Laboratory Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Nitroglycerine & PETN - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B24 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HPLC Nitroglycerine & PETN (EPA SW 846 Method 8332)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 — 12/01/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified LCS ID
VII.	Laboratory control samples	A	
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB = 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	SL-285-SA6-SB-4.0-5.0	11	MBLKIW	21		31	
2	SL-285-SA6-SB-6.0-7.0	12	MBLKIS	22		32	
3	SL-283-SA6-SB-18.0-19.0	13		23		33	
4	EB-SA6-SB-120111 W	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 27103B24
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Method: ✓ GC _____ HPLC

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

LDC #: 27103B21
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 #: 27103B04
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (CF_{std})	Recalculated CF (CF_{std})	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL C-18	7/20/11	nitroglycerin	102	102	101.8	101.8	5.1	5.1
2									
3									
4									

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

LDC #: 27103B24
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
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	PL09002A	12/09/11	Nitroglycerin	750.0	655.56	655.56	13	13
	PL09013A	12/09/11	↓	↓	680.99	680.99	9	9
2								
	PL07013A	12/07/11	↓	↓	664.29	664.29	11	11
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 #: 27163P24
SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 3

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1,2-DNB	ch A	200	245.5	123	123	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 #: 27103B24
SDG #: all cover

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

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: LCS/D soil

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
nitroglycerin	7500	7500	7650	7680	102	102	102	102	0	0

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 #: 27103B24
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:	November 29 through December 1, 2011
LDC Report Date:	February 24, 2012
Matrix:	Soil/Water
Parameters:	Explosives
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11L003

Sample Identification

SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-283-SA6-SB-18.0-19.0
EB-SA6-SB-120111

Introduction

This data review covers 3 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 8330A for Explosives.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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

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

IV. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No explosive contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	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 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-283-SA6-SB-18.0-19.0 EB-SA6-SB-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B40 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II	Initial calibration	A	
III.	Calibration verification/ICV	A	
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB = 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	SL-285-SA6-SB-4.0-5.0 S	11		21		31	
2	SL-285-SA6-SB-6.0-7.0	12		22		32	
3	SL-283-SA6-SB-18.0-19.0	13		23		33	
4	EB-SA6-SB-120111 W	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 27103B40
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Method: GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
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 #: 27103B4U
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 #: 27103B4U
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC [illegible] HPLC [illegible]

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/30/11	HMX Luna 5u Phenyl Hex 9/	234.31	234.31	227.042	227.042	12.9	12.9
			RDX "	253.39	253.39	245.809	245.809	9.8	9.8
2			HMX C18	223	223	221.9	221.9	5.6	5.6
			RDX "	263	263	261.9	261.9	3.6	3.6
3									
4									

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

LDC #: 27103B4U
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: CA

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	PL050114	12/5/11	HMX	400	420.27	420.27	5	5
			RDX	400	397.79	397.79	1	1
2	PL050204	12/5/11	↓	↓	408.18	408.18	2	2
				↓	389.40	389.40	3	3
	PL080024	12/8/11	↓	↓	388.91	388.91	3	3
3			↓	↓	396.65	396.65	1	1
	P209035A	12/9/11	↓	↓	399.13	399.13	0	0
			↓	↓	398.55	398.55	0	0
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 #: 27105B4U
SDG #: see cover

METHOD: __ GC / HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 3

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1,2 - DNB	Luna 5u Phenyl-Hexyl	200	212	106	106	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 #: 27103B40
SDG #: see cover

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

Reviewer: EV
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: Lab ID

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000	2000	2370	2360	118	118	118	118	0	0
2,4,6-Trinitrotoluene (8330)	↓	↓	2320	2420	116	116	121	121	4	4

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 #: 27103B4U
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: November 29 through December 1, 2011

LDC Report Date: February 24, 2012

Matrix: Soil/Water

Parameters: Alcohols

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

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

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

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

IV. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No alcohol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No alcohols were detected in any of the samples.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B43 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/28/12
SDG #: 11L003 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/29 - 12/01/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	N	Not required
VI.	Matrix spike/Matrix spike duplicates	A	
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	ND	D = 11 + 17
XIII.	Field blanks	ND	EB = 16

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

Validated Samples: Soil + water

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21	MBLKIS	31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22	MBLKW	32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23		33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

Notes: _____

LDC #: 27103B43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

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 #: 27103B43
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 #: 27103B43
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F2
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 (10 std)	Recalculated CF (10 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/29/11	Ethanol	13619	13619	13407.9	13407.9	12.5	12.5
2									
3									
4									

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

LDC #: 27103343
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [signature]

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	BL02003A	12/2/11	ethanol	10	9.67	967	3	3
	BL02016A	12/2/11	↓	10	10.78	1078	8	8
2								
	BL02087A	12/2/11	↓	10	9.27	9.27	7	7
3	BL06013A	12/6/11	↓	10	11.52	11.52	15	15
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 #: 2 1105BY3
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: EZ
2nd Reviewer:

METHOD: __ GC __HPLC

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 18 + 19

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
ethanol	10700	10700	ND	9620	12200	90	90	114	114	23	23

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 #: 27103B43
SDG #: see cover

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

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓GC __HPLC

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

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

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

LCS/LCSD samples: 105 ID

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
ethanol	10000	10000	9700	9520	97	97	96	96	1	1

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 #: 27103B43
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 =_____

MP

#	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: November 29 through December 1, 2011

LDC Report Date: February 23, 2012

Matrix: Soil/Water

Parameters: Glycols

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 11L003

Sample Identification

SL-285-SA6-SS-0.0-0.5
SL-285-SA6-SB-4.0-5.0
SL-285-SA6-SB-6.0-7.0
SL-282-SA6-SS-0.0-0.5
SL-282-SA6-SB-2.5-3.5
SL-283-SA6-SS-0.0-0.5
SL-283-SA6-SB-4.0-5.0
SL-283-SA6-SB-9.0-10.0
SL-283-SA6-SB-14.0-15.0
SL-283-SA6-SB-18.0-19.0
SL-284-SA6-SS-0.0-0.5
SL-284-SA6-SB-4.0-5.0
SL-284-SA6-SB-9.0-10.0
SL-284-SA6-SB-14.0-15.0
SL-284-SA6-SB-15.5-16.5
EB-SA6-SB-120111
DUP17-SA6-QC-120111
SL-283-SA6-SS-0.0-0.5MS
SL-283-SA6-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015M for Glycols.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

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

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

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

IV. Blanks

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

Sample EB-SA6-SB-120111 was identified as an equipment blank. No glycol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11L003	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-284-SA6-SS-0.0-0.5 and DUP17-SA6-QC-120111 were identified as field duplicates. No glycols were detected in any of the samples.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG 11L003

SDG	Sample	Compound	Flag	A or P	Reason (Code)
11L003	SL-285-SA6-SS-0.0-0.5 SL-285-SA6-SB-4.0-5.0 SL-285-SA6-SB-6.0-7.0 SL-282-SA6-SS-0.0-0.5 SL-282-SA6-SB-2.5-3.5 SL-283-SA6-SS-0.0-0.5 SL-283-SA6-SB-4.0-5.0 SL-283-SA6-SB-9.0-10.0 SL-283-SA6-SB-14.0-15.0 SL-283-SA6-SB-18.0-19.0 SL-284-SA6-SS-0.0-0.5 SL-284-SA6-SB-4.0-5.0 SL-284-SA6-SB-9.0-10.0 SL-284-SA6-SB-14.0-15.0 SL-284-SA6-SB-15.5-16.5 EB-SA6-SB-120111 DUP17-SA6-QC-120111	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 11L003

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG 11L003

No Sample Data Qualified in this SDG

LDC #: 27103B45 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/23/12
SDG #: 11L003 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: to 11/29 - 12/01/11
II	Initial calibration	A	
III.	Calibration verification/ICV	A	
IV.	Blanks	A	
V	Surrogate recovery	N	not required
VI.	Matrix spike/Matrix spike duplicates	A	
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	ND	D= ~~6+7~~ 11 + 17
XIII.	Field blanks	ND	EB= 16

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

Validated Samples: soil + water

1	SL-285-SA6-SS-0.0-0.5	11	SL-284-SA6-SS-0.0-0.5	21	MBLKIW	31	
2	SL-285-SA6-SB-4.0-5.0	12	SL-284-SA6-SB-4.0-5.0	22	MBLKFS	32	
3	SL-285-SA6-SB-6.0-7.0	13	SL-284-SA6-SB-9.0-10.0	23	MBLKSS	33	
4	SL-282-SA6-SS-0.0-0.5	14	SL-284-SA6-SB-14.0-15.0	24		34	
5	SL-282-SA6-SB-2.5-3.5	15	SL-284-SA6-SB-15.5-16.5	25		35	
6	SL-283-SA6-SS-0.0-0.5	16	EB-SA6-SB-120111 W	26		36	
7	SL-283-SA6-SB-4.0-5.0	17	DUP17-SA6-QC-120111	27		37	
8	SL-283-SA6-SB-9.0-10.0	18	SL-283-SA6-SS-0.0-0.5MS	28		38	
9	SL-283-SA6-SB-14.0-15.0	19	SL-283-SA6-SS-0.0-0.5MSD	29		39	
10	SL-283-SA6-SB-18.0-19.0	20		30		40	

Notes: _____

LDC #: 27103B45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FD
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 #: 27103B45
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 #: 27103B45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: GC ✓ HPLC_____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (25 std)	Recalculated CF (25 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/22/11	Propylene Glycol	7613.64	7613.64	7470.95	7470.95	9.4	9.4
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 #: 27103B45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: FD
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	BL050303A	12/5/11	propylene glycol	25.0	27.25	27.25	9	9
	BL050314A	12/5/11	↓	25.0	27.45	27.45	10	10
2	BL050317A	12/5/11	↓	25.0	28.06	28.06	12	12
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 #: 27103B45
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: __ GC __HPLC

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 18 + 19

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Diethylene Glycol	53.5	53.5	ND	54.3	60.5	101	101	113	113	11	11

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

LDC #: 27103BK1
SDG #: see cover

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

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC __HPLC

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

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

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

LCS/LCSD samples: PEL0015L/SC

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Diethylene Glycol	50	50	62.9	54.3	126	126	109	109	15	15

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 #: 27103B45
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