LDC #: 28578L2b

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.	✓	NA		
Target compounds were detected in the field duplicates.	✓		NA	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓	NA		
Target compounds were detected in the field blanks.		✓	NA	

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 #: 28578L2b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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

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

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

(FD)

Compound	Concentration (ug/Kg)		≤ 50 RPD
	4	5	
CCC	3.3	11U	200 J/UJ/A
III	3.3		
GGG	5.7		
YY	5.7		
ZZ	5.1		

Compound	Concentration (ug/Kg)		≤ 50 RPD
	4	5	
Benzo (e) pyrene	3.0	5.5U	J J

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 28578226

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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	SVE9E24S	5/24/12	~~Phenol (1st internal standard)~~						
			Naphthalene (~~2nd~~ 1st internal standard)	4.035	4.035	4.003	4.003	6.80	6.80
			Anthracene (2nd) Fluorene (~~3rd~~ internal standard)	1.296	1.296	1.278	1.278	5.89	5.89
			Benzo (a) pyrene (3rd) ~~Pentachlorophenol~~ (4th internal standard)	1.210	1.210	1.069	1.069	13.52	13.52
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
2	SVE7F26S	6/26/12	~~Phenol (1st internal standard)~~	3.696	3.696	3.768	3.768	7.25	7.25
			Naphthalene (~~2nd~~ 1st internal standard)						
			Anthracene (2nd) Fluorene (~~3rd~~ internal standard)	1.130	1.130	1.128	1.128	6.73	6.73
			Benzo (a) pyrene (3rd) ~~Pentachlorophenol~~ (4th internal standard)	1.084	1.084	1.010	1.010	11.86	11.86
			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 #: 28578L26

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	RFL301	6/22/12	~~Phenol~~ (1st internal standard)					
			Naphthalene (2nd internal standard)	4.003	4.457	4.457	11.3	11.3
			~~Fluorene~~ Anthracene (3rd internal standard)	1.278	1.178	1.178	7.8	7.8
			~~Pentachlorophenol~~ Benzo(g)Pyrene (4th internal standard)	1.069	1.249	1.249	16.8	16.8
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	RFL325	6/25/12	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		3.936	3.936	1.7	1.7
			Fluorene Anthracene (3rd internal standard)		1.192	1.192	6.7	6.7
			~~Pentachlorophenol~~ Benzo(g)Pyrene (4th internal standard)		1.160	1.160	8.5	8.5
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3	RFH213	6/30/12	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.768	3.809	3.809	1.1	1.1
			~~Fluorene~~ Anthracene (3rd internal standard)	1.128	1.136	1.136	0.7	0.7
			~~Pentachlorophenol~~ Benzo(g)Pyrene (4th internal standard)	1.010	1.143	1.143	13.2	13.2
			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 #: 28578225

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1 2X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10.0	3.14	62.7	62.7	0
2-Fluorobiphenyl	↓	3.15	63.0	63.0	↓
Terphenyl-d14	↓	4.13	82.5	82.5	↓
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 #: 28578226

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

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

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

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

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/Kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	362	362	ND	226	254	62	62	70	70	12	12
Pentachlorophenol											
Pyrene	↓	↓	5.13	321	397	87	87	108	108	21	21

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

LDC #: 28578L2S

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

LCS/LCSD samples: LCS ID

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	333	333	304	302	91	91	90	90	1	1
Pentachlorophenol										
Pyrene	333	333	39	312	117	117	94	94	22	22

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

LDC #: 28578L2b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, Benzo (a) pyrene

Conc. = $\frac{(40456)(40)(2)(1)(1000)}{(348242)(1.069)(30.01)(0.894)}$

= 32 ug/kg

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

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 11, 2012

LDC Report Date: November 15, 2012

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F071

Sample Identification

SL-518-SA5C-SB-4.0-5.0
SL-518-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0
SL-809-SA5C-SB-4.0-5.0
SL-574-SA5C-SB-9.0-10.0
SL-574-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-6.5-7.5
SL-507-SA5C-SB-2.5-3.5
SL-520-SA5C-SB-6.5-7.5
SL-521-SA5C-SB-0.0-0.5
SL-521-SA5C-SB-4.0-5.0
SL-521-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0MS
SL-509-SA5C-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/21/12 (10:39)	CCV	STXCLPII	Aroclor-1016 Aroclor-1260 Aroclor -5460	22 27 20.39	SL-509-SA5C-SB-4.0-5.0MS SL-509-SA5C-SB-4.0-5.0MSD MBLK1S	All TCL compounds	J (all detects) UJ (all non-detects)	A
6/21/12 (16:16)	CCV	STXCLP II	Aroclor-1016 Aroclor-1260 Aroclor -5460	29 28 21	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0	All TCL compounds	J (all detects) UJ (all non-detects)	A

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

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

V. Blanks

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

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12E244	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-509-SA5C-SB-4.0-5.0 and SL-809-SA5C-SB-4.0-5.0 were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples.

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG 12F071

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0	All TCL compounds	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0 SL-521-SA5C-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

LDC #: 28578L3b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12
SDG #: 12F071 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: E
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: 6/11/12
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	
IV.	Continuing calibration/ICV	SW	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	ND	D = 4, 5
XVI.	Field blanks	ND	EB = EB-061412 SDG # 12F102 FB = FB-060512 SDG # 12F037

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

Validated Samples: soil

1	SL-518-SA5C-SB-4.0-5.0	11	SL-520-SA5C-SB-6.5-7.5	21		31	
2	SL-518-SA5C-SB-9.0-10.0	12	SL-521-SA5C-SB-0.0-0.5	22		32	
3	SL-509-SA5C-SB-9.0-10.0	13	SL-521-SA5C-SB-4.0-5.0	23		33	
4	SL-509-SA5C-SB-4.0-5.0 D	14	SL-521-SA5C-SB-9.0-10.0	24		34	
5	SL-809-SA5C-SB-4.0-5.0 D	15	SL-509-SA5C-SB-4.0-5.0MS	25		35	
6	SL-574-SA5C-SB-9.0-10.0	16	SL-509-SA5C-SB-4.0-5.0MSD	26		36	
7	SL-574-SA5C-SB-4.0-5.0	17		27		37	
8	SL-508-SA5C-SB-4.0-5.0	18		28		38	
9	SL-508-SA5C-SB-6.5-7.5	19		29		39	
10	SL-507-SA5C-SB-2.5-3.5	20		30		40	

Notes:

LDC #: 28578L3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FR
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 #: 28578L3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [signature]

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.	~~✓~~	~~NA~~		
Target compounds were detected in the field duplicates.	~~NA~~	✓	~~NA~~	
XV. Field blanks				
Field blanks were identified in this SDG.	~~✓~~	~~NA~~		
Target compounds were detected in the field blanks.	~~NA~~	✓	~~NA~~	

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes: _____

LDC #: 28578L3b

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 ≤15.0%?

Level IV Only

Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

(c)

#	Date	Standard ID	Detector/ Column	Compound	%D / RPD (Limit ≤ 15.0) 20	RT (limit)	Associated Samples	Qualifications
	6/21/12	CCV	STX-CLP II	V	22	( )	MBLK13, 15, 16	J/UJ/A All TCL
	10:39			BB	27	( )	↓	↓
				PCB-5460	20.39	( )		
				Aroclor		( )		
						( )		
						( )		
	6/21/12	CCV	STXCLP II	V	29	( )	1 → 13	J/UJ/A All TCL
	14:16			BB	28	( )	↓	↓
				PCB 5460	21	( )		
				Aroclor		( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 28578L3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FF
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 (100 std)	Recalculated CF (100 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	SF01021A	6/01/12	PCB 1260-1 cup1	945-3	9453	10034.6	10034.6	18.4	18.4
			1 cup2	14768	14768	16004.7	16004.7	15.4	15.4
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.

INIC! C 1SB

LDC #: 28528L36
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC_____ HPLC_____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	SF21002A	6/21/12	PCB 1260 STX clP I	500.0	470.429	470.429	6	6
			STX clP II	500.0	634.593	634.593	27	27
2	SF21013A	6/21/12	✓	✓	473.815	473.815	5	5
					638.951	638.951	28	28
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 #: 28578283

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: #1cl

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
DCB	ch A	40	28.63	71.6	71.6	0
TCMX	↓	↓	35.90	89.8	89.8	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 #: 48518c07
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ
2nd Reviewer: [illegible]

METHOD: __ GC __HPLC

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

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Aroclor 1260	181	181	ND	163	165	90	90	91	91	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 #: 38578L3b
SDG #: all cores

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

Reviewer: F
2nd Reviewer: A

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: res 10

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)										
Arochor 1260	167	167	160	157	96	96	94	94	2	2

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

LDC #: 28578L3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name ND

Concentration =_____

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 11, 2012

LDC Report Date: November 9, 2012

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F071

Sample Identification

SL-518-SA5C-SB-4.0-5.0
SL-518-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0
SL-809-SA5C-SB-4.0-5.0
SL-574-SA5C-SB-9.0-10.0
SL-574-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-6.5-7.5
SL-507-SA5C-SB-2.5-3.5
SL-520-SA5C-SB-6.5-7.5
SL-521-SA5C-SB-0.0-0.5
SL-521-SA5C-SB-4.0-5.0
SL-521-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0MS
SL-509-SA5C-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020 and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

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

III. Calibration

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.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-061412	6/14/12	Boron	0.00551 ug/L	All samples in SDG 12F071

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-060512	6/5/12	Aluminum Calcium Copper	0.0270 ug/L 0.0263 ug/L 0.000954 ug/L	All samples in SDG 12F071

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-509-SA5C-SB-4.0-5.0MS/MSD (All soil samples in SDG 12F071)	Antimony Calcium Phosphorus	72 (75-125) 132 (75-125) -	67 (75-125) 40 (75-125) 74 (75-125)	- 22 (≤20) -	J (all detects) UJ (all non-detects)	A

VII. Duplicate Sample Analysis

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

VIII. Laboratory Control Samples (LCS)

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

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

Sample	Analyte	Flag	A or P
All samples in SDG 12F071	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-509-SA5C-SB-4.0-5.0 and SL-809-SA5C-SB-4.0-5.0 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-509-SA5C-SB-4.0-5.0	SL-809-SA5C-SB-4.0-5.0			
Aluminum	20100	21000	4 (≤50)	-	-
Antimony	0.239	0.190	23 (≤50)	-	-
Arsenic	5.59	5.96	6 (≤50)	-	-
Barium	137	132	4 (≤50)	-	-
Beryllium	0.820	0.898	9 (≤50)	-	-
Boron	3.66	3.35	9 (≤50)	-	-
Cadmium	0.374	0.297	23 (≤50)	-	-
Calcium	9190	20600	77 (≤50)	J (all detects)	A
Chromium	26.5	24.4	8 (≤50)	-	-
Cobalt	6.65	6.62	0 (≤50)	-	-
Copper	10.3	9.79	5 (≤50)	-	-
Iron	23400	23800	2 (≤50)	-	-
Lead	23.0	8.27	94 (≤50)	J (all detects)	A

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-509-SA5C-SB-4.0-5.0	SL-809-SA5C-SB-4.0-5.0			
Magnesium	4680	5070	8 (≤50)	-	-
Manganese	214	204	5 (≤50)	-	-
Molybdenum	0.509	0.358	35 (≤50)	-	-
Nickel	14.4	13.2	9 (≤50)	-	-
Potassium	2500	2280	9 (≤50)	-	-
Silver	0.0620	0.0608	2 (≤50)	-	-
Sodium	339	386	13 (≤50)	-	-
Strontium	29.9	35.7	18 (≤50)	-	-
Thallium	0.263	0.265	1 (≤50)	-	-
Titanium	904	880	3 (≤50)	-	-
Vanadium	43.2	45.3	5 (≤50)	-	-
Zinc	49.7	46.0	8 (≤50)	-	-
Lithium	19.8	20.4	3 (≤50)	-	-
Phosphorus	153	115	28 (≤50)	-	-
Zirconium	2.91	3.28	12 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG 12F071

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0 SL-521-SA5C-SB-9.0-10.0	Antimony Phosphorus	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0 SL-521-SA5C-SB-9.0-10.0	Calcium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q,E)
12F071	SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0	Calcium Lead	J (all detects)	A	Field duplicates (RPD) (FD)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0 SL-521-SA5C-SB-9.0-10.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

LDC #: 28578L4
SDG #: 12F071
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10-31-12
Page: 1 of 1
Reviewer: CA
2nd Reviewer: V

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/11/12
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(4,5)
XV	Field Blanks	SW	EB= EB-060412 (12F102) FB= FB-060512 (12F037)

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

Validated Samples: Soil

1	SL-518-SA5C-SB-4.0-5.0	11	SL-520-SA5C-SB-6.5-7.5	21		31	
2	SL-518-SA5C-SB-9.0-10.0	12	SL-521-SA5C-SB-0.0-0.5	22		32	
3	SL-509-SA5C-SB-9.0-10.0	13	SL-521-SA5C-SB-4.0-5.0	23		33	
4	SL-509-SA5C-SB-4.0-5.0	14	SL-521-SA5C-SB-9.0-10.0	24		34	
5	SL-809-SA5C-SB-4.0-5.0	15	SL-509-SA5C-SB-4.0-5.0MS	25		35	
6	SL-574-SA5C-SB-9.0-10.0	16	SL-509-SA5C-SB-4.0-5.0MSD	26		36	
7	SL-574-SA5C-SB-4.0-5.0	17		27		37	
8	SL-508-SA5C-SB-4.0-5.0	18		28		38	
9	SL-508-SA5C-SB-6.5-7.5	19		29		39	
10	SL-507-SA5C-SB-2.5-3.5	20		30		40	

Notes: _____

LDC #: 28578L4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: IV

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 #: 28578L4

VALIDATION FINDINGS CHECKLIST

Reviewer: GR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓	✓		
Target analytes were detected in the field duplicates.	✓		✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	✓	✓	
Target analytes were detected in the field blanks.	✓			

LDC #: 28578L4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: L

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-14		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
QC:15,16		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 #: 28578L 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CA
2nd Reviewer: CA

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-061412	Action Limit	No Qualifiers									
B	0.00551	1.3775										

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 #: 28578L4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: ar
2nd Reviewer: lw

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

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

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

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

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

LEVEL IV ONLY:

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

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	15/16	S	Sb	72	67		All	J/UJ/A (Q)
			Ca	132	40	22	↓	↓ (Q,E)
			P		74		↓	↓ (Q)

Comments: Ba, Mn, Ti

LDC#: 28578L4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: A
2nd Reviewer: W

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualifiers (Parents Only)
	4	5		
Aluminum	20100	21000	4	
Antimony	0.239	0.190	23	
Arsenic	5.59	5.96	6	
Barium	137	132	4	
Beryllium	0.820	0.898	9	
Boron	3.66	3.35	9	
Cadmium	0.374	0.297	23	
Calcium	9190	20600	77	Jdet/A (FD)
Chromium	26.5	24.4	8	
Cobalt	6.65	6.62	0	
Copper	10.3	9.79	5	
Iron	23400	23800	2	
Lead	23.0	8.27	94	Jdet/A (FD)
Magnesium	4680	5070	8	
Manganese	214	204	5	
Molybdenum	0.509	0.358	35	
Nickel	14.4	13.2	9	
Potassium	2500	2280	9	
Silver	0.0620	0.0608	2	

LDC#: 28578L4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: AL
2nd Reviewer: V

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qualifiers (Parents Only)
	4	5		
Sodium	339	386	13	
Strontium	29.9	35.7	18	
Thallium	0.263	0.265	1	
Titanium	904	880	3	
Vanadium	43.2	45.3	5	
Zinc	49.7	46.0	8	
Lithium	19.8	20.4	3	
Phosphorus	153	115	28	
Zirconium	2.91	3.28	12	

LDC #: 28578L4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CR
2nd Reviewer: [illegible]

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

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

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
ICV	ICP/MS (Initial calibration)	Ni	30.78	30	103	103	T
ICV	CVAA (Initial calibration)	Hg	1.891	2	95	—	↓
	ICP (Continuing calibration)						
CCV2	ICP/MS (Continuing calibration)	P	252.80	250	101	101	↓
CCV 2	CVAA (Continuing calibration)	Hg	5.253	5	105	~~10~~	↓
	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 #: 28578L4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: QR
2nd Reviewer: LC

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	Co	18.30	20	92	92	Y
LCS	Laboratory control sample	Pb	24.7	25	99	99	
15	Matrix spike	Se	(SSR-SR) 26.7	25	94	94	
15/16	Duplicate	Zn	~~107~~ 535	537	5	5	
4	ICP serial dilution	Ti	904	929	3	3	✓

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 #: 25578L 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

Detected analyte results for Ni 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:

$$\frac{100mL(10)(27.26\ ug/L)}{0.894(2.03g)(1000)} = 15.02\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	1	Al	18700	18700	Y
		Sb	0.173	0.173	
		As	4.66	4.66	
		Ba	203	203	
		Be	0.875	0.875	
		B	3.64	3.64	
		Cd	0.355	0.355	
		Ca	60900	60900	
		Cr	25.4	25.4	
		Co	6.83	6.83	
		Cu	10.3	10.3	
		Fe	23700	23700	
		Pb	7.08	7.08	
		Mg	5040	5040	
		Mn	234	234	
		Mo	0.327	0.327	
		Ni	15.0	15.0	
		K	1970	1970	
		Ag	0.0598	0.0598	
		Na	708	708	
		Sr	72.1	72.1	
		Tl	0.243	0.243	
		Ti	786	786	
		V	46.7	46.7	
		Zn	47.5	47.5	

LDC #: 25578L 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CR
2nd reviewer: W

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

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

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

Detected analyte results for A1 were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

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

Recalculation:

$$\frac{100mL(10)(22410ug/L)}{0.938(2.07g)(1000)} = 11541.7 mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	1	Li	22.9	22.9	Y
		P	121	121	
		Zr	3.66	3.66	
	11	Al	11500	11500	
		Sb	0.115	0.115	
		As	4.37	4.37	
		Ba	71.6	71.6	
		Be	0.559	0.559	
		Cd	0.205	0.205	
		Ca	5130	5130	
		Cr	13.3	13.3	
		Co	4.30	4.30	
		Cu	6.89	6.89	
		Fe	18700	18700	
		Pb	4.34	4.34	
		Mg	3690	3690	
		Mn	226	226	
		Mo	0.230	0.230	
		Ni	9.23	9.23	
		K	2170	2170	
		Na	237	237	
		Sr	23.9	23.9	
		Tl	0.197	0.197	
		Ti	963	963	
		V	30.3	30.3	
		Zn	43.7	43.7	
		Li	27.1	27.1	
		P	249	249	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 11, 2012

LDC Report Date: October 31, 2012

Matrix: Soil

Parameters: Hexavalent Chromium

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F071

Sample Identification

SL-520-SA5C-SB-6.5-7.5
SL-521-SA5C-SB-0.0-0.5
SL-521-SA5C-SB-4.0-5.0
SL-521-SA5C-SB-9.0-10.0

Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7199 for Hexavalent Chromium.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

III. Calibration Verification

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

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No hexavalent chromium was found in the initial, continuing and preparation blanks.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No hexavalent chromium was found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No hexavalent chromium was found.

V. 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.

VI. Duplicates

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

VII. Laboratory Control Samples

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

VIII. Sample Result Verification

All sample result verifications were acceptable.

All analytes reported below the CRDL and above the IDL were qualified as follows:

IX. Overall Assessment of Data

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

X. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Hexavalent Chromium - Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Hexavalent Chromium – Laboratory Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Hexavalent Chromium - Field Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

LDC #: 28578L6
SDG #: 12F071
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10/3/12
Page: 1 of 1
Reviewer: CL
2nd Reviewer: [signature]

METHOD: (Analyte) Hexavalent Chromium (EPA SW846 Method 7199)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/11/12
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	CS
VI.	Duplicates	N	D
VII.	Laboratory control samples	A	LCS
VIII.	Sample result verification	A	
IX.	Overall assessment of data	A	
X.	Field duplicates	N	
XI	Field blanks	ND	EB=EB060112 (12F102), FB=FB060512 (12F037)

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-520-SA5C-SB-6.5-7.5	11		21		31	
2	SL-521-SA5C-SB-0.0-0.5	12		22		32	
3	SL-521-SA5C-SB-4.0-5.0	13		23		33	
4	SL-521-SA5C-SB-9.0-10.0	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 28578L6

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: QR
2nd Reviewer: W

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.				
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.			✓	
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 28578L6

VALIDATION FINDINGS CHECKLIST

Reviewer: AR
2nd Reviewer: MV

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 #: 28571B6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

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

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of Cd was recalculated. Calibration date: 6/15/12

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. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	Cd	s1	0	0	*0.9999*	0.9999	Y
		s2	0.2	0.0000178			
		s3	1	0.0001001			
		s4	2	0.0002012			
		s5	5	0.0005152			
Calibration verification		ICV	2	2.017	101	-	
Calibration verification		CCV		2.150	107	107	
Calibration verification				2.175	109	109	

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 #: 28578G

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: 9R
2nd Reviewer: W

METHOD: Inorganics, Method See cover

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

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

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

RPD = |S-D| / (S+D)/2 x 100 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Cr	264	270	98	98	Y
N	Matrix spike sample		(SSR-SR)				
N	Duplicate sample						

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 #: 28586

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: QR
2nd reviewer: W

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 _____ reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

ND

#	Sample ID	Analyte	Reported Concentration ( )	Calculated Concentration ( )	Acceptable (Y/N)

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 11, 2012

LDC Report Date: November 14, 2012

Matrix: Soil

Parameters: Perchlorate

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F071

Sample Identification

SL-518-SA5C-SB-4.0-5.0
SL-518-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0
SL-809-SA5C-SB-4.0-5.0
SL-574-SA5C-SB-9.0-10.0
SL-574-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-4.0-5.0
SL-508-SA5C-SB-6.5-7.5
SL-507-SA5C-SB-2.5-3.5
SL-520-SA5C-SB-6.5-7.5
SL-521-SA5C-SB-0.0-0.5
SL-521-SA5C-SB-4.0-5.0
SL-521-SA5C-SB-9.0-10.0
SL-509-SA5C-SB-4.0-5.0MS
SL-509-SA5C-SB-4.0-5.0MSD

Introduction

This data review covers 16 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the limit of detection verification (LODV) calibration standard were less than or equal to 50.0% for perchlorate.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No perchlorate contaminants were found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No perchlorate contaminants were found.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) 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 12F071	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-509-SA5C-SB-4.0-5.0 and SL-809-SA5C-SB-4.0-5.0 were identified as field duplicates. No perchlorate was detected in any of the samples.

Santa Susana Field Laboratory
Perchlorate - Data Qualification Summary - SDG 12F071

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F071	SL-518-SA5C-SB-4.0-5.0 SL-518-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-9.0-10.0 SL-509-SA5C-SB-4.0-5.0 SL-809-SA5C-SB-4.0-5.0 SL-574-SA5C-SB-9.0-10.0 SL-574-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-4.0-5.0 SL-508-SA5C-SB-6.5-7.5 SL-507-SA5C-SB-2.5-3.5 SL-520-SA5C-SB-6.5-7.5 SL-521-SA5C-SB-0.0-0.5 SL-521-SA5C-SB-4.0-5.0 SL-521-SA5C-SB-9.0-10.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG 12F071

No Sample Data Qualified in this SDG

LDC #: 28578L87 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12

SDG #: 12F071 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: EF

2nd Reviewer: A

METHOD: LC/MS Perchlorate (EPA SW846 Method 6850)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/11/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	12
IV.	Continuing calibration/ICV	A	ICV/CCV ± 15/50 LODV ± 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 4 a 5
XVII.	Field blanks	ND	EB = EB061412 SDG 12F102 FB = FB-060512 SDG# 12F037

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

Validated Samples:

SOIL

1	SL-518-SA5C-SB-4.0-5.0	11	SL-520-SA5C-SB-6.5-7.5	21		31	
2	SL-518-SA5C-SB-9.0-10.0	12	SL-521-SA5C-SB-0.0-0.5	22		32	
3	SL-509-SA5C-SB-9.0-10.0	13	SL-521-SA5C-SB-4.0-5.0	23		33	
4	SL-509-SA5C-SB-4.0-5.0	14	SL-521-SA5C-SB-9.0-10.0	24		34	
5	SL-809-SA5C-SB-4.0-5.0	15	SL-509-SA5C-SB-4.0-5.0MS	25		35	
6	SL-574-SA5C-SB-9.0-10.0	16	SL-509-SA5C-SB-4.0-5.0MSD	26		36	
7	SL-574-SA5C-SB-4.0-5.0	17		27		37	
8	SL-508-SA5C-SB-4.0-5.0	18		28		38	
9	SL-508-SA5C-SB-6.5-7.5	19		29		39	
10	SL-507-SA5C-SB-2.5-3.5	20		30		40	

LDC #: 78578187

VALIDATION FINDINGS CHECKLIST

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

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

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?		NA	✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 15/30 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 28578287

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.	✓		NA	
Target compounds were detected in the field duplicates.		✓	NA	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓	NA	

LDC # 28578287
SDG#

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JB
2nd Reviewer: SA

METHOD: 6850.00

Parameter: perchlorate

weighted

Date	Instrument	Compound	Y	X	
03/02/2012	NS	perchlorate	0.09050	0.05	
			0.16323	0.10	
			0.37489	0.25	
			0.77283	0.50	
			1.48528	1.00	
			3.63370	2.50	
			7.24902	5.00	
			14.43676	10.00	

Regression Output:		Regression Output:	Reported	
Constant		0.03038		
Std Err of Y Est		0.01511		
R Squared		0.99999		0.99990
No. of Observations		8.00000		
Degrees of Freedom		6.00000		
X Coefficient(s)	1.441E+000			
Std Err of Coef.	0.001634	0.00		

LDC #: 28578487

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270C)~~ Method 6850

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %R	Recalculated %R
1	NF14003	6/14/12	~~Phenol~~ Perchlorate (1st internal standard)	2.0	2.082	2.082	104	104
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	NF14014	6/14/12	~~Phenol~~ Perchlorate (1st internal standard)	2.0	2.107	2.107	105	105
			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	NF14015	6/14/12	~~Phenol~~ Perchlorate (1st internal standard)	2.0	2.076	2.076	104	104
			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 #: 28578287

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ Method 6850

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

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

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 15 + 16

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											
Perchlorate	27.1	27.1	ND	26.6	26.7	98	98	98	98	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 #: 25578487

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)~~ Method 8321

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

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

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

LCS/LCSD samples: LCS 10

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	25.0	25.0	27.1	24.8	108	108	99	99	9	9

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 #: 28578187

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ Method 8151

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

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

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____ , _____:

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

=

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

SAMPLE DELIVERY GROUP

12F074

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
12-Jun-2012	TB-061212	F074-17	TB	5030B	8015B GRO	IV
12-Jun-2012	SL-743-SA5C-SB-2.0	F074-06	N	5035	8015B GRO	IV
12-Jun-2012	SL-743-SA5C-SB-1.0-2.0	F074-05	N	3550B	8015B EFH	IV
12-Jun-2012	SL-743-SA5C-SB-1.0-2.0	F074-05	N	3550B	8270C SIM	IV
12-Jun-2012	SL-743-SA5C-SB-5.0	F074-08	N	5035	8015B GRO	IV
12-Jun-2012	SL-743-SA5C-SB-4.0-5.0	F074-07	N	3550B	8015B EFH	IV
12-Jun-2012	SL-743-SA5C-SB-4.0-5.0	F074-07R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-743-SA5C-SB-10.0	F074-10	N	5035	8015B GRO	IV
12-Jun-2012	SL-743-SA5C-SB-9.0-10.0	F074-09	N	3550B	8015B EFH	IV
12-Jun-2012	SL-743-SA5C-SB-9.0-10.0	F074-09	N	3550B	8270C SIM	IV
12-Jun-2012	SL-743-SA5C-SB-15.0	F074-12	N	5035	8015B GRO	IV
12-Jun-2012	SL-743-SA5C-SB-14.0-15.0	F074-11	N	3550B	8015B EFH	IV
12-Jun-2012	SL-743-SA5C-SB-14.0-15.0	F074-11	N	3550B	8270C SIM	IV
12-Jun-2012	SL-693-SA5C-SB-5.0	F074-14	N	5035	8015B GRO	IV
12-Jun-2012	SL-693-SA5C-SB-4.0-5.0	F074-13	N	3550B	8015B EFH	IV
12-Jun-2012	SL-693-SA5C-SB-4.0-5.0	F074-13	N	3550B	8082	IV
12-Jun-2012	SL-693-SA5C-SB-4.0-5.0	F074-13	N	3550B	8270C SIM	IV
12-Jun-2012	SL-693-SA5C-SB-4.0-5.0	F074-13	N	7471A	7471A	IV
12-Jun-2012	SL-693-SA5C-SB-4.0-5.0	F074-13	N	TOTAL	6020	IV
12-Jun-2012	SL-693-SA5C-SB-10.0	F074-16	N	5035	8015B GRO	IV
12-Jun-2012	SL-693-SA5C-SB-9.0-10.0	F074-15	N	3550B	8015B EFH	IV
12-Jun-2012	SL-693-SA5C-SB-9.0-10.0	F074-15	N	3550B	8082	IV
12-Jun-2012	SL-693-SA5C-SB-9.0-10.0	F074-15	N	7471A	7471A	IV
12-Jun-2012	SL-693-SA5C-SB-9.0-10.0	F074-15	N	TOTAL	6020	IV
12-Jun-2012	SL-693-SA5C-SB-9.0-10.0	F074-15R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-692-SA5C-SB-6.0	F074-04	N	5035	8015B GRO	IV

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0	F074-03	N	3550B	8015B EFH	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0	F074-03	N	3550B	8082	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0	F074-03	N	7471A	7471A	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0	F074-03	N	TOTAL	6020	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0MS	F074-03M	MS	3550B	8015B EFH	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0	F074-03R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-692-SA5C-SB-5.0-6.0MSD	F074-03S	MSD	3550B	8015B EFH	IV
12-Jun-2012	SL-690-SA5C-SB-4.5	F074-02	N	5035	8015B GRO	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5	F074-01	N	3550B	8015B EFH	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5	F074-01	N	3550B	8082	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5	F074-01	N	3550B	8270C SIM	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5	F074-01	N	7471A	7471A	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5	F074-01	N	TOTAL	6020	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5MS	F074-01M	MS	7471A	7471A	IV
12-Jun-2012	SL-690-SA5C-SB-3.5-4.5MSD	F074-01S	MSD	7471A	7471A	IV
12-Jun-2012	SL-689-SA5C-SB-5.0	F074-21	N	5035	8015B GRO	IV
12-Jun-2012	SL-689-SA5C-SB-4.0-5.0	F074-20	N	3550B	8015B EFH	IV
12-Jun-2012	SL-689-SA5C-SB-4.0-5.0	F074-20	N	3550B	8082	IV
12-Jun-2012	SL-689-SA5C-SB-4.0-5.0	F074-20	N	7471A	7471A	IV
12-Jun-2012	SL-689-SA5C-SB-4.0-5.0	F074-20	N	TOTAL	6020	IV
12-Jun-2012	SL-689-SA5C-SB-4.0-5.0	F074-20R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-689-SA5C-SB-8.5	F074-23	N	5035	8015B GRO	IV
12-Jun-2012	SL-689-SA5C-SB-7.5-8.5	F074-22	N	3550B	8015B EFH	IV
12-Jun-2012	SL-689-SA5C-SB-7.5-8.5	F074-22	N	3550B	8082	IV
12-Jun-2012	SL-689-SA5C-SB-7.5-8.5	F074-22	N	7471A	7471A	IV
12-Jun-2012	SL-689-SA5C-SB-7.5-8.5	F074-22	N	TOTAL	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
12-Jun-2012	SL-689-SA5C-SB-7.5-8.5	F074-22R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-687-SA5C-SB-5.0	F074-19	N	5035	8015B GRO	IV
12-Jun-2012	SL-687-SA5C-SB-4.0-5.0	F074-18	N	3550B	8015B EFH	IV
12-Jun-2012	SL-687-SA5C-SB-4.0-5.0	F074-18	N	3550B	8082	IV
12-Jun-2012	SL-687-SA5C-SB-4.0-5.0	F074-18	N	7471A	7471A	IV
12-Jun-2012	SL-687-SA5C-SB-4.0-5.0	F074-18	N	TOTAL	6020	IV
12-Jun-2012	SL-687-SA5C-SB-4.0-5.0	F074-18R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-688-SA5C-SB-5.0	F074-27	N	5035	8015B GRO	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0	F074-26	N	3550B	8015B EFH	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0	F074-26	N	3550B	8082	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0	F074-26	N	7471A	7471A	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0	F074-26	N	TOTAL	6020	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0MS	F074-26M	MS	3550B	8270C SIM	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0MS	F074-26M	MS	TOTAL	6020	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0	F074-26R	N	3550B	8270C SIM	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0MSD	F074-26S	MSD	3550B	8270C SIM	IV
12-Jun-2012	SL-688-SA5C-SB-4.0-5.0MSD	F074-26S	MSD	TOTAL	6020	IV
12-Jun-2012	SL-688-SA5C-SB-10.0	F074-25	N	5035	8015B GRO	IV
12-Jun-2012	SL-688-SA5C-SB-9.0-10.0	F074-24	N	3550B	8015B EFH	IV
12-Jun-2012	SL-688-SA5C-SB-9.0-10.0	F074-24	N	3550B	8082	IV
12-Jun-2012	SL-688-SA5C-SB-9.0-10.0	F074-24	N	7471A	7471A	IV
12-Jun-2012	SL-688-SA5C-SB-9.0-10.0	F074-24	N	TOTAL	6020	IV
12-Jun-2012	SL-688-SA5C-SB-9.0-10.0	F074-24R	N	3550B	8270C SIM	IV

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-687-SA5C-SB-4.0-5.0 **Collected:** 6/12/2012 2:10:00 **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	0.229	J	0.107	MDL	0.535	PQL	MG/KG	J	Z
BERYLLIUM	0.357	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
CADMIUM	0.0814	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
PHOSPHORUS	88.6		6.42	MDL	12.8	PQL	MG/KG	J	Q
THALLIUM	0.190	J	0.0535	MDL	0.428	PQL	MG/KG	J	Z

Sample ID: SL-688-SA5C-SB-4.0-5.0 **Collected:** 6/12/2012 2:50:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.294	J	0.111	MDL	0.556	PQL	MG/KG	J	Z
CADMIUM	0.170	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
PHOSPHORUS	134		6.68	MDL	13.4	PQL	MG/KG	J	Q
SILVER	0.0625	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
SODIUM	108	J	55.6	MDL	111	PQL	MG/KG	J	Z
THALLIUM	0.201	J	0.0556	MDL	0.445	PQL	MG/KG	J	Z

Sample ID: SL-688-SA5C-SB-9.0-10.0 **Collected:** 6/12/2012 3:00:00 **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	0.117	J	0.110	MDL	0.552	PQL	MG/KG	J	Z
BERYLLIUM	0.349	J	0.0552	MDL	0.552	PQL	MG/KG	J	Z
CADMIUM	0.151	J	0.0552	MDL	0.552	PQL	MG/KG	J	Z
MOLYBDENUM	0.239	J	0.0552	MDL	0.552	PQL	MG/KG	J	Z
PHOSPHORUS	56.8		6.63	MDL	13.3	PQL	MG/KG	J	Q
SODIUM	90.7	J	55.2	MDL	110	PQL	MG/KG	J	Z
THALLIUM	0.151	J	0.0552	MDL	0.442	PQL	MG/KG	J	Z

Sample ID: SL-689-SA5C-SB-4.0-5.0 **Collected:** 6/12/2012 1:25:00 **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	0.202	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BORON	2.93	J	2.68	MDL	5.36	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: SL-689-SA5C-SB-4.0-5.0 ***Collected:*** 6/12/2012 1:25:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.225	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
MOLYBDENUM	0.531	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
PHOSPHORUS	272		6.43	MDL	12.9	PQL	MG/KG	J	Q
THALLIUM	0.232	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z

Sample ID: SL-689-SA5C-SB-7.5-8.5 ***Collected:*** 6/12/2012 1:45:00 ***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	0.196	J	0.105	MDL	0.525	PQL	MG/KG	J	Z
BERYLLIUM	0.447	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
CADMIUM	0.170	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
MOLYBDENUM	0.498	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
PHOSPHORUS	188		6.30	MDL	12.6	PQL	MG/KG	J	Q
THALLIUM	0.200	J	0.0525	MDL	0.420	PQL	MG/KG	J	Z

Sample ID: SL-690-SA5C-SB-3.5-4.5 ***Collected:*** 6/12/2012 11:25:00 ***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	0.135	J	0.105	MDL	0.524	PQL	MG/KG	J	Z
BERYLLIUM	0.329	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
CADMIUM	0.0700	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
MOLYBDENUM	0.368	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
PHOSPHORUS	52.7		6.29	MDL	12.6	PQL	MG/KG	J	Q
THALLIUM	0.167	J	0.0524	MDL	0.419	PQL	MG/KG	J	Z

Sample ID: SL-692-SA5C-SB-5.0-6.0 ***Collected:*** 6/12/2012 10:15:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.225	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BERYLLIUM	0.479	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.167	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
PHOSPHORUS	132		6.44	MDL	12.9	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-692-SA5C-SB-5.0-6.0 *Collected:* 6/12/2012 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.243	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z

Sample ID: SL-693-SA5C-SB-4.0-5.0 *Collected:* 6/12/2012 9:25:00 *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	0.184	J	0.105	MDL	0.527	PQL	MG/KG	J	Z
BERYLLIUM	0.484	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
CADMIUM	0.205	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
MOLYBDENUM	0.510	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
PHOSPHORUS	285		6.32	MDL	12.6	PQL	MG/KG	J	Q
THALLIUM	0.217	J	0.0527	MDL	0.421	PQL	MG/KG	J	Z

Sample ID: SL-693-SA5C-SB-9.0-10.0 *Collected:* 6/12/2012 9:35:00 *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	0.193	J	0.107	MDL	0.533	PQL	MG/KG	J	Z
BERYLLIUM	0.520	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
BORON	2.79	J	2.66	MDL	5.33	PQL	MG/KG	J	Z
CADMIUM	0.222	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
PHOSPHORUS	269		6.39	MDL	12.8	PQL	MG/KG	J	Q
THALLIUM	0.219	J	0.0533	MDL	0.426	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-689-SA5C-SB-7.5-8.5 *Collected:* 6/12/2012 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
EFH(C21-C30)	3.5	J	2.7	MDL	5.5	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-693-SA5C-SB-4.0-5.0 *Collected:* 6/12/2012 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
EFH(C21-C30)	3.9	J	2.7	MDL	5.5	PQL	MG/KG	J	Z

Sample ID: SL-693-SA5C-SB-9.0-10.0 *Collected:* 6/12/2012 9:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.6	J	2.8	MDL	5.5	PQL	MG/KG	J	Z

Sample ID: SL-743-SA5C-SB-4.0-5.0 *Collected:* 6/12/2012 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
EFH(C21-C30)	3.9	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-743-SA5C-SB-9.0-10.0 *Collected:* 6/12/2012 8:37:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.7	J	2.7	MDL	5.5	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-690-SA5C-SB-3.5-4.5 *Collected:* 6/12/2012 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-690-SA5C-SB-3.5-4.5 *Collected:* 6/12/2012 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-693-SA5C-SB-4.0-5.0 *Collected:* 6/12/2012 9:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.7	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-693-SA5C-SB-4.0-5.0** ***Collected:*** **6/12/2012 9:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: **SL-693-SA5C-SB-9.0-10.0** ***Collected:*** **6/12/2012 9:35:00** ***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	5.6	J	5.5	MDL	22	PQL	UG/KG	J	Z

Sample ID: **SL-743-SA5C-SB-1.0-2.0** ***Collected:*** **6/12/2012 8:27:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.8	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-743-SA5C-SB-14.0-15.0 *Collected:* 6/12/2012 8:42:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
ACENAPHTHENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
ANTHRACENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.1	U	2.5	MDL	5.1	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
CHRYSENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
FLUORANTHENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
FLUORENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
NAPHTHALENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
PHENANTHRENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S
PYRENE	10	U	2.5	MDL	10	PQL	UG/KG	UJ	S

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-061212 *Collected:* 6/12/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	18	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F074

Surrogate Outlier Report

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-690-SA5C-SB-3.5-4.5	2-FLUOROBIPHENYL Nitrobenzene-d5	31.4 33.4	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J (all detects) UJ (all non-detects)
SL-693-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	38.5 35.6	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-743-SA5C-SB-1.0-2.0	2-FLUOROBIPHENYL Nitrobenzene-d5	33.4 37.4	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-743-SA5C-SB-14.0-15.0	2-FLUOROBIPHENYL Nitrobenzene-d5	37.3 39.5	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-688-SA5C-SB-4.0-5.0MSD (TOT) (SL-687-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-9.0-10.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0)	ALUMINUM	-	129	75.00-125.00	-	ALUMINUM	No Qual, >4x
SL-688-SA5C-SB-4.0-5.0MS (TOT) **SL-688-SA5C-SB-4.0-5.0MSD (TOT)** (SL-687-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-9.0-10.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0)	MANGANESE TITANIUM	15 -114	- -113	75.00-125.00 75.00-125.00	- -	MANGANESE TITANIUM	No Qual, >4x
SL-688-SA5C-SB-4.0-5.0MS (TOT) **SL-688-SA5C-SB-4.0-5.0MSD (TOT)** (SL-687-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-4.0-5.0 SL-688-SA5C-SB-9.0-10.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0)	IRON PHOSPHORUS	34 70	41 71	75.00-125.00 75.00-125.00	- -	IRON PHOSPHORUS	J(all detects) UJ(all non-detects) Fe, No Qual, >4x

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-061212	GASOLINE RANGE ORGANICS (C5-C12)	J	18	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-687-SA5C-SB-4.0-5.0	ANTIMONY	J	0.229	0.535	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.357	0.535	PQL	MG/KG	
	CADMIUM	J	0.0814	0.535	PQL	MG/KG	
	THALLIUM	J	0.190	0.428	PQL	MG/KG	
SL-688-SA5C-SB-4.0-5.0	ANTIMONY	J	0.294	0.556	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.170	0.556	PQL	MG/KG	
	SILVER	J	0.0625	0.556	PQL	MG/KG	
	SODIUM	J	108	111	PQL	MG/KG	
	THALLIUM	J	0.201	0.445	PQL	MG/KG	
SL-688-SA5C-SB-9.0-10.0	ANTIMONY	J	0.117	0.552	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.349	0.552	PQL	MG/KG	
	CADMIUM	J	0.151	0.552	PQL	MG/KG	
	MOLYBDENUM	J	0.239	0.552	PQL	MG/KG	
	SODIUM	J	90.7	110	PQL	MG/KG	
	THALLIUM	J	0.151	0.442	PQL	MG/KG	
SL-689-SA5C-SB-4.0-5.0	ANTIMONY	J	0.202	0.536	PQL	MG/KG	J (all detects)
	BORON	J	2.93	5.36	PQL	MG/KG	
	CADMIUM	J	0.225	0.536	PQL	MG/KG	
	MOLYBDENUM	J	0.531	0.536	PQL	MG/KG	
	THALLIUM	J	0.232	0.429	PQL	MG/KG	
SL-689-SA5C-SB-7.5-8.5	ANTIMONY	J	0.196	0.525	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.447	0.525	PQL	MG/KG	
	CADMIUM	J	0.170	0.525	PQL	MG/KG	
	MOLYBDENUM	J	0.498	0.525	PQL	MG/KG	
	THALLIUM	J	0.200	0.420	PQL	MG/KG	
SL-690-SA5C-SB-3.5-4.5	ANTIMONY	J	0.135	0.524	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.329	0.524	PQL	MG/KG	
	CADMIUM	J	0.0700	0.524	PQL	MG/KG	
	MOLYBDENUM	J	0.368	0.524	PQL	MG/KG	
	THALLIUM	J	0.167	0.419	PQL	MG/KG	
SL-692-SA5C-SB-5.0-6.0	ANTIMONY	J	0.225	0.536	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.479	0.536	PQL	MG/KG	
	CADMIUM	J	0.167	0.536	PQL	MG/KG	
	THALLIUM	J	0.243	0.429	PQL	MG/KG	
SL-693-SA5C-SB-4.0-5.0	ANTIMONY	J	0.184	0.527	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.484	0.527	PQL	MG/KG	
	CADMIUM	J	0.205	0.527	PQL	MG/KG	
	MOLYBDENUM	J	0.510	0.527	PQL	MG/KG	
	THALLIUM	J	0.217	0.421	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F074 **Laboratory: EMXT**

EDD Filename: 12F074 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-693-SA5C-SB-9.0-10.0	ANTIMONY	J	0.193	0.533	PQL	MG/KG	
	BERYLLIUM	J	0.520	0.533	PQL	MG/KG	
	BORON	J	2.79	5.33	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.222	0.533	PQL	MG/KG	
	THALLIUM	J	0.219	0.426	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-689-SA5C-SB-7.5-8.5	EFH(C21-C30)	J	3.5	5.5	PQL	MG/KG	J (all detects)
SL-693-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	3.9	5.5	PQL	MG/KG	J (all detects)
SL-693-SA5C-SB-9.0-10.0	EFH(C21-C30)	J	4.6	5.5	PQL	MG/KG	J (all detects)
SL-743-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	3.9	5.6	PQL	MG/KG	J (all detects)
SL-743-SA5C-SB-9.0-10.0	EFH(C21-C30)	J	4.7	5.5	PQL	MG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-693-SA5C-SB-9.0-10.0	BENZO(A)ANTHRACENE	J	5.6	22	PQL	UG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 12, 2012

LDC Report Date: November 14, 2012

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F074

Sample Identification

SL-690-SA5C-SB-3.5-4.5
SL-692-SA5C-SB-5.0-6.0
SL-743-SA5C-SB-1.0-2.0
SL-743-SA5C-SB-4.0-5.0
SL-743-SA5C-SB-9.0-10.0
SL-743-SA5C-SB-14.0-15.0
SL-693-SA5C-SB-4.0-5.0
SL-693-SA5C-SB-9.0-10.0
SL-687-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-7.5-8.5
SL-688-SA5C-SB-9.0-10.0
SL-688-SA5C-SB-4.0-5.0
SL-688-SA5C-SB-4.0-5.0MS
SL-688-SA5C-SB-4.0-5.0MSD

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard.

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.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No semivolatile contaminants were found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

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

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-690-SA5C-SB-3.5-4.5	Nitrobenzene-d5 2-Fluorobiphenyl	33.4 (40-130) 31.4 (45-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-743-SA5C-SB-1.0-2.0	Nitrobenzene-d5 2-Fluorobiphenyl	37.4 (40-130) 33.4 (45-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-743-SA5C-SB-14.0-15.0	Nitrobenzene-d5 2-Fluorobiphenyl	39.5 (40-130) 37.3 (45-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A
SL-693-SA5C-SB-4.0-5.0	Nitrobenzene-d5 2-Fluorobiphenyl	35.6 (40-130) 38.5 (45-130)	All TCL compounds	J (all detects) UJ (all non-detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

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

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 12F074	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG 12F074

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-743-SA5C-SB-1.0-2.0 SL-743-SA5C-SB-14.0-15.0 SL-693-SA5C-SB-4.0-5.0	All TCL compounds	J (all detects) UJ (all non-detects)	A	Surrogate spikes (%R) (S)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-743-SA5C-SB-1.0-2.0 SL-743-SA5C-SB-4.0-5.0 SL-743-SA5C-SB-9.0-10.0 SL-743-SA5C-SB-14.0-15.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0 SL-687-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-688-SA5C-SB-9.0-10.0 SL-688-SA5C-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

LDC #: 28578M2b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12
SDG #: 12F074 Level IV Page: 1 of 7
Laboratory: EMAX Laboratories, Inc. Reviewer: F
SUOA 2nd Reviewer: A

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/12/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 2T
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.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	EB = EB-061412 SDG # 12F102 FB = FB-060512 SDG # 12F037

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-690-SA5C-SB-3.5-4.5	11	SL-689-SA5C-SB-7.5-8.5	21	MBLK1S	31	
2	SL-692-SA5C-SB-5.0-6.0	12	SL-688-SA5C-SB-9.0-10.0	22	MBLK2S	32	
3	SL-743-SA5C-SB-1.0-2.0	13	SL-688-SA5C-SB-4.0-5.0	23		33	
4	SL-743-SA5C-SB-4.0-5.0	14	SL-688-SA5C-SB-4.0-5.0MS	24		34	
5	SL-743-SA5C-SB-9.0-10.0	15	SL-688-SA5C-SB-4.0-5.0MSD	25		35	
6	SL-743-SA5C-SB-14.0-15.0	16		26		36	
7	SL-693-SA5C-SB-4.0-5.0	17		27		37	
8	SL-693-SA5C-SB-9.0-10.0	18		28		38	
9	SL-687-SA5C-SB-4.0-5.0	19		29		39	
10	SL-689-SA5C-SB-4.0-5.0	20		30		40	

LDC #: 28578M2b

VALIDATION FINDINGS CHECKLIST

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

Method: Semivolatiles (EPA SW 846 Method 8270C)

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

LDC #: 26578M2D

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 #: 28578M2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

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

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

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	NBZ	33.4 (40-130)	J/UJ/A (S) all TCL
			FBP	31.4 (45-130)	J
				( )	
		3	↓	37.4 (↓)	↓
			↓	33.4 (↓)	↓
				( )	
		6	↓	39.5 (↓)	↓
			↓	37.3 (↓)	↓
				( )	
		7	↓	35.6 (↓)	↓
			↓	38.5 (↓)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* 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

	QC Limits (Soil)	QC Limits (Water)
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 #: 28578#26 M

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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	SVE9E24S	5/24/12	~~Phenol (1st internal standard)~~ (1ST)						
			Naphthalene (~~2nd~~ internal standard)	4.035	4.035	4.003	4.003	6.80	6.80
			Anthracene (2nd) Fluorene (~~3rd~~ internal standard)	1.296	1.296	1.278	1.278	5.89	5.89
			Benzo (a) Pyrene (3rd) ~~Pentachlorophenol~~ (4th internal standard)	1.210	1.210	1.069	1.069	13.52	13.52
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
2	SVE7F26S	6/26/12	~~Phenol (1st internal standard)~~	3.696	3.696	3.768	3.768	7.25	7.25
			Naphthalene (~~2nd~~ internal standard) (1ST)						
			Anthracene (2nd) Fluorene (~~3rd~~ internal standard)	1.130	1.130	1.128	1.128	6.73	6.73
			Benzo(a)pyrene (3rd) ~~Pentachlorophenol~~ (4th internal standard)	1.084	1.084	1.010	1.010	11.86	11.86
			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 #: 28578M26

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

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	RF1173	6/29/12	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.768	3841	3.841	1.9	1.9
			~~Fluorene~~ Anthracene (3rd internal standard)	1.128	1.129		0.1	
			~~Pentachlorophenol~~ Benzo(g)pyrene (4th internal standard)	1.010	1.134		12.3	
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	RFL325	6/25/12	~~Phenol (1st internal standard)~~	4.003	3.936	3.936	1.7	1.7
			Naphthalene (2nd internal standard)	1.278	1.192	1.192	6.7	6.7
			Fluorene (3rd internal standard)	1.069	1.160	1.160	8.5	8.5
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

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

LDC #: 28578M26

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

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

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #8 2X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	2.51	50.2	50.2	0
2-Fluorobiphenyl	10	2.37	47.3	47.3	✓
Terphenyl-d14	10	3.58	71.6	71.6	✓
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 #: 28578MB

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

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

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

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

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 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
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	373	373	ND	272	264	73	73	71	71	3	3
Pentachlorophenol											
Pyrene	373	373	ND	344	361	92	92	97	97	5	5

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

LDC #: 28578M26

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

LCS/LCSD samples: WA 10

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	224	234	67	67	70	70	4	4
Pentachlorophenol										
Pyrene	↓	↓	293	300	88	88	90	90	2	2

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

LDC #: 28578M2b

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. #8, Benzo (a) anthracene

Final Conc. = $\frac{(0.07625)(1)(2)(1000)(\quad)}{(30.01)(0.907)(\quad)(\quad)(\quad)(\quad)}$

= 5-6 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification
		$\frac{17374}{3981676} = \frac{1.16637}{40}$ (X)	+0.00214		
		X = 0.07625			

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 12, 2012

LDC Report Date: November 14, 2012

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F074

Sample Identification

SL-690-SA5C-SB-3.5-4.5
SL-692-SA5C-SB-5.0-6.0
SL-693-SA5C-SB-4.0-5.0
SL-693-SA5C-SB-9.0-10.0
SL-687-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-7.5-8.5
SL-688-SA5C-SB-9.0-10.0
SL-688-SA5C-SB-4.0-5.0

Introduction

This data review covers 9 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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.

Continuing calibration was performed at required frequencies.

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

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
6/18/12 (14:08)	CCV	STX CLP1	Aroclor-1260	23	MBLK15	Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	J (all detects) UJ (all non-detects)	A

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

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

V. Blanks

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

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation 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 12F074	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

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

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG 12F074

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0 SL-687-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-688-SA5C-SB-9.0-10.0 SL-688-SA5C-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

LDC #: 28578M3b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12
SDG #: 12F074 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/12/12
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	1/1 RSD ≤ 20
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specific
VIII.	Laboratory control samples	A	yes 1/1
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	ND	EB = EB-061412 SDG# 12F102 EB = FB-060512 SDG# 12F037

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: 801L

1	SL-690-SA5C-SB-3.5-4.5	11	MBLK1S	21		31	
2	SL-692-SA5C-SB-5.0-6.0	12		22		32	
3	SL-693-SA5C-SB-4.0-5.0	13		23		33	
4	SL-693-SA5C-SB-9.0-10.0	14		24		34	
5	SL-687-SA5C-SB-4.0-5.0	15		25		35	
6	SL-689-SA5C-SB-4.0-5.0	16		26		36	
7	SL-689-SA5C-SB-7.5-8.5	17		27		37	
8	SL-688-SA5C-SB-9.0-10.0	18		28		38	
9	SL-688-SA5C-SB-4.0-5.0	19		29		39	
10		20		30		40	

Notes:

LDC #: 28578M3h
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: PA
2nd Reviewer:

Method: ✓ GC ____ HPLC

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

_DC #: 38578M3D
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

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

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. Aroclor - 1262	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. 1 - 1268	NN.

Notes: _____

LDC #: 28578M3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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

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 ≤15.0% 20%?
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 ≤ 15.0 20)	RT (limit)	Associated Samples	Qualifications
	6/18/12	CCV	STX CLP 1	BB	23	( )	MBLK15	J/UJ/A (C)
	14:08					( )		qual:
						( )		Y, Z, AA, BB only
						( )		EE, FF
						( )		
						( )		
						( )		
						( )		
						( )		
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LDC #: 28578&3b (M)
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 (1/00std)	Recalculated CF (10^6 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	SF01021A	6/01/12	PCB 1260-1 cup1	9453	9453	10034.6	10034.6	18.4	18.4
			1 cup2	14768	14768	16004.7	16004.7	15.4	15.4
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 #: 28578M36
SDG #: w cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	SF18007A	6/18/12	PCB 1260 STX CLP I	500.0	386.703	386.703	23	23
			STX CLP II	500.0	480.577	480.577	4	4
2	SF18024A	6/18/12	↓	500.0	444.761	444.761	11	11
				500	571.997	571.997	14	14
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 #: 28528M3b
SDG #: ~~—~~

Reviewer: B
2nd reviewer: ✓

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

METHOD: ✓ GC ___ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
DCB	ch B	40	38.87	97.2	97.2	0
TCMX	↓	↓	40.35	101	101	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 #: 25528M3b
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 = I LCS - LCSD I * 2/(LCS + LCSD)

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

LCS/LCSD samples: LCS 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)										
Aroclor 1260	167	167	152	144	94	94	82	86	8	8

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 #: 25578M3b
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. ______________ Compound Name ______________

Concentration = ______________

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: ______________

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 12, 2012

LDC Report Date: October 31, 2012

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F074

Sample Identification

SL-690-SA5C-SB-3.5-4.5
SL-692-SA5C-SB-5.0-6.0
SL-693-SA5C-SB-4.0-5.0
SL-693-SA5C-SB-9.0-10.0
SL-687-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-7.5-8.5
SL-688-SA5C-SB-9.0-10.0
SL-688-SA5C-SB-4.0-5.0
SL-690-SA5C-SB-3.5-4.5MS
SL-690-SA5C-SB-3.5-4.5MSD
SL-688-SA5C-SB-4.0-5.0MS
SL-688-SA5C-SB-4.0-5.0MSD

Introduction

This data review covers 13 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020 and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

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

III. Calibration

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.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-061412	6/14/12	Boron	0.00551 ug/L	All samples in SDG 12F074

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-060512	6/5/12	Aluminum Calcium Copper	0.0270 ug/L 0.0263 ug/L 0.000954 ug/L	All samples in SDG 12F074

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-688-SA5C-SB-4.0-5.0MS/MSD (All samples in SDG 12F074)	Phosphorus	70 (75-125) -	71 (75-125)	-	J (all detects) UJ (all non-detects)	A

VII. Duplicate Sample Analysis

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

VIII. Laboratory Control Samples (LCS)

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

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

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 12F074	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

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

XIV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG 12F074

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0 SL-687-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-688-SA5C-SB-9.0-10.0 SL-688-SA5C-SB-4.0-5.0	Phosphorus	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0 SL-687-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-688-SA5C-SB-9.0-10.0 SL-688-SA5C-SB-4.0-5.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

LDC #: 28578M4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/30/12

SDG #: 12F074 Level IV Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: AL

2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/12/12
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB= EB-060412 (12F102) FB= FB-060512 (12F037)

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-690-SA5C-SB-3.5-4.5	11	SL-690-SA5C-SB-3.5-4.5MSD	21		31	
2	SL-692-SA5C-SB-5.0-6.0	12	SL-688-SA5C-SB-4.0-5.0MS	22		32	
3	SL-693-SA5C-SB-4.0-5.0	13	SL-688-SA5C-SB-4.0-5.0MSD	23		33	
4	SL-693-SA5C-SB-9.0-10.0	14		24		34	
5	SL-687-SA5C-SB-4.0-5.0	15		25		35	
6	SL-689-SA5C-SB-4.0-5.0	16		26		36	
7	SL-689-SA5C-SB-7.5-8.5	17		27		37	
8	SL-688-SA5C-SB-9.0-10.0	18		28		38	
9	SL-688-SA5C-SB-4.0-5.0	19		29		39	
10	SL-690-SA5C-SB-3.5-4.5MS	20		30		40	

Notes: _____

LDC #: 28578M4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: W

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

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 28578MV4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	✓		✓
Target analytes were detected in the field blanks.	✓		✓	

LDC #: 28578M4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

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

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-9		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
QC:10,11		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
12,13		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 #: 28578N4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification										
	EB-061412	Action Limit	No Qualifiers									
B	0.00551	1.3775										

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 #: 28578M4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

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

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

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

LEVEL IV ONLY:

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

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	12/13	S	P	70	71		All	J (J/A CQ)

Comments: Al, Fe, Mn, Ti 7Y X

MSD.4SW

LDC #: 28578M4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: QR
2nd Reviewer: W

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

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

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
ICV	ICP/MS (Initial calibration)	Cu	31.07	30	104	104	Y
ICV	CVAA (Initial calibration)	Hg	1.89	2	95	-	
	ICP (Continuing calibration)						
CCV2	ICP/MS (Continuing calibration)	As	25.10	25	100	100	
CCV2	CVAA (Continuing calibration)	Hg	5.23	5	105	-	
	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 #: 28578M4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: QR
2nd Reviewer:

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	Sr	18.29	20	91	91	Y
LCS	Laboratory control sample	Be	24.5	25	98	98	
12	Matrix spike	Se	(SSR-SR) 24.1	27.4	88	88	
12D3	Duplicate	Sr	45.1	45.9	2	2	
9	ICP serial dilution	Ni	9.03	9.64	7	7	

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

LDC #: 25578M 4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

Y N N/A 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 Ca 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:

$$\frac{100mL(10)(3375ug/L)}{0.918(2.08g)(1000)} = 1767.5mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/Kg)	Calculated Concentration (mg/Kg)	Acceptable (Y/N)
	1	Al	13700	13700	Y
		Sb	0.135	0.135	
		As	3.54	3.54	
		Ba	60.1	60.1	
		Be	0.329	0.329	
		Cd	0.0700	0.0700	
		Ca	1770	1770	
		Cr	12.4	12.4	
		Co	1.91	1.91	
		Cu	3.51	3.51	
		Fe	16200	16200	
		Pb	5.07	5.07	
		Mg	2910	2910	
		Mn	66.9	66.9	
		Mo	0.368	0.368	
		Ni	3.60	3.60	
		K	1170	1170	
		Na	1120	1120	
		Sr	22.9	22.9	
		Tl	0.167	0.167	
		Ti	657	657	
		V	23.8	23.8	
		Zn	32.1	32.1	
		Li	9.36	9.36	
		P	52.7	52.7	Y

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 12, 2012

LDC Report Date: November 14, 2012

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F074

Sample Identification

SL-690-SA5C-SB-4.5
SL-692-SA5C-SB-6.0
SL-743-SA5C-SB-2.0
SL-743-SA5C-SB-5.0
SL-743-SA5C-SB-10.0
SL-743-SA5C-SB-15.0
SL-693-SA5C-SB-5.0
SL-693-SA5C-SB-10.0
TB-061212
SL-687-SA5C-SB-5.0
SL-689-SA5C-SB-5.0
SL-689-SA5C-SB-8.5
SL-688-SA5C-SB-10.0
SL-688-SA5C-SB-5.0

Introduction

This data review covers 13 soil samples and one water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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-061212 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
TB-061212	6/12/12	Gasoline range organics (C5-C12)	18 ug/L	All soil samples in SDG 12F074

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-061412	6/14/12	Gasoline range organics (C5-C12)	49 ug/L	All soil samples in SDG 12F074

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-060512	6/5/12	Gasoline range organics (C5-C12)	51 ug/L	All soil samples in SDG 12F074

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. 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 12F074	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 12F074

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F074	SL-690-SA5C-SB-4.5 SL-692-SA5C-SB-6.0 SL-743-SA5C-SB-2.0 SL-743-SA5C-SB-5.0 SL-743-SA5C-SB-10.0 SL-743-SA5C-SB-15.0 SL-693-SA5C-SB-5.0 SL-693-SA5C-SB-10.0 TB-061212 SL-687-SA5C-SB-5.0 SL-689-SA5C-SB-5.0 SL-689-SA5C-SB-8.5 SL-688-SA5C-SB-10.0 SL-688-SA5C-SB-5.0	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 12F074

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

LDC #: 28578M7 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12
SDG #: 12F074 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: 6/12/12
II	Initial calibration	A	%D ≤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/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	SW	TB=9 EB=EB-061412 SDG# 12F102 FB=FB-060512 SDG# 12F037

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-690-SA5C-SB-4.5	11	SL-689-SA5C-SB-5.0	21	MB1K1W	31	
2	SL-692-SA5C-SB-6.0	12	SL-689-SA5C-SB-8.5	22	MB1K1S	32	
3	SL-743-SA5C-SB-2.0	13	SL-688-SA5C-SB-10.0	23		33	
4	SL-743-SA5C-SB-5.0	14	SL-688-SA5C-SB-5.0	24		34	
5	SL-743-SA5C-SB-10.0	15		25		35	
6	SL-743-SA5C-SB-15.0	16		26		36	
7	SL-693-SA5C-SB-5.0	17		27		37	
8	SL-693-SA5C-SB-10.0	18		28		38	
9	TB-061212 W	19		29		39	
10	SL-687-SA5C-SB-5.0	20		30		40	

Notes: _____

LDC #: 78578M7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Method: ✓ GC _____ HPLC

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

.DC #: 78578M7
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

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

LDC #: 28578M7

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

METHOD: GC __ HPLC
Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:** ug/kg
Sampling date: 6/12
Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: TB
Associated Samples: All soils (All ND)

Compound	Blank ID	Blank ID	Sample Identification							
	9									
Gasoline Range Organics (C5-C12)	18									
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 #: 28578M7

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

METHOD: ✓ **GC** __ **HPLC**

FB = FB-060512
EB = EB-061412

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:** ug/kg
Sampling date: ~~060512~~ 6/5/12
Field blank type: (circle one) ~~Field Blank~~ / Trip Blank / Atmospheric Blank / Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: FB

Associated Samples: All soils (all ND)

Compound	Blank ID	Blank ID	Sample Identification							
	FB	EB								
Gasoline Range Organics (C5-C12)	49	51								
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 #: 38578M7
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Reported CF (5pt/std)	Recalculated CF (5pt/std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/18/12	GRO a-C12	29479	29479	27004.2	27004.2	10.1	10.1
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 #: 48578M7
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

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

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	EF13003A	6/13/12	GRO a-c12	500.0	545.26	545.26	9	9
	EF13012A	6/13/12	↓	500.0	502.80	502.80	1	1
2								
	EF13023A	6/14/12	↓	500.0	462.57	462.57	7	7
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 #: 28528M7
SDG #: all covers

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

Reviewer: FO
2nd Reviewer:

METHOD: ✓ GC __HPLC

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

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

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

LCS/LCSD samples: 1cs/1D

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)	25.0	25.0	21.8	22.5	87	87	90	90	3	3
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 #: 21157817
SDG #: pu cover

Reviewer: [illegible]
2nd Reviewer: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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. ______________ Compound Name ND

Concentration = ______________

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: ______________

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: June 12, 2012

LDC Report Date: November 14, 2012

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12F074

Sample Identification

SL-690-SA5C-SB-3.5-4.5
SL-692-SA5C-SB-5.0-6.0
SL-743-SA5C-SB-1.0-2.0
SL-743-SA5C-SB-4.0-5.0
SL-743-SA5C-SB-9.0-10.0
SL-743-SA5C-SB-14.0-15.0
SL-693-SA5C-SB-4.0-5.0
SL-693-SA5C-SB-9.0-10.0
SL-687-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-4.0-5.0
SL-689-SA5C-SB-7.5-8.5
SL-688-SA5C-SB-9.0-10.0
SL-688-SA5C-SB-4.0-5.0
SL-692-SA5C-SB-5.0-6.0MS
SL-692-SA5C-SB-5.0-6.0MSD

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

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

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

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

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractables contaminants were found in the method blanks.

Sample EB-061412 (from SDG 12F102) was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

Sample FB-060512 (from SDG 12F037) was identified as a field blank. No total petroleum hydrocarbons as extractable contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12F074	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 12F074

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12F074	SL-690-SA5C-SB-3.5-4.5 SL-692-SA5C-SB-5.0-6.0 SL-743-SA5C-SB-1.0-2.0 SL-743-SA5C-SB-4.0-5.0 SL-743-SA5C-SB-9.0-10.0 SL-743-SA5C-SB-14.0-15.0 SL-693-SA5C-SB-4.0-5.0 SL-693-SA5C-SB-9.0-10.0 SL-687-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-4.0-5.0 SL-689-SA5C-SB-7.5-8.5 SL-688-SA5C-SB-9.0-10.0 SL-688-SA5C-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 12F074

No Sample Data Qualified in this SDG

LDC #: 28578M8 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/22/12
SDG #: 12F074 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: 6/12/12
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	MD	EB = EB-061412 SDG # 12F102 FB = FB-060512 SDG # 12F037

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-690-SA5C-SB-3.5-4.5	11	SL-689-SA5C-SB-7.5-8.5	21	MB01615	31	
2	SL-692-SA5C-SB-5.0-6.0	12	SL-688-SA5C-SB-9.0-10.0	22		32	
3	SL-743-SA5C-SB-1.0-2.0	13	SL-688-SA5C-SB-4.0-5.0	23		33	
4	SL-743-SA5C-SB-4.0-5.0	14	SL-692-SA5C-SB-5.0-6.0MS	24		34	
5	SL-743-SA5C-SB-9.0-10.0	15	SL-692-SA5C-SB-5.0-6.0MSD	25		35	
6	SL-743-SA5C-SB-14.0-15.0	16		26		36	
7	SL-693-SA5C-SB-4.0-5.0	17		27		37	
8	SL-693-SA5C-SB-9.0-10.0	18		28		38	
9	SL-687-SA5C-SB-4.0-5.0	19		29		39	
10	SL-689-SA5C-SB-4.0-5.0	20		30		40	

Notes:

DC #: 78578MS
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

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

DC #: 25578MS
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 #: 28528 MS
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: EJ
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 (MW std)	Recalculated CF (MW std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	2/01/12	Total EPH (c8-c40)	2297	2297	23084-1	23084-1	10.8	10.8
2									
3									
4									

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

LDC #: 78578M8
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: SA

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	LF/5015A	6/15/12	Total EFH (C8-C40	500	512.96	512.96	3	3
2	LF/5007A	6/15/12	"	500	495.78	493.78	1	1
3								
4								

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

LDC #: [illegible]

SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: ~~#7~~ 13

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Bromobenzene	DB-5	100	64.374	64.4	64.4	0
Hexacosane	↓	25	18.403	73.6	73.6	0

Sample ID: _____

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

Sample ID: _____

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

LDC #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: __ GC __ HPLC

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

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 14 & 15

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)											
TOTAL EFH (C8-C40)	545	545	ND	460	448	84	84	82	82	3	3

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

LDC #: 28578MS
SDG #: all 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
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 1 to 10

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Total EPH (c8-c40)	500	500	452	478	90	90	86	86	5	5

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 #: 28578M1

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. #4 Compound Name EFH (e21-c30)

Concentration = $\frac{(80941)(10)}{(23684.06)(10.01)(0.897)}$

= 3.9 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

SAMPLE DELIVERY GROUP

12F093

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2012	TB-061312	F093-18	TB	5030B	8015B GRO	III
13-Jun-2012	SL-684-SA5C-SB-3.5	F093-06	N	5035	8015B GRO	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5	F093-05	N	3550B	8015B EFH	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5	F093-05	N	3550B	8082	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5	F093-05	N	3550B	8270C SIM	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5	F093-05	N	7471A	7471A	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5	F093-05	N	TOTAL	6020	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5MS	F093-05M	MS	3550B	8082	III
13-Jun-2012	SL-684-SA5C-SB-2.5-3.5MSD	F093-05S	MSD	3550B	8082	III
13-Jun-2012	SL-685-SA5C-SB-8.0	F093-10	N	5035	8015B GRO	III
13-Jun-2012	SL-685-SA5C-SB-7.0-8.0	F093-09	N	3550B	8015B EFH	III
13-Jun-2012	SL-685-SA5C-SB-7.0-8.0	F093-09	N	3550B	8082	III
13-Jun-2012	SL-685-SA5C-SB-7.0-8.0	F093-09	N	3550B	8270C SIM	III
13-Jun-2012	SL-685-SA5C-SB-7.0-8.0	F093-09	N	7471A	7471A	III
13-Jun-2012	SL-685-SA5C-SB-7.0-8.0	F093-09	N	TOTAL	6020	III
13-Jun-2012	SL-685-SA5C-SB-5.0	F093-08	N	5035	8015B GRO	III
13-Jun-2012	SL-685-SA5C-SB-4.0-5.0	F093-07	N	3550B	8015B EFH	III
13-Jun-2012	SL-685-SA5C-SB-4.0-5.0	F093-07	N	3550B	8082	III
13-Jun-2012	SL-685-SA5C-SB-4.0-5.0	F093-07	N	3550B	8270C SIM	III
13-Jun-2012	SL-685-SA5C-SB-4.0-5.0	F093-07	N	7471A	7471A	III
13-Jun-2012	SL-685-SA5C-SB-4.0-5.0	F093-07	N	TOTAL	6020	III
13-Jun-2012	SL-683-SA5C-SB-5.0	F093-02	N	5035	8015B GRO	III
13-Jun-2012	SL-683-SA5C-SB-4.0-5.0	F093-01	N	3550B	8015B EFH	III
13-Jun-2012	SL-683-SA5C-SB-4.0-5.0	F093-01	N	3550B	8082	III
13-Jun-2012	SL-683-SA5C-SB-4.0-5.0	F093-01	N	3550B	8270C SIM	III
13-Jun-2012	SL-683-SA5C-SB-4.0-5.0	F093-01	N	7471A	7471A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2012	SL-683-SA5C-SB-4.0-5.0	F093-01	N	TOTAL	6020	III
13-Jun-2012	SL-683-SA5C-SB-8.0	F093-04	N	5035	8015B GRO	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0	F093-03	N	3550B	8015B EFH	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0	F093-03	N	3550B	8082	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0	F093-03	N	3550B	8270C SIM	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0	F093-03	N	7471A	7471A	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0	F093-03	N	TOTAL	6020	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0MS	F093-03M	MS	3550B	8015B EFH	III
13-Jun-2012	SL-683-SA5C-SB-7.0-8.0MSD	F093-03S	MSD	3550B	8015B EFH	III
13-Jun-2012	SL-720-SA5C-SB-5.5	F093-15	N	5035	8015B GRO	III
13-Jun-2012	SL-720-SA5C-SB-4.5-5.5	F093-16	N	3550B	8015B EFH	III
13-Jun-2012	SL-720-SA5C-SB-4.5-5.5	F093-16	N	3550B	8082	III
13-Jun-2012	SL-720-SA5C-SB-4.5-5.5	F093-16	N	3550B	8270C SIM	III
13-Jun-2012	SL-720-SA5C-SB-4.5-5.5	F093-16	N	7471A	7471A	III
13-Jun-2012	SL-720-SA5C-SB-4.5-5.5	F093-16	N	TOTAL	6020	III
13-Jun-2012	SL-718-SA5C-SB-4.0-5.0	F093-13	N	3550B	8082	III
13-Jun-2012	SL-718-SA5C-SB-4.0-5.0	F093-13	N	7471A	7471A	III
13-Jun-2012	SL-718-SA5C-SB-4.0-5.0	F093-13	N	TOTAL	6020	III
13-Jun-2012	SL-718-SA5C-SB-8.0-9.0	F093-14	N	3550B	8082	III
13-Jun-2012	SL-718-SA5C-SB-8.0-9.0	F093-14	N	7471A	7471A	III
13-Jun-2012	SL-718-SA5C-SB-8.0-9.0	F093-14	N	TOTAL	6020	III
13-Jun-2012	SL-722-SA5C-SB-7.0	F093-12	N	5035	8015B GRO	III
13-Jun-2012	SL-722-SA5C-SB-6.0-7.0	F093-11	N	3550B	8015B EFH	III
13-Jun-2012	SL-722-SA5C-SB-6.0-7.0	F093-11	N	3550B	8082	III
13-Jun-2012	SL-722-SA5C-SB-6.0-7.0	F093-11	N	3550B	8270C SIM	III
13-Jun-2012	SL-722-SA5C-SB-6.0-7.0	F093-11	N	7471A	7471A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2012	SL-722-SA5C-SB-6.0-7.0	F093-11	N	TOTAL	6020	III
13-Jun-2012	SL-717-SA5C-SB-6.0-7.0	F093-17	N	3550B	8082	III
13-Jun-2012	SL-717-SA5C-SB-6.0-7.0	F093-17	N	7471A	7471A	III
13-Jun-2012	SL-717-SA5C-SB-6.0-7.0	F093-17	N	TOTAL	6020	III
13-Jun-2012	SL-717-SA5C-SB-6.0-7.0MS	F093-17M	MS	TOTAL	6020	III
13-Jun-2012	SL-717-SA5C-SB-6.0-7.0MSD	F093-17S	MSD	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-683-SA5C-SB-4.0-5.0** ***Collected:*** **6/13/2012 9:31:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.236	J	0.104	MDL	0.520	PQL	MG/KG	J	Z
CADMIUM	0.131	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
CALCIUM	1530		10.4	MDL	20.8	PQL	MG/KG	J	A
IRON	18800		10.4	MDL	104	PQL	MG/KG	J	A
THALLIUM	0.318	J	0.0520	MDL	0.416	PQL	MG/KG	J	Z

Sample ID: **SL-683-SA5C-SB-7.0-8.0** ***Collected:*** **6/13/2012 9:45:00** ***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	0.281	J	0.109	MDL	0.543	PQL	MG/KG	J	Z
CADMIUM	0.117	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z
CALCIUM	1570		10.9	MDL	21.7	PQL	MG/KG	J	A
IRON	20100		10.9	MDL	109	PQL	MG/KG	J	A

Sample ID: **SL-684-SA5C-SB-2.5-3.5** ***Collected:*** **6/13/2012 8:18:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.229	J	0.104	MDL	0.522	PQL	MG/KG	J	Z
CADMIUM	0.177	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
CALCIUM	5100		10.4	MDL	20.9	PQL	MG/KG	J	A
IRON	21400		10.4	MDL	104	PQL	MG/KG	J	A
MOLYBDENUM	0.358	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
THALLIUM	0.261	J	0.0522	MDL	0.418	PQL	MG/KG	J	Z

Sample ID: **SL-685-SA5C-SB-4.0-5.0** ***Collected:*** **6/13/2012 9:00:00** ***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	0.269	J	0.103	MDL	0.514	PQL	MG/KG	J	Z
CADMIUM	0.153	J	0.0514	MDL	0.514	PQL	MG/KG	J	Z
CALCIUM	2100		10.3	MDL	20.6	PQL	MG/KG	J	A
IRON	18400		10.3	MDL	103	PQL	MG/KG	J	A
THALLIUM	0.231	J	0.0514	MDL	0.411	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-685-SA5C-SB-7.0-8.0** ***Collected:*** **6/13/2012 8:48:00** ***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	0.205	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
CADMIUM	0.144	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
CALCIUM	1890		11.2	MDL	22.3	PQL	MG/KG	J	A
IRON	19800		11.2	MDL	112	PQL	MG/KG	J	A
MOLYBDENUM	0.408	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
THALLIUM	0.227	J	0.0558	MDL	0.447	PQL	MG/KG	J	Z

Sample ID: **SL-717-SA5C-SB-6.0-7.0** ***Collected:*** **6/13/2012 2:45:00** ***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	0.327	J	0.106	MDL	0.532	PQL	MG/KG	J	Z
CADMIUM	0.257	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
CALCIUM	5350		10.6	MDL	21.3	PQL	MG/KG	J	A
IRON	27900		10.6	MDL	106	PQL	MG/KG	J	A
MOLYBDENUM	0.483	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
THALLIUM	0.316	J	0.0532	MDL	0.425	PQL	MG/KG	J	Z

Sample ID: **SL-718-SA5C-SB-4.0-5.0** ***Collected:*** **6/13/2012 1:08:00** ***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	0.178	J	0.0997	MDL	0.498	PQL	MG/KG	J	Z
BERYLLIUM	0.212	J	0.0498	MDL	0.498	PQL	MG/KG	J	Z
CADMIUM	0.206	J	0.0498	MDL	0.498	PQL	MG/KG	J	Z
CALCIUM	7250		9.97	MDL	19.9	PQL	MG/KG	J	A
IRON	10200		9.97	MDL	99.7	PQL	MG/KG	J	A
SILVER	0.390	J	0.0498	MDL	0.498	PQL	MG/KG	J	Z
SODIUM	91.1	J	49.8	MDL	99.7	PQL	MG/KG	J	Z
THALLIUM	0.0843	J	0.0498	MDL	0.399	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-718-SA5C-SB-8.0-9.0 **Collected:** 6/13/2012 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	0.231	J	0.108	MDL	0.541	PQL	MG/KG	J	Z
CADMIUM	0.285	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
CALCIUM	5220		10.8	MDL	21.6	PQL	MG/KG	J	A
IRON	23200		10.8	MDL	108	PQL	MG/KG	J	A
THALLIUM	0.259	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: SL-720-SA5C-SB-4.5-5.5 **Collected:** 6/13/2012 12:37:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.375	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
CADMIUM	0.441	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
CALCIUM	7300		11.2	MDL	22.4	PQL	MG/KG	J	A
IRON	28900		11.2	MDL	112	PQL	MG/KG	J	A
MOLYBDENUM	0.469	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
SILVER	0.107	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
THALLIUM	0.367	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z

Sample ID: SL-722-SA5C-SB-6.0-7.0 **Collected:** 6/13/2012 2:18:00 **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	0.172	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BERYLLIUM	0.510	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.229	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CALCIUM	3300		10.8	MDL	21.6	PQL	MG/KG	J	A
IRON	20100		10.8	MDL	108	PQL	MG/KG	J	A
MOLYBDENUM	0.415	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
SODIUM	90.2	J	54.0	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.217	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-684-SA5C-SB-2.5-3.5 *Collected:* 6/13/2012 8:18:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-061312 *Collected:* 6/13/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	12	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: Prep12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F093

Surrogate Outlier Report

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-684-SA5C-SB-2.5-3.5	2-FLUOROBIPHENYL Nitrobenzene-d5	35.6 38.6	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J (all detects) UJ (all non-detects)
SL-685-SA5C-SB-7.0-8.0	2-FLUOROBIPHENYL	39.1	45.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-717-SA5C-SB-6.0-7.0MSD (TOT) (SL-683-SA5C-SB-4.0-5.0 SL -683-SA5C-SB-7.0-8.0 SL -684-SA5C-SB-2.5-3.5 SL -685-SA5C-SB-4.0-5.0 SL -685-SA5C-SB-7.0-8.0 SL -717-SA5C-SB-6.0-7.0 SL -718-SA5C-SB-4.0-5.0 SL -718-SA5C-SB-8.0-9.0 SL -720-SA5C-SB-4.5-5.5 SL -722-SA5C-SB-6.0-7.0)	BARIUM	-	176	75.00-125.00	-	BARIUM	No Qual, >4x
SL-717-SA5C-SB-6.0-7.0MS (TOT) **SL-717-SA5C-SB-6.0-7.0MSD (TOT)** (SL-683-SA5C-SB-4.0-5.0 SL -683-SA5C-SB-7.0-8.0 SL -684-SA5C-SB-2.5-3.5 SL -685-SA5C-SB-4.0-5.0 SL -685-SA5C-SB-7.0-8.0 SL -717-SA5C-SB-6.0-7.0 SL -718-SA5C-SB-4.0-5.0 SL -718-SA5C-SB-8.0-9.0 SL -720-SA5C-SB-4.5-5.5 SL -722-SA5C-SB-6.0-7.0)	TITANIUM	236	-54	75.00-125.00	-	TITANIUM	No Qual, >4x
SL-717-SA5C-SB-6.0-7.0MS (TOT) (SL-683-SA5C-SB-4.0-5.0 SL -683-SA5C-SB-7.0-8.0 SL -684-SA5C-SB-2.5-3.5 SL -685-SA5C-SB-4.0-5.0 SL -685-SA5C-SB-7.0-8.0 SL -717-SA5C-SB-6.0-7.0 SL -718-SA5C-SB-4.0-5.0 SL -718-SA5C-SB-8.0-9.0 SL -720-SA5C-SB-4.5-5.5 SL -722-SA5C-SB-6.0-7.0)	MANGANESE	71	-	75.00-125.00	-	MANGANESE	No Qual, >4x

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F093 **Laboratory: EMXT**

EDD Filename: 12F093 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-061312	GASOLINE RANGE ORGANICS (C5-C12)	J	12	50	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-683-SA5C-SB-4.0-5.0	ANTIMONY	J	0.236	0.520	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.131	0.520	PQL	MG/KG	
	THALLIUM	J	0.318	0.416	PQL	MG/KG	
SL-683-SA5C-SB-7.0-8.0	ANTIMONY	J	0.281	0.543	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.117	0.543	PQL	MG/KG	
SL-684-SA5C-SB-2.5-3.5	ANTIMONY	J	0.229	0.522	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.177	0.522	PQL	MG/KG	
	MOLYBDENUM	J	0.358	0.522	PQL	MG/KG	
	THALLIUM	J	0.261	0.418	PQL	MG/KG	
SL-685-SA5C-SB-4.0-5.0	ANTIMONY	J	0.269	0.514	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.153	0.514	PQL	MG/KG	
	THALLIUM	J	0.231	0.411	PQL	MG/KG	
SL-685-SA5C-SB-7.0-8.0	ANTIMONY	J	0.205	0.558	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.144	0.558	PQL	MG/KG	
	MOLYBDENUM	J	0.408	0.558	PQL	MG/KG	
	THALLIUM	J	0.227	0.447	PQL	MG/KG	
SL-717-SA5C-SB-6.0-7.0	ANTIMONY	J	0.327	0.532	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.257	0.532	PQL	MG/KG	
	MOLYBDENUM	J	0.483	0.532	PQL	MG/KG	
	THALLIUM	J	0.316	0.425	PQL	MG/KG	
SL-718-SA5C-SB-4.0-5.0	ANTIMONY	J	0.178	0.498	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.212	0.498	PQL	MG/KG	
	CADMIUM	J	0.206	0.498	PQL	MG/KG	
	SILVER	J	0.390	0.498	PQL	MG/KG	
	SODIUM	J	91.1	99.7	PQL	MG/KG	
	THALLIUM	J	0.0843	0.399	PQL	MG/KG	
SL-718-SA5C-SB-8.0-9.0	ANTIMONY	J	0.231	0.541	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.285	0.541	PQL	MG/KG	
	THALLIUM	J	0.259	0.433	PQL	MG/KG	
SL-720-SA5C-SB-4.5-5.5	ANTIMONY	J	0.375	0.559	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.441	0.559	PQL	MG/KG	
	MOLYBDENUM	J	0.469	0.559	PQL	MG/KG	
	SILVER	J	0.107	0.559	PQL	MG/KG	
	THALLIUM	J	0.367	0.447	PQL	MG/KG	
SL-722-SA5C-SB-6.0-7.0	ANTIMONY	J	0.172	0.540	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.510	0.540	PQL	MG/KG	
	CADMIUM	J	0.229	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.415	0.540	PQL	MG/KG	
	SODIUM	J	90.2	108	PQL	MG/KG	
	THALLIUM	J	0.217	0.432	PQL	MG/KG	

LDC #: 28578K4
SDG #: 12F093
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 8/17/09
Page: 1 of 1
Reviewer: CR
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (Ba, Mn, Ti >4X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB= EB061412 (12F102) FB= FB060512 (12F037)

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-683-SA5C-SB-4.0-5.0	11	SL-717-SA5C-SB-6.0-7.0MS	21		31	
2	SL-683-SA5C-SB-7.0-8.0	12	SL-717-SA5C-SB-6.0-7.0MSD	22		32	
3	SL-684-SA5C-SB-2.5-3.5	13		23		33	
4	SL-685-SA5C-SB-4.0-5.0	14		24		34	
5	SL-685-SA5C-SB-7.0-8.0	15		25		35	
6	SL-722-SA5C-SB-6.0-7.0	16		26		36	
7	SL-718-SA5C-SB-4.0-5.0	17		27		37	
8	SL-718-SA5C-SB-8.0-9.0	18		28		38	
9	SL-720-SA5C-SB-4.5-5.5	19		29		39	
10	SL-717-SA5C-SB-6.0-7.0	20		30		40	

Notes:

LDC #: 28578N 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: W

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification											
	FB-060512	Action Limit	No Qualifiers										
Al	0.0270	6.75											
Ca	0.0263	6.575											
Cu	0.000954	0.2385											

Sampling date: 6/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All ~~Soil~~

Analyte	Blank ID	Sample Identification											
	EB-061412	Action Limit	No Qualifiers										
B	0.00551	1.3775											

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 #: 28578K4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Reviewer: QR
2nd Reviewer: [illegible]

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

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

(Y) N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y (N) N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

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

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		10	S	Ca	12	All	J/UJ/A
				Fe	13	"	"

Comments: _____

SDILICPMS.wpd

SAMPLE DELIVERY GROUP

12F102

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Jun-2012	SL-716-SA5C-SB-5.5-6.5	F102-02	N	3550B	8082	III
13-Jun-2012	SL-716-SA5C-SB-5.5-6.5	F102-02	N	7471A	7471A	III
13-Jun-2012	SL-716-SA5C-SB-5.5-6.5	F102-02	N	TOTAL	6020	III
14-Jun-2012	TB-061412	F102-16	TB	5030B	8015B GRO	III
14-Jun-2012	SL-711-SA5C-SB-10.0	F102-07	N	5035	8015B GRO	III
14-Jun-2012	SL-711-SA5C-SB-9.0-10.0	F102-06	N	3550B	8015B EFH	III
14-Jun-2012	SL-711-SA5C-SB-9.0-10.0	F102-06	N	3550B	8082	III
14-Jun-2012	SL-711-SA5C-SB-9.0-10.0	F102-06	N	3550B	8270C SIM	III
14-Jun-2012	SL-711-SA5C-SB-9.0-10.0	F102-06	N	7471A	7471A	III
14-Jun-2012	SL-711-SA5C-SB-9.0-10.0	F102-06	N	TOTAL	6020	III
14-Jun-2012	SL-711-SA5C-SB-5.0	F102-09	N	5035	8015B GRO	III
14-Jun-2012	SL-711-SA5C-SB-4.0-5.0	F102-08	N	3550B	8015B EFH	III
14-Jun-2012	SL-711-SA5C-SB-4.0-5.0	F102-08	N	3550B	8082	III
14-Jun-2012	SL-711-SA5C-SB-4.0-5.0	F102-08	N	3550B	8270C SIM	III
14-Jun-2012	SL-711-SA5C-SB-4.0-5.0	F102-08	N	7471A	7471A	III
14-Jun-2012	SL-711-SA5C-SB-4.0-5.0	F102-08	N	TOTAL	6020	III
14-Jun-2012	SL-712-SA5C-SB-10.0	F102-11	N	5035	8015B GRO	III
14-Jun-2012	SL-712-SA5C-SB-5.0	F102-12	N	5035	8015B GRO	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0	F102-10	N	3550B	8015B EFH	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0	F102-10	N	3550B	8082	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0	F102-10	N	3550B	8270C SIM	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0	F102-10	N	7471A	7471A	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0	F102-10	N	TOTAL	6020	III
14-Jun-2012	SL-712-SA5C-SB-9.0-10.0MS	F102-10M	MS	3550B	8015B EFH	III
14-Jun-2012	SL-712-SA5C-SB-4.0-5.0	F102-13	N	3550B	8015B EFH	III
14-Jun-2012	SL-712-SA5C-SB-4.0-5.0	F102-13	N	3550B	8082	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2012	SL-712-SA5C-SB-4.0-5.0	F102-13	N	3550B	8270C SIM	III
14-Jun-2012	SL-712-SA5C-SB-4.0-5.0	F102-13	N	7471A	7471A	III
14-Jun-2012	SL-712-SA5C-SB-4.0-5.0	F102-13	N	TOTAL	6020	III
14-Jun-2012	SL-713-SA5C-SB-7.0	F102-14	N	5035	8015B GRO	III
14-Jun-2012	SL-713-SA5C-SB-6.0-7.0	F102-15	N	3550B	8015B EFH	III
14-Jun-2012	SL-713-SA5C-SB-6.0-7.0	F102-15	N	3550B	8082	III
14-Jun-2012	SL-713-SA5C-SB-6.0-7.0	F102-15	N	3550B	8270C SIM	III
14-Jun-2012	SL-713-SA5C-SB-6.0-7.0	F102-15	N	7471A	7471A	III
14-Jun-2012	SL-713-SA5C-SB-6.0-7.0	F102-15	N	TOTAL	6020	III
14-Jun-2012	SL-715-SA5C-SB-7.0	F102-03	N	5035	8015B GRO	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	3550B	8015B EFH	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	3550B	8082	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	3550B	8270C SIM	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	7471A	7471A	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	GEN PREP	7199	III
14-Jun-2012	SL-715-SA5C-SB-6.0-7.0	F102-04	N	TOTAL	6020	III
14-Jun-2012	SL-719-SA5C-SB-6.0-7.0	F102-05	N	3550B	8082	III
14-Jun-2012	SL-719-SA5C-SB-6.0-7.0	F102-05	N	7471A	7471A	III
14-Jun-2012	SL-719-SA5C-SB-6.0-7.0	F102-05	N	TOTAL	6020	III
14-Jun-2012	EB-061412	F102-01	EB	3520C	8015B EFH	III
14-Jun-2012	EB-061412	F102-01	EB	3520C	8082	III
14-Jun-2012	EB-061412	F102-01	EB	5030B	8015B GRO	III
14-Jun-2012	EB-061412	F102-01	EB	7470A	7470A	III
14-Jun-2012	EB-061412	F102-01	EB	GEN PREP	6850	III
14-Jun-2012	EB-061412	F102-01	EB	GEN PREP	7199	III
14-Jun-2012	EB-061412	F102-01	EB	TOTAL	6020	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Jun-2012	EB-061412	F102-01W	EB	3520C	8270C SIM	III
14-Jun-2012	SL-707-SA5C-SB-14.0	F102-17	N	5035	8015B GRO	III
14-Jun-2012	SL-707-SA5C-SB-13.0-14.0	F102-18	N	3550B	8015B EFH	III
14-Jun-2012	SL-707-SA5C-SB-13.0-14.0	F102-18	N	3550B	8270C SIM	III
14-Jun-2012	SL-707-SA5C-SB-13.0-14.0	F102-18	N	7471A	7471A	III
14-Jun-2012	SL-707-SA5C-SB-13.0-14.0	F102-18	N	TOTAL	6020	III
14-Jun-2012	SL-707-SA5C-SB-13.0-14.0M	F102-18M	MS	3550B	8270C SIM	III
14-Jun-2012	SL-709-SA5C-SB-4.0-5.0	F102-19	N	7471A	7471A	III
14-Jun-2012	SL-709-SA5C-SB-4.0-5.0	F102-19	N	TOTAL	6020	III
14-Jun-2012	SL-709-SA5C-SB-9.0-10.0	F102-20	N	7471A	7471A	III
14-Jun-2012	SL-709-SA5C-SB-9.0-10.0	F102-20	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB-061412 *Collected:* 6/14/2012 2:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.00551	J	0.00500	MDL	0.0100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-707-SA5C-SB-13.0-14.0 *Collected:* 6/14/2012 2:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.255	J	0.109	MDL	0.545	PQL	MG/KG	J	Z
BERYLLIUM	0.377	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
CADMIUM	0.232	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
MOLYBDENUM	0.437	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
THALLIUM	0.242	J	0.0545	MDL	0.436	PQL	MG/KG	J	Z

Sample ID: SL-709-SA5C-SB-4.0-5.0 *Collected:* 6/14/2012 3:20:00 *Analysis Type:* RES/TOT *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.175	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.166	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
THALLIUM	0.252	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z

Sample ID: SL-709-SA5C-SB-9.0-10.0 *Collected:* 6/14/2012 3:25:00 *Analysis Type:* RES/TOT *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.205	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
THALLIUM	0.209	J	0.0563	MDL	0.450	PQL	MG/KG	J	Z

Sample ID: SL-711-SA5C-SB-4.0-5.0 *Collected:* 6/14/2012 8:55:00 *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	0.246	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.183	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-711-SA5C-SB-4.0-5.0 **Collected:** 6/14/2012 8:55:00 **Analysis Type:** RES/TOT **Dilution:** 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.200	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z

Sample ID: SL-711-SA5C-SB-9.0-10.0 **Collected:** 6/14/2012 8:46:00 **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	J	0.104	MDL	0.521	PQL	MG/KG	J	Z
BERYLLIUM	0.447	J	0.0521	MDL	0.521	PQL	MG/KG	J	Z
CADMIUM	0.185	J	0.0521	MDL	0.521	PQL	MG/KG	J	Z
MOLYBDENUM	0.445	J	0.0521	MDL	0.521	PQL	MG/KG	J	Z
SODIUM	95.3	J	52.1	MDL	104	PQL	MG/KG	J	Z
THALLIUM	0.262	J	0.0521	MDL	0.417	PQL	MG/KG	J	Z

Sample ID: SL-712-SA5C-SB-4.0-5.0 **Collected:** 6/14/2012 9:50:00 **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	0.341	J	0.110	MDL	0.549	PQL	MG/KG	J	Z
CADMIUM	0.228	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
MOLYBDENUM	0.351	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
SILVER	0.0812	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
THALLIUM	0.262	J	0.0549	MDL	0.439	PQL	MG/KG	J	Z

Sample ID: SL-712-SA5C-SB-9.0-10.0 **Collected:** 6/14/2012 9:44:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.520	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
CADMIUM	0.153	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
MOLYBDENUM	0.261	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
SILVER	0.0648	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
THALLIUM	0.223	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-713-SA5C-SB-6.0-7.0 **Collected:** 6/14/2012 10:40:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.172	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BERYLLIUM	0.435	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.187	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
THALLIUM	0.215	J	0.0536	MDL	0.428	PQL	MG/KG	J	Z

Sample ID: SL-715-SA5C-SB-6.0-7.0 **Collected:** 6/14/2012 11:20:00 **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	0.167	J	0.103	MDL	0.517	PQL	MG/KG	J	Z
BERYLLIUM	0.490	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
CADMIUM	0.215	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
THALLIUM	0.214	J	0.0517	MDL	0.413	PQL	MG/KG	J	Z

Sample ID: SL-716-SA5C-SB-5.5-6.5 **Collected:** 6/13/2012 3:24:00 **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	0.291	J	0.104	MDL	0.522	PQL	MG/KG	J	Z
BERYLLIUM	0.475	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
BORON	3.40	J	2.61	MDL	5.22	PQL	MG/KG	J	Z
CADMIUM	0.236	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
SELENIUM	0.262	J	0.209	MDL	0.522	PQL	MG/KG	J	Z
THALLIUM	0.224	J	0.0522	MDL	0.417	PQL	MG/KG	J	Z

Sample ID: SL-719-SA5C-SB-6.0-7.0 **Collected:** 6/14/2012 12:00:00 **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	0.203	J	0.103	MDL	0.515	PQL	MG/KG	J	Z
BERYLLIUM	0.374	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
CADMIUM	0.189	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
MOLYBDENUM	0.328	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
THALLIUM	0.237	J	0.0515	MDL	0.412	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-711-SA5C-SB-4.0-5.0 *Collected:* 6/14/2012 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.9	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-713-SA5C-SB-6.0-7.0 *Collected:* 6/14/2012 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(C30-C40)	6.9	J	5.4	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-715-SA5C-SB-6.0-7.0 *Collected:* 6/14/2012 11:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	6.6	J	5.3	MDL	11	PQL	MG/KG	J	Z
EFH(C8-C11)	3.2	J	2.7	MDL	5.3	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-707-SA5C-SB-13.0-14.0 *Collected:* 6/14/2012 2:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIPHENYL	5.5	U	2.7	MDL	5.5	PQL	UG/KG	UJ	Q

Sample ID: SL-713-SA5C-SB-6.0-7.0 *Collected:* 6/14/2012 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-713-SA5C-SB-6.0-7.0 *Collected:* 6/14/2012 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-061412 *Collected:* 6/14/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	15	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F102

Surrogate Outlier Report

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-711-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL	38.5	45.00-130.00	No Affected Compounds	
SL-712-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	39.3	45.00-130.00	No Affected Compounds	
SL-712-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL	36.1	45.00-130.00	No Affected Compounds	
SL-713-SA5C-SB-6.0-7.0	2-FLUOROBIPHENYL Nitrobenzene-d5	40.5 38.2	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-707-SA5C-SB-13.0-14.0MSD (SL-707-SA5C-SB-13.0-14.0)	BIPHENYL	-	29	30.00-150.00	-	BIPHENYL	J (all detects) UJ (all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-061412	BORON	J	0.00551	0.0100	PQL	MG/L	J (all detects)

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-061412	GASOLINE RANGE ORGANICS (C5-C12)	J	15	50	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-707-SA5C-SB-13.0-14.0	ANTIMONY	J	0.255	0.545	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.377	0.545	PQL	MG/KG	
	CADMIUM	J	0.232	0.545	PQL	MG/KG	
	MOLYBDENUM	J	0.437	0.545	PQL	MG/KG	
	THALLIUM	J	0.242	0.436	PQL	MG/KG	
SL-709-SA5C-SB-4.0-5.0	ANTIMONY	J	0.175	0.560	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.166	0.560	PQL	MG/KG	
	THALLIUM	J	0.252	0.448	PQL	MG/KG	
SL-709-SA5C-SB-9.0-10.0	CADMIUM	J	0.205	0.562	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.209	0.450	PQL	MG/KG	
SL-711-SA5C-SB-4.0-5.0	ANTIMONY	J	0.246	0.540	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.183	0.540	PQL	MG/KG	
	THALLIUM	J	0.200	0.432	PQL	MG/KG	
SL-711-SA5C-SB-9.0-10.0	ANTIMONY	J	0.281	0.521	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.447	0.521	PQL	MG/KG	
	CADMIUM	J	0.185	0.521	PQL	MG/KG	
	MOLYBDENUM	J	0.445	0.521	PQL	MG/KG	
	SODIUM	J	95.3	104	PQL	MG/KG	
	THALLIUM	J	0.262	0.417	PQL	MG/KG	
SL-712-SA5C-SB-4.0-5.0	ANTIMONY	J	0.341	0.549	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.228	0.549	PQL	MG/KG	
	MOLYBDENUM	J	0.351	0.549	PQL	MG/KG	
	SILVER	J	0.0812	0.549	PQL	MG/KG	
	THALLIUM	J	0.262	0.439	PQL	MG/KG	
SL-712-SA5C-SB-9.0-10.0	BERYLLIUM	J	0.520	0.554	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.153	0.554	PQL	MG/KG	
	MOLYBDENUM	J	0.261	0.554	PQL	MG/KG	
	SILVER	J	0.0648	0.554	PQL	MG/KG	
	THALLIUM	J	0.223	0.443	PQL	MG/KG	
SL-713-SA5C-SB-6.0-7.0	ANTIMONY	J	0.172	0.536	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.435	0.536	PQL	MG/KG	
	CADMIUM	J	0.187	0.536	PQL	MG/KG	
	THALLIUM	J	0.215	0.428	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12F102 **Laboratory: EMXT**

EDD Filename: 12F102 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-715-SA5C-SB-6.0-7.0	ANTIMONY	J	0.167	0.517	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.490	0.517	PQL	MG/KG	
	CADMIUM	J	0.215	0.517	PQL	MG/KG	
	THALLIUM	J	0.214	0.413	PQL	MG/KG	
SL-716-SA5C-SB-5.5-6.5	ANTIMONY	J	0.291	0.522	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.475	0.522	PQL	MG/KG	
	BORON	J	3.40	5.22	PQL	MG/KG	
	CADMIUM	J	0.236	0.522	PQL	MG/KG	
	SELENIUM	J	0.262	0.522	PQL	MG/KG	
	THALLIUM	J	0.224	0.417	PQL	MG/KG	
SL-719-SA5C-SB-6.0-7.0	ANTIMONY	J	0.203	0.515	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.374	0.515	PQL	MG/KG	
	CADMIUM	J	0.189	0.515	PQL	MG/KG	
	MOLYBDENUM	J	0.328	0.515	PQL	MG/KG	
	THALLIUM	J	0.237	0.412	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-711-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	3.9	5.6	PQL	MG/KG	J (all detects)
SL-713-SA5C-SB-6.0-7.0	EFH(C30-C40)	J	6.9	11	PQL	MG/KG	J (all detects)
SL-715-SA5C-SB-6.0-7.0	EFH(C30-C40)	J	6.6	11	PQL	MG/KG	J (all detects)
	EFH(C8-C11)	J	3.2	5.3	PQL	MG/KG	

LDC #: 28578N4
SDG #: 12F102
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11-6-12
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (see 12F120)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB=1 FB: FB-060512

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

C12F037

Validated Samples: soil/water

1	EB-061412 ✓	11	SL-709-SA5C-SB-4.0-5.0	21		31	
2	SL-716-SA5C-SB-5.5-6.5	12	SL-709-SA5C-SB-9.0-10.0	22		32	
3	SL-715-SA5C-SB-6.0-7.0	13		23		33	
4	SL-719-SA5C-SB-6.0-7.0	14		24		34	
5	SL-711-SA5C-SB-9.0-10.0	15		25		35	
6	SL-711-SA5C-SB-4.0-5.0	16		26		36	
7	SL-712-SA5C-SB-9.0-10.0	17		27		37	
8	SL-712-SA5C-SB-4.0-5.0	18		28		38	
9	SL-713-SA5C-SB-6.0-7.0	19		29		39	
10	SL-707-SA5C-SB-13.0-14.0	20		30		40	

Notes: _____

LDC #: 28578N 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: AllSoil

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	EB-061412	Action Limit	No Qualifiers									
B	0.00551	1.3775										

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".

SAMPLE DELIVERY GROUP

12F120

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
18-Jun-2012	TB-061812	F120-17	TB	5030B	8015B GRO	III
18-Jun-2012	SL-700-SA5C-SB-5.0	F120-05	N	5035	8015B GRO	III
18-Jun-2012	SL-700-SA5C-SB-5.0MS	F120-05M	MS	5035	8015B GRO	III
18-Jun-2012	SL-700-SA5C-SB-5.0MSD	F120-05S	MSD	5035	8015B GRO	III
18-Jun-2012	SL-1000-SA5C-SB-5.0	F120-06	FD	5035	8015B GRO	III
18-Jun-2012	SL-700-SA5C-SB-4.0-5.0	F120-07	N	3550B	8015B EFH	III
18-Jun-2012	SL-700-SA5C-SB-4.0-5.0MS	F120-07M	MS	3550B	8015B EFH	III
18-Jun-2012	SL-700-SA5C-SB-4.0-5.0MSD	F120-07S	MSD	3550B	8015B EFH	III
18-Jun-2012	SL-1000-SA5C-SB-4.0-5.0	F120-08	FD	3550B	8015B EFH	III
18-Jun-2012	SL-700-SA5C-SB-10.0	F120-09	N	5035	8015B GRO	III
18-Jun-2012	SL-700-SA5C-SB-9.0-10.0	F120-10	N	3550B	8015B EFH	III
18-Jun-2012	SL-702-SA5C-SB-4.0-5.0	F120-11	N	7471A	7471A	III
18-Jun-2012	SL-702-SA5C-SB-4.0-5.0	F120-11	N	TOTAL	6020	III
18-Jun-2012	SL-702-SA5C-SB-4.0-5.0MS	F120-11M	MS	7471A	7471A	III
18-Jun-2012	SL-702-SA5C-SB-4.0-5.0MSD	F120-11S	MSD	7471A	7471A	III
18-Jun-2012	SL-702-SA5C-SB-9.0-10.0	F120-12	N	7471A	7471A	III
18-Jun-2012	SL-702-SA5C-SB-9.0-10.0	F120-12	N	TOTAL	6020	III
18-Jun-2012	SL-701-SA5C-SB-5.0	F120-14	N	5035	8015B GRO	III
18-Jun-2012	SL-701-SA5C-SB-10.0	F120-16	N	5035	8015B GRO	III
18-Jun-2012	SL-701-SA5C-SB-4.0-5.0	F120-15	N	3550B	8015B EFH	III
18-Jun-2012	SL-701-SA5C-SB-4.0-5.0	F120-15	N	3550B	8270C SIM	III
18-Jun-2012	SL-701-SA5C-SB-9.0-10.0	F120-13	N	3550B	8015B EFH	III
18-Jun-2012	SL-701-SA5C-SB-9.0-10.0	F120-13	N	3550B	8270C SIM	III
18-Jun-2012	SL-699-SA5C-SB-5.0	F120-04	N	5035	8015B GRO	III
18-Jun-2012	SL-699-SA5C-SB-10.0	F120-02	N	5035	8015B GRO	III
18-Jun-2012	SL-699-SA5C-SB-4.0-5.0	F120-03	N	3550B	8015B EFH	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Jun-2012	SL-699-SA5C-SB-4.0-5.0	F120-03	N	3550B	8270C SIM	III
18-Jun-2012	SL-699-SA5C-SB-9.0-10.0	F120-01	N	3550B	8015B EFH	III
18-Jun-2012	SL-699-SA5C-SB-9.0-10.0	F120-01	N	3550B	8270C SIM	III
18-Jun-2012	SL-696-SA5C-SB-4.0-5.0	F120-19	N	7471A	7471A	III
18-Jun-2012	SL-696-SA5C-SB-4.0-5.0	F120-19	N	TOTAL	6020	III
18-Jun-2012	SL-696-SA5C-SB-9.0-10.0	F120-20	N	7471A	7471A	III
18-Jun-2012	SL-696-SA5C-SB-9.0-10.0	F120-20	N	TOTAL	6020	III
18-Jun-2012	SL-696-SA5C-SB-1.0-2.0	F120-18	N	7471A	7471A	III
18-Jun-2012	SL-696-SA5C-SB-1.0-2.0	F120-18	N	TOTAL	6020	III
18-Jun-2012	SL-703-SA5C-SB-5.0	F120-24	N	5035	8015B GRO	III
18-Jun-2012	SL-703-SA5C-SB-10.0	F120-22	N	5035	8015B GRO	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	3550B	8015B EFH	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	3550B	8082	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	3550B	8270C SIM	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	7471A	7471A	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	GEN PREP	7199	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	GEN PREP	8015B	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	GEN PREP	8015M	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0	F120-23	N	TOTAL	6020	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0MS	F120-23M	MS	TOTAL	6020	III
18-Jun-2012	SL-703-SA5C-SB-4.0-5.0MSD	F120-23S	MSD	TOTAL	6020	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	3550B	8015B EFH	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	3550B	8082	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	3550B	8270C SIM	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	7471A	7471A	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	GEN PREP	7199	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	GEN PREP	8015B	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	GEN PREP	8015M	III
18-Jun-2012	SL-703-SA5C-SB-9.0-10.0	F120-21	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F120 **Laboratory: EMXT**

EDD Filename: 12F120 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-696-SA5C-SB-1.0-2.0 **Collected:** 6/18/2012 2:35:00 **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	0.241	J	0.106	MDL	0.528	PQL	MG/KG	J	Z
CADMIUM	0.117	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
SILVER	0.0591	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
THALLIUM	0.274	J	0.0528	MDL	0.422	PQL	MG/KG	J	Z

Sample ID: SL-696-SA5C-SB-4.0-5.0 **Collected:** 6/18/2012 2:20:00 **Analysis Type:** RES/TOT **Dilution:** 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.201	J	0.107	MDL	0.533	PQL	MG/KG	J	Z
CADMIUM	0.201	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
MOLYBDENUM	0.391	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
THALLIUM	0.265	J	0.0533	MDL	0.427	PQL	MG/KG	J	Z

Sample ID: SL-696-SA5C-SB-9.0-10.0 **Collected:** 6/18/2012 2:25:00 **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	0.181	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BERYLLIUM	0.535	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
CADMIUM	0.175	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
MOLYBDENUM	0.373	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
THALLIUM	0.235	J	0.0542	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: SL-702-SA5C-SB-4.0-5.0 **Collected:** 6/18/2012 9:57:00 **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	0.272	J	0.108	MDL	0.541	PQL	MG/KG	J	Z
CADMIUM	0.159	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SILVER	0.0761	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
THALLIUM	0.286	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F120 **Laboratory: EMXT**

EDD Filename: 12F120 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-702-SA5C-SB-9.0-10.0 *Collected:* 6/18/2012 10:00:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.144	J	0.109	MDL	0.544	PQL	MG/KG	J	Z
BERYLLIUM	0.476	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
CADMIUM	0.150	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
THALLIUM	0.196	J	0.0544	MDL	0.435	PQL	MG/KG	J	Z

Sample ID: SL-703-SA5C-SB-4.0-5.0 *Collected:* 6/18/2012 3:05:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.207	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
CADMIUM	0.235	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
MOLYBDENUM	0.469	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
THALLIUM	0.273	J	0.0558	MDL	0.446	PQL	MG/KG	J	Z

Sample ID: SL-703-SA5C-SB-9.0-10.0 *Collected:* 6/18/2012 3:10:00 *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	0.214	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.198	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.241	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-061812 *Collected:* 6/18/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	41	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F120 **Laboratory: EMXT**

EDD Filename: 12F120 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F120

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F120 **Laboratory: EMXT**

EDD Filename: 12F120 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-703-SA5C-SB-4.0-5.0MS (TOT) (SL-696-SA5C-SB-1.0-2.0 SL -696-SA5C-SB-4.0-5.0 SL -696-SA5C-SB-9.0-10.0 SL -702-SA5C-SB-4.0-5.0 SL -702-SA5C-SB-9.0-10.0 SL -703-SA5C-SB-4.0-5.0 SL -703-SA5C-SB-9.0-10.0)	ALUMINUM	127	-	75.00-125.00	-	ALUMINUM	No Qual, >4x
SL-703-SA5C-SB-4.0-5.0MS (TOT) **SL-703-SA5C-SB-4.0-5.0MSD (TOT)** (SL-696-SA5C-SB-1.0-2.0 SL -696-SA5C-SB-4.0-5.0 SL -696-SA5C-SB-9.0-10.0 SL -702-SA5C-SB-4.0-5.0 SL -702-SA5C-SB-9.0-10.0 SL -703-SA5C-SB-4.0-5.0 SL -703-SA5C-SB-9.0-10.0)	IRON MANGANESE TITANIUM	21 -74 -	40 -53 -5	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MANGANESE TITANIUM	No Qual, >4x

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F120 **Laboratory: EMXT**

EDD Filename: 12F120 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-061812	GASOLINE RANGE ORGANICS (C5-C12)	J	41	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-696-SA5C-SB-1.0-2.0	ANTIMONY	J	0.241	0.528	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.117	0.528	PQL	MG/KG	
	SILVER	J	0.0591	0.528	PQL	MG/KG	
	THALLIUM	J	0.274	0.422	PQL	MG/KG	
SL-696-SA5C-SB-4.0-5.0	ANTIMONY	J	0.201	0.533	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.201	0.533	PQL	MG/KG	
	MOLYBDENUM	J	0.391	0.533	PQL	MG/KG	
	THALLIUM	J	0.265	0.427	PQL	MG/KG	
SL-696-SA5C-SB-9.0-10.0	ANTIMONY	J	0.181	0.542	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.535	0.542	PQL	MG/KG	
	CADMIUM	J	0.175	0.542	PQL	MG/KG	
	MOLYBDENUM	J	0.373	0.542	PQL	MG/KG	
	THALLIUM	J	0.235	0.433	PQL	MG/KG	
SL-702-SA5C-SB-4.0-5.0	ANTIMONY	J	0.272	0.541	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.159	0.541	PQL	MG/KG	
	SILVER	J	0.0761	0.541	PQL	MG/KG	
	THALLIUM	J	0.286	0.433	PQL	MG/KG	
SL-702-SA5C-SB-9.0-10.0	ANTIMONY	J	0.144	0.544	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.476	0.544	PQL	MG/KG	
	CADMIUM	J	0.150	0.544	PQL	MG/KG	
	THALLIUM	J	0.196	0.435	PQL	MG/KG	
SL-703-SA5C-SB-4.0-5.0	ANTIMONY	J	0.207	0.558	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.235	0.558	PQL	MG/KG	
	MOLYBDENUM	J	0.469	0.558	PQL	MG/KG	
	THALLIUM	J	0.273	0.446	PQL	MG/KG	
SL-703-SA5C-SB-9.0-10.0	ANTIMONY	J	0.214	0.540	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.198	0.540	PQL	MG/KG	
	THALLIUM	J	0.241	0.432	PQL	MG/KG	

LDC #: 28578O4

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 1/6/12

SDG #: 12F120

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer:

2nd Reviewer:

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (Al, Fe, Mn, Ti 1/x)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB = EB2-062112 (12F162) FB = FB-060512 (12F037)

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-702-SA5C-SB-4.0-5.0	11	SL-703-SA5C-SB-4.0-5.0MSD	21		31	
2	SL-702-SA5C-SB-9.0-10.0	12		22		32	
3	SL-696-SA5C-SB-1.0-2.0	13		23		33	
4	SL-696-SA5C-SB-4.0-5.0	14		24		34	
5	SL-696-SA5C-SB-9.0-10.0	15		25		35	
6	SL-703-SA5C-SB-9.0-10.0	16		26		36	
7	SL-703-SA5C-SB-4.0-5.0	17		27		37	
8	SL-702-SA5C-SB-4.0-5.0MS	18		28		38	
9	SL-702-SA5C-SB-4.0-5.0MSD	19		29		39	
10	SL-703-SA5C-SB-4.0-5.0MS	20		30		40	

Notes:

LDC #: 28578O 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/21/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB2-062112	Action Limit	No Qualifiers									
Al	0.0723	18.075										
B	0.00560	1.4										
Ca	0.0304	7.6										
Cu	0.00245	0.6125										
Fe	0.0220	5.5										
Mn	0.000336	0.084										
Na	0.104	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".

SAMPLE DELIVERY GROUP

12F132

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
19-Jun-2012	SL-643-SA5C-SB-1.0-2.0	F132-12	N	3550B	8082	III
19-Jun-2012	TB-061912	F132-14	TB	5030B	8015B GRO	III
19-Jun-2012	SL-643-SA5C-SB-2.0-3.0	F132-13	N	3550B	8082	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	3550B	8015B EFH	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	3550B	8082	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	3550B	8270C SIM	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	7471A	7471A	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	GEN PREP	8015B	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	GEN PREP	8015M	III
19-Jun-2012	SL-572-SA5C-SB-0.0-0.5	F132-07	N	TOTAL	6020	III
19-Jun-2012	SL-572-SA5C-SB-5.0	F132-09	N	5035	8015B GRO	III
19-Jun-2012	SL-572-SA5C-SB-5.0MS	F132-09M	MS	5035	8015B GRO	III
19-Jun-2012	SL-572-SA5C-SB-5.0MSD	F132-09S	MSD	5035	8015B GRO	III
19-Jun-2012	SL-872-SA5C-SB-5.0	F132-11	FD	5035	8015B GRO	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	3550B	8015B EFH	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	3550B	8082	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	3550B	8270C SIM	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	7471A	7471A	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	GEN PREP	8015B	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	GEN PREP	8015M	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0	F132-08	N	TOTAL	6020	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	3550B	8015B EFH	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	3550B	8082	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	3550B	8270C SIM	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	7471A	7471A	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	GEN PREP	8015B	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	GEN PREP	8015M	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MS	F132-08M	MS	TOTAL	6020	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	3550B	8015B EFH	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	3550B	8082	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	3550B	8270C SIM	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	7471A	7471A	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	GEN PREP	8015B	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	GEN PREP	8015M	III
19-Jun-2012	SL-572-SA5C-SB-4.0-5.0MSD	F132-08S	MSD	TOTAL	6020	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	3550B	8015B EFH	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	3550B	8082	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	3550B	8270C SIM	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	7471A	7471A	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	GEN PREP	8015B	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	GEN PREP	8015M	III
19-Jun-2012	SL-872-SA5C-SB-4.0-5.0	F132-10	FD	TOTAL	6020	III
19-Jun-2012	SL-528-SA5C-SB-5.0	F132-04	N	5035	8015B GRO	III
19-Jun-2012	SL-528-SA5C-SB-5.0MS	F132-04M	MS	5035	8015B GRO	III
19-Jun-2012	SL-528-SA5C-SB-5.0MSD	F132-04S	MSD	5035	8015B GRO	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0	F132-03	N	3550B	8015B EFH	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0	F132-03	N	3550B	8082	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0	F132-03	N	3550B	8270C SIM	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0	F132-03	N	7471A	7471A	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0	F132-03	N	TOTAL	6020	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MS	F132-03M	MS	3550B	8015B EFH	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MS	F132-03M	MS	3550B	8082	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MS	F132-03M	MS	3550B	8270C SIM	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MS	F132-03M	MS	7471A	7471A	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MS	F132-03M	MS	TOTAL	6020	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MSD	F132-03S	MSD	3550B	8015B EFH	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MSD	F132-03S	MSD	3550B	8082	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MSD	F132-03S	MSD	3550B	8270C SIM	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MSD	F132-03S	MSD	7471A	7471A	III
19-Jun-2012	SL-528-SA5C-SB-4.0-5.0MSD	F132-03S	MSD	TOTAL	6020	III
19-Jun-2012	SL-828-SA5C-SB-5.0	F132-06	FD	5035	8015B GRO	III
19-Jun-2012	SL-828-SA5C-SB-4.0-5.0	F132-05	FD	3550B	8015B EFH	III
19-Jun-2012	SL-828-SA5C-SB-4.0-5.0	F132-05	FD	3550B	8082	III
19-Jun-2012	SL-828-SA5C-SB-4.0-5.0	F132-05	FD	3550B	8270C SIM	III
19-Jun-2012	SL-828-SA5C-SB-4.0-5.0	F132-05	FD	7471A	7471A	III
19-Jun-2012	SL-828-SA5C-SB-4.0-5.0	F132-05	FD	TOTAL	6020	III
19-Jun-2012	SL-527-SA5C-SB-5.0	F132-02	N	5035	8015B GRO	III
19-Jun-2012	SL-527-SA5C-SB-4.0-5.0	F132-01	N	3550B	8015B EFH	III
19-Jun-2012	SL-527-SA5C-SB-4.0-5.0	F132-01	N	3550B	8082	III
19-Jun-2012	SL-527-SA5C-SB-4.0-5.0	F132-01	N	3550B	8270C SIM	III
19-Jun-2012	SL-527-SA5C-SB-4.0-5.0	F132-01	N	7471A	7471A	III
19-Jun-2012	SL-527-SA5C-SB-4.0-5.0	F132-01	N	TOTAL	6020	III
19-Jun-2012	SL-524-SA5C-SB-5.0	F132-16	N	5035	8015B GRO	III
19-Jun-2012	SL-524-SA5C-SB-4.0-5.0	F132-15	N	3550B	8015B EFH	III
19-Jun-2012	SL-524-SA5C-SB-4.0-5.0	F132-15	N	3550B	8082	III
19-Jun-2012	SL-524-SA5C-SB-4.0-5.0	F132-15	N	3550B	8270C SIM	III
19-Jun-2012	SL-524-SA5C-SB-4.0-5.0	F132-15	N	7471A	7471A	III
19-Jun-2012	SL-524-SA5C-SB-4.0-5.0	F132-15	N	TOTAL	6020	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Jun-2012	SL-526-SA5C-SB-5.0	F132-17	N	5035	8015B GRO	III
19-Jun-2012	SL-526-SA5C-SB-10.0	F132-19	N	5035	8015B GRO	III
19-Jun-2012	SL-526-SA5C-SB-4.0-5.0	F132-18	N	3550B	8015B EFH	III
19-Jun-2012	SL-526-SA5C-SB-4.0-5.0	F132-18	N	3550B	8082	III
19-Jun-2012	SL-526-SA5C-SB-4.0-5.0	F132-18	N	3550B	8270C SIM	III
19-Jun-2012	SL-526-SA5C-SB-4.0-5.0	F132-18	N	7471A	7471A	III
19-Jun-2012	SL-526-SA5C-SB-4.0-5.0	F132-18	N	TOTAL	6020	III
19-Jun-2012	SL-526-SA5C-SB-9.0-10.0	F132-20	N	3550B	8015B EFH	III
19-Jun-2012	SL-526-SA5C-SB-9.0-10.0	F132-20	N	3550B	8082	III
19-Jun-2012	SL-526-SA5C-SB-9.0-10.0	F132-20	N	3550B	8270C SIM	III
19-Jun-2012	SL-526-SA5C-SB-9.0-10.0	F132-20	N	7471A	7471A	III
19-Jun-2012	SL-526-SA5C-SB-9.0-10.0	F132-20	N	TOTAL	6020	III
19-Jun-2012	SL-525-SA5C-SB-5.0	F132-22	N	5035	8015B GRO	III
19-Jun-2012	SL-525-SA5C-SB-10.0	F132-24	N	5035	8015B GRO	III
19-Jun-2012	SL-525-SA5C-SB-4.0-5.0	F132-21	N	3550B	8015B EFH	III
19-Jun-2012	SL-525-SA5C-SB-4.0-5.0	F132-21	N	3550B	8082	III
19-Jun-2012	SL-525-SA5C-SB-4.0-5.0	F132-21	N	3550B	8270C SIM	III
19-Jun-2012	SL-525-SA5C-SB-4.0-5.0	F132-21	N	7471A	7471A	III
19-Jun-2012	SL-525-SA5C-SB-4.0-5.0	F132-21	N	TOTAL	6020	III
19-Jun-2012	SL-525-SA5C-SB-9.0-10.0	F132-23	N	3550B	8015B EFH	III
19-Jun-2012	SL-525-SA5C-SB-9.0-10.0	F132-23	N	3550B	8082	III
19-Jun-2012	SL-525-SA5C-SB-9.0-10.0	F132-23	N	3550B	8270C SIM	III
19-Jun-2012	SL-525-SA5C-SB-9.0-10.0	F132-23	N	7471A	7471A	III
19-Jun-2012	SL-525-SA5C-SB-9.0-10.0	F132-23	N	TOTAL	6020	III
19-Jun-2012	SL-670-SA5C-SB-5.0	F132-27	N	5035	8015B GRO	III
19-Jun-2012	SL-670-SA5C-SB-4.0-5.0	F132-25	N	3550B	8015B EFH	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Jun-2012	SL-670-SA5C-SB-4.0-5.0	F132-25	N	3550B	8082	III
19-Jun-2012	SL-670-SA5C-SB-4.0-5.0	F132-25	N	3550B	8270C SIM	III
19-Jun-2012	SL-670-SA5C-SB-4.0-5.0	F132-25	N	7471A	7471A	III
19-Jun-2012	SL-670-SA5C-SB-4.0-5.0	F132-25	N	TOTAL	6020	III
19-Jun-2012	SL-670-SA5C-SB-0.0-0.5	F132-26	N	3550B	8015B EFH	III
19-Jun-2012	SL-670-SA5C-SB-0.0-0.5	F132-26	N	3550B	8082	III
19-Jun-2012	SL-670-SA5C-SB-0.0-0.5	F132-26	N	3550B	8270C SIM	III
19-Jun-2012	SL-670-SA5C-SB-0.0-0.5	F132-26	N	7471A	7471A	III
19-Jun-2012	SL-670-SA5C-SB-0.0-0.5	F132-26	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-524-SA5C-SB-4.0-5.0 **Collected:** 6/19/2012 1:00:00 **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	0.151	J	0.105	MDL	0.523	PQL	MG/KG	J	Z
CADMIUM	0.0954	J	0.0523	MDL	0.523	PQL	MG/KG	J	Z
MOLYBDENUM	0.251	J	0.0523	MDL	0.523	PQL	MG/KG	J	Z
THALLIUM	0.221	J	0.0523	MDL	0.418	PQL	MG/KG	J	Z

Sample ID: SL-525-SA5C-SB-4.0-5.0 **Collected:** 6/19/2012 2:30:00 **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	0.311	J	0.106	MDL	0.528	PQL	MG/KG	J	Z
CADMIUM	0.160	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
MOLYBDENUM	0.517	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
THALLIUM	0.253	J	0.0528	MDL	0.423	PQL	MG/KG	J	Z

Sample ID: SL-525-SA5C-SB-9.0-10.0 **Collected:** 6/19/2012 2:35:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.189	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.197	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.238	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z

Sample ID: SL-526-SA5C-SB-4.0-5.0 **Collected:** 6/19/2012 1:35:00 **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	0.237	J	0.106	MDL	0.532	PQL	MG/KG	J	Z
BORON	4.02	J	2.66	MDL	5.32	PQL	MG/KG	J	Z
CADMIUM	0.125	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
MOLYBDENUM	0.513	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0532	MDL	0.426	PQL	MG/KG	J	Z

Sample ID: SL-526-SA5C-SB-9.0-10.0 **Collected:** 6/19/2012 1:40:00 **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.169	J	0.108	MDL	0.541	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-526-SA5C-SB-9.0-10.0 *Collected:* 6/19/2012 1:40:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.152	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
MOLYBDENUM	0.283	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SILVER	0.109	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
THALLIUM	0.229	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: SL-527-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:40:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.237	J	0.109	MDL	0.547	PQL	MG/KG	J	Z
CADMIUM	0.130	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
THALLIUM	0.280	J	0.0547	MDL	0.438	PQL	MG/KG	J	Z

Sample ID: SL-528-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:00:00 *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	0.251	J	0.104	MDL	0.520	PQL	MG/KG	J	Z
BARIUM	100		0.208	MDL	0.520	PQL	MG/KG	J	Q
CADMIUM	0.154	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
THALLIUM	0.250	J	0.0520	MDL	0.416	PQL	MG/KG	J	Z
Zirconium	5.20	U	2.60	MDL	5.20	PQL	MG/KG	UJ	Q

Sample ID: SL-572-SA5C-SB-0.0-0.5 *Collected:* 6/19/2012 8:55:00 *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	0.184	J	0.109	MDL	0.547	PQL	MG/KG	J	Z
CADMIUM	0.114	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
MOLYBDENUM	0.366	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
THALLIUM	0.246	J	0.0547	MDL	0.438	PQL	MG/KG	J	Z

Sample ID: SL-572-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 9:10:00 *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	0.166	J	0.102	MDL	0.508	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: SL-572-SA5C-SB-4.0-5.0 ***Collected:*** 6/19/2012 9:10:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.957

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.458	J	0.0508	MDL	0.508	PQL	MG/KG	J	Z
CADMIUM	0.0863	J	0.0508	MDL	0.508	PQL	MG/KG	J	Z
CALCIUM	3580		10.2	MDL	20.3	PQL	MG/KG	J	Q
MOLYBDENUM	0.380	J	0.0508	MDL	0.508	PQL	MG/KG	J	Z
THALLIUM	0.141	J	0.0508	MDL	0.406	PQL	MG/KG	J	Z

Sample ID: SL-670-SA5C-SB-0.0-0.5 ***Collected:*** 6/19/2012 3:50:00 ***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	0.231	J	0.111	MDL	0.554	PQL	MG/KG	J	Z
CADMIUM	0.104	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
MOLYBDENUM	0.505	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
THALLIUM	0.185	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

Sample ID: SL-670-SA5C-SB-4.0-5.0 ***Collected:*** 6/19/2012 3:20:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.207	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z

Sample ID: SL-828-SA5C-SB-4.0-5.0 ***Collected:*** 6/19/2012 10:10:00 ***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	0.265	J	0.105	MDL	0.524	PQL	MG/KG	J	Z
CADMIUM	0.150	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
THALLIUM	0.265	J	0.0524	MDL	0.419	PQL	MG/KG	J	Z

Sample ID: SL-872-SA5C-SB-4.0-5.0 ***Collected:*** 6/19/2012 9:15:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.155	J	0.106	MDL	0.531	PQL	MG/KG	J	Z
BERYLLIUM	0.472	J	0.0531	MDL	0.531	PQL	MG/KG	J	Z
CADMIUM	0.0907	J	0.0531	MDL	0.531	PQL	MG/KG	J	Z
THALLIUM	0.174	J	0.0531	MDL	0.425	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-524-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 1:00:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0584	J	0.0531	MDL	0.106	PQL	MG/KG	J	Z

Sample ID: SL-528-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:00:00 *Analysis Type:* RES/TOT *Dilution:* 0.988

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.136		0.0529	MDL	0.106	PQL	MG/KG	J	FD

Sample ID: SL-828-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0815	J	0.0535	MDL	0.107	PQL	MG/KG	J	Z, FD

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-525-SA5C-SB-9.0-10.0 *Collected:* 6/19/2012 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	3.0	J	2.7	MDL	5.4	PQL	MG/KG	J	Z

Sample ID: SL-526-SA5C-SB-9.0-10.0 *Collected:* 6/19/2012 1:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	2.8	J	2.7	MDL	5.4	PQL	MG/KG	J	Z

Sample ID: SL-528-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	5.4	U	2.7	MDL	5.4	PQL	MG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-572-SA5C-SB-0.0-0.5 *Collected:* 6/19/2012 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	6.3	J	5.6	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-572-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	5.3	U	2.7	MDL	5.3	PQL	MG/KG	UJ	FD
EFH(C21-C30)	7.2		2.7	MDL	5.3	PQL	MG/KG	J	FD
EFH(C30-C40)	11	U	5.3	MDL	11	PQL	MG/KG	UJ	FD

Sample ID: SL-828-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 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
EFH(C8-C11)	2.9	J	2.7	MDL	5.3	PQL	MG/KG	J	Z, FD

Sample ID: SL-872-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	3.1	J	2.7	MDL	5.4	PQL	MG/KG	J	Z, FD
EFH(C21-C30)	76		2.7	MDL	5.4	PQL	MG/KG	J	FD
EFH(C30-C40)	100		5.4	MDL	11	PQL	MG/KG	J	FD

Method Category: SVOA

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

Sample ID: SL-525-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 2:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-525-SA5C-SB-4.0-5.0** ***Collected:*** **6/19/2012 2:30:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: **SL-525-SA5C-SB-9.0-10.0** ***Collected:*** **6/19/2012 2:35:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	2.8	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	4.9	J	2.7	MDL	5.4	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	5.1	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-526-SA5C-SB-9.0-10.0** ***Collected:*** **6/19/2012 1:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-526-SA5C-SB-9.0-10.0 *Collected:* 6/19/2012 1:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-527-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.7	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-527-SA5C-SB-4.0-5.0** ***Collected:*** **6/19/2012 10:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: **SL-572-SA5C-SB-4.0-5.0** ***Collected:*** **6/19/2012 9:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.7	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
BENZO(E)PYRENE	3.0	J	2.7	MDL	5.3	PQL	UG/KG	J	Z, FD
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
PHENANTHRENE	3.5	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD

Sample ID: **SL-670-SA5C-SB-4.0-5.0** ***Collected:*** **6/19/2012 3:20:00** ***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	5.8	J	5.3	MDL	21	PQL	UG/KG	J	Z
BENZO(E)PYRENE	7.6	J	5.3	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-828-SA5C-SB-4.0-5.0** ***Collected:*** **6/19/2012 10:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.3	U	2.7	MDL	5.3	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-828-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-872-SA5C-SB-4.0-5.0 *Collected:* 6/19/2012 9:15:00 *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	11	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	5.8	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD
BENZO(B)FLUORANTHENE	6.9	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD
BENZO(E)PYRENE	8.2	J	5.4	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(K)FLUORANTHENE	6.0	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD
CHRYSENE	7.3	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD
PHENANTHRENE	11	J	5.4	MDL	21	PQL	UG/KG	J	Z, FD

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-061912 *Collected:* 6/19/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	23	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F132

Surrogate Outlier Report

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-525-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	34.5 36.3	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J (all detects) UJ (all non-detects)
SL-526-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	38.2	45.00-130.00	No Affected Compounds	
SL-526-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL Nitrobenzene-d5	33.1 34.9	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-527-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	38.8 39.8	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-528-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	44.7	45.00-130.00	No Affected Compounds	
SL-572-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	39.2	45.00-130.00	No Affected Compounds	
SL-828-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	39.9 38.3	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-872-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	44.8	45.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-528-SA5C-SB-4.0-5.0MS (TOT) **SL-528-SA5C-SB-4.0-5.0MSD (TOT)** (SL-528-SA5C-SB-4.0-5.0)	ALUMINUM BARIUM TITANIUM	- 147 240	135 - 236	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ALUMINUM BARIUM TITANIUM	J (all detects) Al, Ti, No Qual, >4x
SL-528-SA5C-SB-4.0-5.0MS (TOT) **SL-528-SA5C-SB-4.0-5.0MSD (TOT)** (SL-528-SA5C-SB-4.0-5.0)	IRON MANGANESE Zirconium	150 - 73	68 48 71	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MANGANESE Zirconium	J(all detects) UJ(all non-detects) Fe, Mn, No Qual, >4x
SL-572-SA5C-SB-4.0-5.0MSD (TOT) (SL-572-SA5C-SB-4.0-5.0)	ALUMINUM	-	131	75.00-125.00	-	ALUMINUM	No Qual, >4x
SL-572-SA5C-SB-4.0-5.0MS (TOT) **SL-572-SA5C-SB-4.0-5.0MSD (TOT)** (SL-572-SA5C-SB-4.0-5.0)	TITANIUM	-28	183	75.00-125.00	-	TITANIUM	No Qual, >4x

Project Name and Number: PHASE3 - SSFL PHASE 3

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-572-SA5C-SB-4.0-5.0MS (TOT)	CALCIUM	-	65	75.00-125.00	-	CALCIUM	J(all detects) UJ(all non-detects) Fe, Mn, No Qual, >4x
	IRON	50	-	75.00-125.00	-	IRON	
SL-572-SA5C-SB-4.0-5.0MSD (TOT) (SL-572-SA5C-SB-4.0-5.0)	MANGANESE	65	142	75.00-125.00	-	MANGANESE	

Field Duplicate RPD Report

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-528-SA5C-SB-4.0-5.0 (TOT)	SL-828-SA5C-SB-4.0-5.0 (TOT)			
ALUMINUM	14400	16200	12	50.00	
ANTIMONY	0.251	0.265	5	50.00	
ARSENIC	4.10	5.08	21	50.00	
BARIUM	100	108	8	50.00	
BERYLLIUM	0.618	0.770	22	50.00	
CADMIUM	0.154	0.150	3	50.00	
CALCIUM	2330	2530	8	50.00	
CHROMIUM	18.8	20.0	6	50.00	
COBALT	5.13	7.26	34	50.00	
COPPER	7.26	7.65	5	50.00	
IRON	18000	20600	13	50.00	
LEAD	6.01	6.82	13	50.00	
LITHIUM	12.8	14.7	14	50.00	No Qualifiers Applied
MAGNESIUM	3610	3980	10	50.00	
MANGANESE	221	264	18	50.00	
MOLYBDENUM	1.21	1.18	3	50.00	
NICKEL	9.13	10.9	18	50.00	
PHOSPHORUS	142	162	13	50.00	
POTASSIUM	2360	2470	5	50.00	
SODIUM	408	466	13	50.00	
STRONTIUM	25.7	29.1	12	50.00	
THALLIUM	0.250	0.265	6	50.00	
TITANIUM	815	861	5	50.00	
VANADIUM	33.2	38.5	15	50.00	
ZINC	37.8	41.3	9	50.00	

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-572-SA5C-SB-4.0-5.0 (TOT)	SL-872-SA5C-SB-4.0-5.0 (TOT)			
ALUMINUM	10800	11900	10	50.00	
ANTIMONY	0.166	0.155	7	50.00	
ARSENIC	3.50	3.78	8	50.00	
BARIUM	66.1	68.1	3	50.00	
BERYLLIUM	0.458	0.472	3	50.00	
CADMIUM	0.0863	0.0907	5	50.00	
CALCIUM	3580	5930	49	50.00	
CHROMIUM	16.0	17.6	10	50.00	
COBALT	4.21	4.21	0	50.00	
COPPER	5.83	6.29	8	50.00	
IRON	15200	16200	6	50.00	
LEAD	3.91	3.91	0	50.00	
LITHIUM	15.1	17.3	14	50.00	No Qualifiers Applied
MAGNESIUM	3440	3520	2	50.00	
MANGANESE	168	132	24	50.00	
MOLYBDENUM	0.380	0.561	38	50.00	
NICKEL	9.92	10.1	2	50.00	
PHOSPHORUS	239	261	9	50.00	
POTASSIUM	1550	1650	6	50.00	
SODIUM	310	328	6	50.00	
STRONTIUM	27.9	32.8	16	50.00	
THALLIUM	0.141	0.174	21	50.00	
TITANIUM	590	656	11	50.00	
VANADIUM	24.6	26.5	7	50.00	
ZINC	33.0	33.9	3	50.00	

Project Name and Number: PHASE3 - SSFL PHASE 3

Field Duplicate RPD Report

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: Prep12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 7471A
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-528-SA5C-SB-4.0-5.0 (TOT)	SL-828-SA5C-SB-4.0-5.0 (TOT)			
MERCURY	0.136	0.0815	50	50.00	J(all detects)

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-528-SA5C-SB-4.0-5.0	SL-828-SA5C-SB-4.0-5.0			
EFH(C8-C11)	5.4 U	2.9	200	50.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-572-SA5C-SB-4.0-5.0	SL-872-SA5C-SB-4.0-5.0			
EFH(C15-C20)	5.3 U	3.1	200	50.00	J(all detects) UJ(all non-detects)
EFH(C21-C30)	7.2	76	165	50.00	
EFH(C30-C40)	11 U	100	200	50.00	

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-572-SA5C-SB-4.0-5.0	SL-872-SA5C-SB-4.0-5.0			
BENZO(A)ANTHRACENE	3.7	11	99	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	11 U	5.8	200	50.00	
BENZO(B)FLUORANTHENE	11 U	6.9	200	50.00	
BENZO(E)PYRENE	3.0	8.2	93	50.00	
BENZO(K)FLUORANTHENE	11 U	6.0	200	50.00	
CHRYSENE	11 U	7.3	200	50.00	
PHENANTHRENE	3.5	11	103	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-528-SA5C-SB-4.0-5.0	SL-828-SA5C-SB-4.0-5.0			
PH	8.10	8.01	1		No Qualifiers Applied

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-572-SA5C-SB-4.0-5.0	SL-872-SA5C-SB-4.0-5.0			
PH	9.06	9.07	0		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-061912	GASOLINE RANGE ORGANICS (C5-C12)	J	23	50	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5C-SB-4.0-5.0	ANTIMONY	J	0.151	0.523	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.0954	0.523	PQL	MG/KG	
	MOLYBDENUM	J	0.251	0.523	PQL	MG/KG	
	THALLIUM	J	0.221	0.418	PQL	MG/KG	
SL-525-SA5C-SB-4.0-5.0	ANTIMONY	J	0.311	0.528	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.160	0.528	PQL	MG/KG	
	MOLYBDENUM	J	0.517	0.528	PQL	MG/KG	
	THALLIUM	J	0.253	0.423	PQL	MG/KG	
SL-525-SA5C-SB-9.0-10.0	ANTIMONY	J	0.189	0.540	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.197	0.540	PQL	MG/KG	
	THALLIUM	J	0.238	0.432	PQL	MG/KG	
SL-526-SA5C-SB-4.0-5.0	ANTIMONY	J	0.237	0.532	PQL	MG/KG	J (all detects)
	BORON	J	4.02	5.32	PQL	MG/KG	
	CADMIUM	J	0.125	0.532	PQL	MG/KG	
	MOLYBDENUM	J	0.513	0.532	PQL	MG/KG	
	THALLIUM	J	0.255	0.426	PQL	MG/KG	
SL-526-SA5C-SB-9.0-10.0	ANTIMONY	J	0.169	0.541	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.152	0.541	PQL	MG/KG	
	MOLYBDENUM	J	0.283	0.541	PQL	MG/KG	
	SILVER	J	0.109	0.541	PQL	MG/KG	
	THALLIUM	J	0.229	0.433	PQL	MG/KG	
SL-527-SA5C-SB-4.0-5.0	ANTIMONY	J	0.237	0.547	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.130	0.547	PQL	MG/KG	
	THALLIUM	J	0.280	0.438	PQL	MG/KG	
SL-528-SA5C-SB-4.0-5.0	ANTIMONY	J	0.251	0.520	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.154	0.520	PQL	MG/KG	
	THALLIUM	J	0.250	0.416	PQL	MG/KG	
SL-572-SA5C-SB-0.0-0.5	ANTIMONY	J	0.184	0.547	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.114	0.547	PQL	MG/KG	
	MOLYBDENUM	J	0.366	0.547	PQL	MG/KG	
	THALLIUM	J	0.246	0.438	PQL	MG/KG	
SL-572-SA5C-SB-4.0-5.0	ANTIMONY	J	0.166	0.508	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.458	0.508	PQL	MG/KG	
	CADMIUM	J	0.0863	0.508	PQL	MG/KG	
	MOLYBDENUM	J	0.380	0.508	PQL	MG/KG	
	THALLIUM	J	0.141	0.406	PQL	MG/KG	
SL-670-SA5C-SB-0.0-0.5	ANTIMONY	J	0.231	0.554	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.104	0.554	PQL	MG/KG	
	MOLYBDENUM	J	0.505	0.554	PQL	MG/KG	
	THALLIUM	J	0.185	0.443	PQL	MG/KG	
SL-670-SA5C-SB-4.0-5.0	CADMIUM	J	0.207	0.528	PQL	MG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-828-SA5C-SB-4.0-5.0	ANTIMONY	J	0.265	0.524	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.150	0.524	PQL	MG/KG	
	THALLIUM	J	0.265	0.419	PQL	MG/KG	
SL-872-SA5C-SB-4.0-5.0	ANTIMONY	J	0.155	0.531	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.472	0.531	PQL	MG/KG	
	CADMIUM	J	0.0907	0.531	PQL	MG/KG	
	THALLIUM	J	0.174	0.425	PQL	MG/KG	

Method: 7471A
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-524-SA5C-SB-4.0-5.0	MERCURY	J	0.0584	0.106	PQL	MG/KG	J (all detects)
SL-828-SA5C-SB-4.0-5.0	MERCURY	J	0.0815	0.107	PQL	MG/KG	J (all detects)

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5C-SB-9.0-10.0	EFH(C8-C11)	J	3.0	5.4	PQL	MG/KG	J (all detects)
SL-526-SA5C-SB-9.0-10.0	EFH(C8-C11)	J	2.8	5.4	PQL	MG/KG	J (all detects)
SL-572-SA5C-SB-0.0-0.5	EFH(C30-C40)	J	6.3	11	PQL	MG/KG	J (all detects)
SL-828-SA5C-SB-4.0-5.0	EFH(C8-C11)	J	2.9	5.3	PQL	MG/KG	J (all detects)
SL-872-SA5C-SB-4.0-5.0	EFH(C15-C20)	J	3.1	5.4	PQL	MG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-525-SA5C-SB-9.0-10.0	BENZO(A)PYRENE	J	2.8	11	PQL	UG/KG	J (all detects)
	BENZO(E)PYRENE	J	4.9	5.4	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	5.1	11	PQL	UG/KG	
SL-572-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	3.7	11	PQL	UG/KG	J (all detects)
	BENZO(E)PYRENE	J	3.0	5.3	PQL	UG/KG	
	PHENANTHRENE	J	3.5	11	PQL	UG/KG	
SL-670-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	5.8	21	PQL	UG/KG	J (all detects)
	BENZO(E)PYRENE	J	7.6	11	PQL	UG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12F132 **Laboratory: EMXT**

EDD Filename: 12F132 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-872-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	11	21	PQL	UG/KG	
	BENZO(A)PYRENE	J	5.8	21	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	6.9	21	PQL	UG/KG	
	BENZO(E)PYRENE	J	8.2	11	PQL	UG/KG	J (all detects)
	BENZO(K)FLUORANTHENE	J	6.0	21	PQL	UG/KG	
	CHRYSENE	J	7.3	21	PQL	UG/KG	
	PHENANTHRENE	J	11	21	PQL	UG/KG	

LDC #: 28578P4
SDG #: 12F132
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 1-6-12
Page: 1 of 1
Reviewer: CL
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	SW	MS/D (Al, Fe, Mn, Ti >4x) (2 ms/d in batch - quals parent only - see ws)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks		EB= EB2-062112 FB= FB-060512 (12F162) (12F037)

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: SO

1	SL-527-SA5C-SB-4.0-5.0	11	SL-525-SA5C-SB-9.0-10.0	21		31	
2	SL-528-SA5C-SB-4.0-5.0	12	SL-670-SA5C-SB-4.0-5.0	22		32	
3	SL-828-SA5C-SB-4.0-5.0	13	SL-670-SA5C-SB-0.0-0.5	23		33	
4	SL-572-SA5C-SB-0.0-0.5	14	SL-528-SA5C-SB-4.0-5.0MS	24		34	
5	SL-572-SA5C-SB-4.0-5.0	15	SL-528-SA5C-SB-4.0-5.0MSD	25		35	
6	SL-872-SA5C-SB-4.0-5.0	16	SL-572-SA5C-SB-4.0-5.0MS	26		36	
7	SL-524-SA5C-SB-4.0-5.0	17	SL-572-SA5C-SB-4.0-5.0MSD	27		37	
8	SL-526-SA5C-SB-4.0-5.0	18		28		38	
9	SL-526-SA5C-SB-9.0-10.0	19		29		39	
10	SL-525-SA5C-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 28578P 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CN
2nd Reviewer: W

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/21/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB2-062112	Action Limit	No Qualifiers									
Al	0.0723	18.075										
B	0.00560	1.4										
Ca	0.0304	7.6										
Cu	0.00245	0.6125										
Fe	0.0220	5.5										
Mn	0.000336	0.084										
Na	0.104	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 #: 28578Q4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

(Y) N N/A 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
	14/15	S	Ba	147			2	J det/A
			Zr	73	71		↓	J/UJ/A
	16/17	S	Ca		65		5	J/UJ/A

Comments: _____

MSD.4SW

SAMPLE DELIVERY GROUP

12F146

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2012	TB-062012	F146-02	TB	5030B	8015B GRO	III
20-Jun-2012	TB-062012	F146-02	TB	5030B	8260B	III
20-Jun-2012	TB-062012	F146-02	TB	5030B	8260B SIM	III
20-Jun-2012	SL-628-SA5C-SB-12.5	F146-12	N	5035	8015B GRO	III
20-Jun-2012	SL-628-SA5C-SB-12.5	F146-12	N	5035	8260B	III
20-Jun-2012	SL-628-SA5C-SB-12.5	F146-12	N	5035	8260B SIM	III
20-Jun-2012	SL-628-SA5C-SB-10.5	F146-10	N	5035	8015B GRO	III
20-Jun-2012	SL-628-SA5C-SB-10.5	F146-10	N	5035	8260B	III
20-Jun-2012	SL-628-SA5C-SB-10.5	F146-10	N	5035	8260B SIM	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	3550B	8015B EFH	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	3550B	8082	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	3550B	8270C SIM	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	7471A	7471A	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	GEN PREP	6850	III
20-Jun-2012	SL-628-SA5C-SB-11.5-12.5	F146-11	N	TOTAL	6020	III
20-Jun-2012	SL-630-SA5C-SB-9.0	F146-14	N	5035	8015B GRO	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	3550B	8015B EFH	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	3550B	8082	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	3550B	8270C SIM	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	7471A	7471A	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	GEN PREP	6850	III
20-Jun-2012	SL-630-SA5C-SB-8.0-9.0	F146-13	N	TOTAL	6020	III
20-Jun-2012	SL-587-SA5C-SB-5.0	F146-03	N	5035	8015B GRO	III
20-Jun-2012	SL-587-SA5C-SB-5.0MS	F146-03M	MS	5035	8015B GRO	III
20-Jun-2012	SL-587-SA5C-SB-5.0MSD	F146-03S	MSD	5035	8015B GRO	III
20-Jun-2012	SL-587-SA5C-SB-9.5	F146-07	N	5035	8015B GRO	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2012	SL-887-SA5C-SB-5.0	F146-05	FD	5035	8015B GRO	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0	F146-04	N	3550B	8015B EFH	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0	F146-04	N	3550B	8082	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0	F146-04	N	3550B	8270C SIM	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0	F146-04	N	7471A	7471A	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0	F146-04	N	TOTAL	6020	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MS	F146-04M	MS	3550B	8015B EFH	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MS	F146-04M	MS	3550B	8082	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MS	F146-04M	MS	3550B	8270C SIM	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MS	F146-04M	MS	7471A	7471A	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MS	F146-04M	MS	TOTAL	6020	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MSD	F146-04S	MSD	3550B	8015B EFH	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MSD	F146-04S	MSD	3550B	8082	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MSD	F146-04S	MSD	3550B	8270C SIM	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MSD	F146-04S	MSD	7471A	7471A	III
20-Jun-2012	SL-587-SA5C-SB-4.0-5.0MSD	F146-04S	MSD	TOTAL	6020	III
20-Jun-2012	SL-587-SA5C-SB-8.5-9.5	F146-08	N	3550B	8015B EFH	III
20-Jun-2012	SL-587-SA5C-SB-8.5-9.5	F146-08	N	3550B	8082	III
20-Jun-2012	SL-587-SA5C-SB-8.5-9.5	F146-08	N	3550B	8270C SIM	III
20-Jun-2012	SL-587-SA5C-SB-8.5-9.5	F146-08	N	7471A	7471A	III
20-Jun-2012	SL-587-SA5C-SB-8.5-9.5	F146-08	N	TOTAL	6020	III
20-Jun-2012	SL-887-SA5C-SB-4.0-5.0	F146-06	FD	3550B	8015B EFH	III
20-Jun-2012	SL-887-SA5C-SB-4.0-5.0	F146-06	FD	3550B	8082	III
20-Jun-2012	SL-887-SA5C-SB-4.0-5.0	F146-06	FD	3550B	8270C SIM	III
20-Jun-2012	SL-887-SA5C-SB-4.0-5.0	F146-06	FD	7471A	7471A	III
20-Jun-2012	SL-887-SA5C-SB-4.0-5.0	F146-06	FD	TOTAL	6020	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Jun-2012	FB-062012	F146-01	FB	3520C	8015B EFH	III
20-Jun-2012	FB-062012	F146-01	FB	3520C	8081A	III
20-Jun-2012	FB-062012	F146-01	FB	3520C	8082	III
20-Jun-2012	FB-062012	F146-01	FB	3520C	8270C	III
20-Jun-2012	FB-062012	F146-01	FB	3520C	8270C SIM	III
20-Jun-2012	FB-062012	F146-01	FB	5030B	8015B GRO	III
20-Jun-2012	FB-062012	F146-01	FB	5030B	8260B	III
20-Jun-2012	FB-062012	F146-01	FB	5030B	8260B SIM	III
20-Jun-2012	FB-062012	F146-01	FB	7470A	7470A	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	6850	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	7199	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	8015B	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	8015M	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	8151A	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	8330A	III
20-Jun-2012	FB-062012	F146-01	FB	GEN PREP	8332	III
20-Jun-2012	FB-062012	F146-01	FB	TOTAL	6020	III
20-Jun-2012	SL-604-SA5C-SB-5.0	F146-15	N	5035	8015B GRO	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	3550B	8015B EFH	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	3550B	8082	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	3550B	8270C SIM	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	7471A	7471A	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	GEN PREP	6850	III
20-Jun-2012	SL-604-SA5C-SB-4.0-5.0	F146-09	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: FB-062012 ***Collected:*** 6/20/2012 3:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	0.0271	J	0.0200	MDL	0.100	PQL	MG/L	J	Z
BORON	0.00916	J	0.00500	MDL	0.0100	PQL	MG/L	J	Z
CALCIUM	0.0438	J	0.0250	MDL	0.100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-587-SA5C-SB-4.0-5.0 ***Collected:*** 6/20/2012 2:05:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.216	J	0.113	MDL	0.566	PQL	MG/KG	J	Z
BARIUM	93.1		0.226	MDL	0.566	PQL	MG/KG	J	Q
BORON	5.66	U	2.83	MDL	5.66	PQL	MG/KG	UJ	FD
CADMIUM	0.224	J	0.0566	MDL	0.566	PQL	MG/KG	J	Z
MANGANESE	242		0.283	MDL	0.566	PQL	MG/KG	J	FD
MOLYBDENUM	0.517	J	0.0566	MDL	0.566	PQL	MG/KG	J	Z, FD
SODIUM	97.1	J	56.6	MDL	113	PQL	MG/KG	J	Z
THALLIUM	0.261	J	0.0566	MDL	0.453	PQL	MG/KG	J	Z
Zirconium	5.66	U	2.83	MDL	5.66	PQL	MG/KG	UJ	Q

Sample ID: SL-587-SA5C-SB-8.5-9.5 ***Collected:*** 6/20/2012 2:10:00 ***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	0.195	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BARIUM	80.2		0.216	MDL	0.540	PQL	MG/KG	J	Q
BERYLLIUM	0.536	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.164	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.208	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z
Zirconium	5.40	U	2.70	MDL	5.40	PQL	MG/KG	UJ	Q

Sample ID: SL-604-SA5C-SB-4.0-5.0 ***Collected:*** 6/20/2012 3:10:00 ***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	0.181	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
BARIUM	92.0		0.208	MDL	0.519	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-604-SA5C-SB-4.0-5.0 **Collected:** 6/20/2012 3:10:00 **Analysis Type:** RES/TOT **Dilution:** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.484	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
CADMIUM	0.168	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
MOLYBDENUM	0.350	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.218	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z
Zirconium	5.19	U	2.60	MDL	5.19	PQL	MG/KG	UJ	Q

Sample ID: SL-628-SA5C-SB-11.5-12.5 **Collected:** 6/20/2012 11:00:00 **Analysis Type:** RES/TOT **Dilution:** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.206	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BARIUM	96.0		0.216	MDL	0.540	PQL	MG/KG	J	Q
BERYLLIUM	0.455	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.174	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
SODIUM	74.0	J	54.0	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.238	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z
Zirconium	5.40	U	2.70	MDL	5.40	PQL	MG/KG	UJ	Q

Sample ID: SL-630-SA5C-SB-8.0-9.0 **Collected:** 6/20/2012 11:55:00 **Analysis Type:** RES/TOT **Dilution:** 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.165	J	0.106	MDL	0.529	PQL	MG/KG	J	Z
BARIUM	91.7		0.211	MDL	0.529	PQL	MG/KG	J	Q
BERYLLIUM	0.365	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
CADMIUM	0.158	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
THALLIUM	0.172	J	0.0529	MDL	0.423	PQL	MG/KG	J	Z
Zirconium	5.29	U	2.64	MDL	5.29	PQL	MG/KG	UJ	Q

Sample ID: SL-887-SA5C-SB-4.0-5.0 **Collected:** 6/20/2012 2:15:00 **Analysis Type:** RES/TOT **Dilution:** 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.248	J	0.110	MDL	0.549	PQL	MG/KG	J	Z
BARIUM	131		0.220	MDL	0.549	PQL	MG/KG	J	Q
BORON	2.90	J	2.75	MDL	5.49	PQL	MG/KG	J	Z, FD
CADMIUM	0.266	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
MANGANESE	603		0.275	MDL	0.549	PQL	MG/KG	J	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

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

Sample ID: SL-887-SA5C-SB-4.0-5.0 *Collected:* 6/20/2012 2:15:00 *Analysis Type:* RES/TOT *Dilution:* 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.919		0.0549	MDL	0.549	PQL	MG/KG	J	FD
THALLIUM	0.271	J	0.0549	MDL	0.440	PQL	MG/KG	J	Z
Zirconium	5.49	U	2.75	MDL	5.49	PQL	MG/KG	UJ	Q

Method Category: SVOA
Method: 8015B EFH **Matrix: SO**

Sample ID: SL-587-SA5C-SB-4.0-5.0 *Collected:* 6/20/2012 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.0	J	2.9	MDL	5.7	PQL	MG/KG	J	Z, FD

Sample ID: SL-604-SA5C-SB-4.0-5.0 *Collected:* 6/20/2012 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
EFH(C21-C30)	3.0	J	2.6	MDL	5.3	PQL	MG/KG	J	Z

Sample ID: SL-628-SA5C-SB-11.5-12.5 *Collected:* 6/20/2012 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	2.9	J	2.7	MDL	5.5	PQL	MG/KG	J	Z

Sample ID: SL-630-SA5C-SB-8.0-9.0 *Collected:* 6/20/2012 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
EFH(C21-C30)	4.7	J	2.7	MDL	5.4	PQL	MG/KG	J	Z
EFH(C30-C40)	7.5	J	5.4	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-887-SA5C-SB-4.0-5.0 *Collected:* 6/20/2012 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
EFH(C21-C30)	5.7	U	2.8	MDL	5.7	PQL	MG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: FB-062012 *Collected:* 6/20/2012 3:00:00 *Analysis Type:* RES-ACID *Dilution:* 1.02

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLOROPHENOL	10	U	5.1	MDL	10	PQL	UG/L	UJ	E
3,3'-DICHLOROBENZIDINE	10	U	5.1	MDL	10	PQL	UG/L	UJ	E
4-CHLOROANILINE	10	U	5.1	MDL	10	PQL	UG/L	UJ	E
ANILINE	20	U	10	MDL	20	PQL	UG/L	UJ	E
BENZIDINE	51	U	20	MDL	51	PQL	UG/L	R	L

Method Category: SVOA

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

Sample ID: SL-587-SA5C-SB-8.5-9.5 *Collected:* 6/20/2012 2:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.6	U	2.8	MDL	5.6	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-604-SA5C-SB-4.0-5.0** ***Collected:*** **6/20/2012 3:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	4.2	J	2.6	MDL	11	PQL	UG/KG	J	Z, S
BENZO(A)ANTHRACENE	21		2.6	MDL	11	PQL	UG/KG	J	S
BENZO(A)PYRENE	16		2.6	MDL	11	PQL	UG/KG	J	S
BENZO(B)FLUORANTHENE	26		2.6	MDL	11	PQL	UG/KG	J	S
BENZO(E)PYRENE	13		2.6	MDL	5.3	PQL	UG/KG	J	S
BENZO(G,H,I)PERYLENE	6.1	J	2.6	MDL	11	PQL	UG/KG	J	Z, S
BENZO(K)FLUORANTHENE	8.6	J	2.6	MDL	11	PQL	UG/KG	J	Z, S
CHRYSENE	24		2.6	MDL	11	PQL	UG/KG	J	S
DIBENZO(A,H)ANTHRACENE	2.7	J	2.6	MDL	11	PQL	UG/KG	J	Z, S
FLUORANTHENE	44		2.6	MDL	11	PQL	UG/KG	J	S
FLUORENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	5.6	J	2.6	MDL	11	PQL	UG/KG	J	Z, S
NAPHTHALENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	27		2.6	MDL	11	PQL	UG/KG	J	S
PYRENE	33		2.6	MDL	11	PQL	UG/KG	J	S

Sample ID: **SL-628-SA5C-SB-11.5-12.5** ***Collected:*** **6/20/2012 11:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.7	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-628-SA5C-SB-11.5-12.5** ***Collected:*** **6/20/2012 11:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: **SL-630-SA5C-SB-8.0-9.0** ***Collected:*** **6/20/2012 11:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
ACENAPHTHENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
ANTHRACENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	11	U	5.4	MDL	11	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
CHRYSENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
FLUORANTHENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
FLUORENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
NAPHTHALENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
PHENANTHRENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S
PYRENE	22	U	5.4	MDL	22	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-887-SA5C-SB-4.0-5.0 *Collected:* 6/20/2012 2:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.7	U	2.8	MDL	5.7	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: FB-062012 *Collected:* 6/20/2012 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
GASOLINE RANGE ORGANICS (C5-C12)	28	J	10	MDL	50	PQL	UG/L	J	Z

Sample ID: TB-062012 *Collected:* 6/20/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	28	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: FB-062012 *Collected:* 6/20/2012 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
2-BUTANONE (MEK)	6.2	J	4.0	MDL	10	PQL	UG/L	J	Z
TOLUENE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	Z

Sample ID: TB-062012 *Collected:* 6/20/2012 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
METHYLENE CHLORIDE	0.50	J	0.50	MDL	1.0	PQL	UG/L	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-628-SA5C-SB-10.5 *Collected:* 6/20/2012 10:50:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE (MEK)	6.3	J	5.2	MDL	10	PQL	UG/KG	U	F

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

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

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F146

Field Blank Outlier Report

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

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

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-062012(RES)	6/20/2012 3:00:00 PM	2-BUTANONE (MEK) METHYLENE CHLORIDE TOLUENE	6.2 UG/L 4.1 UG/L 0.29 UG/L	SL-587-SA5C-SB-4.0-5.0 SL-587-SA5C-SB-5.0 SL-587-SA5C-SB-8.5-9.5 SL-587-SA5C-SB-9.5 SL-604-SA5C-SB-4.0-5.0 SL-604-SA5C-SB-5.0 SL-628-SA5C-SB-10.5 SL-628-SA5C-SB-11.5-12.5 SL-628-SA5C-SB-12.5 SL-630-SA5C-SB-8.0-9.0 SL-630-SA5C-SB-9.0 SL-887-SA5C-SB-4.0-5.0 SL-887-SA5C-SB-5.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-628-SA5C-SB-10.5(RES)	2-BUTANONE (MEK)	6.3 UG/KG	10U UG/KG

Project Name and Number: PHASE3 - SSFL PHASE 3

Surrogate Outlier Report

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-587-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	34.6	45.00-130.00	No Affected Compounds	
SL-587-SA5C-SB-8.5-9.5	2-FLUOROBIPHENYL Nitrobenzene-d5	38.1 38.5	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-604-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	40.4 36.3	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-628-SA5C-SB-11.5-12.5	2-FLUOROBIPHENYL Nitrobenzene-d5	29.9 28	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-630-SA5C-SB-8.0-9.0	2-FLUOROBIPHENYL Nitrobenzene-d5	33.3 23.8	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-887-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	27 33.8	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-587-SA5C-SB-4.0-5.0MS (TOT) **SL-587-SA5C-SB-4.0-5.0MSD (TOT)** (SL-587-SA5C-SB-4.0-5.0 SL-587-SA5C-SB-8.5-9.5 SL-604-SA5C-SB-4.0-5.0 SL-628-SA5C-SB-11.5-12.5 SL-630-SA5C-SB-8.0-9.0 SL-887-SA5C-SB-4.0-5.0)	ALUMINUM BARIUM IRON MANGANESE TITANIUM	193 149 160 284 529	204 134 152 344 493	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM BARIUM IRON MANGANESE TITANIUM	J (all detects) Al, Fe, Mn, Ti, No Qual, >4x
SL-587-SA5C-SB-4.0-5.0MS (TOT) **SL-587-SA5C-SB-4.0-5.0MSD (TOT)** (SL-587-SA5C-SB-4.0-5.0 SL-587-SA5C-SB-8.5-9.5 SL-604-SA5C-SB-4.0-5.0 SL-628-SA5C-SB-11.5-12.5 SL-630-SA5C-SB-8.0-9.0 SL-887-SA5C-SB-4.0-5.0)	Zirconium	67	70	75.00-125.00	-	Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SVF050WC **SVF050WL** (FB-062012)	BENZIDINE	0	0	20.00-130.00	-	BENZIDINE	J (all detects) R (all non-detects)
SVF050WC (FB-062012)	2-CHLOROPHENOL 3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE ANILINE	- - - -	- - - -	30.00-130.00 20.00-140.00 30.00-130.00 10.00-130.00	31 (30.00) 68 (30.00) 43 (30.00) 86 (30.00)	2-CHLOROPHENOL 3,3'-DICHLOROBENZIDINE 4-CHLOROANILINE ANILINE	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12F146 **Laboratory: EMXT**

EDD Filename: 12F146R **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-587-SA5C-SB-4.0-5.0 (TOT)	SL-887-SA5C-SB-4.0-5.0 (TOT)			
ALUMINUM	13100	15200	15	50.00	
ANTIMONY	0.216	0.248	14	50.00	
ARSENIC	4.10	5.89	36	50.00	
BARIUM	93.1	131	34	50.00	
BERYLLIUM	0.608	0.672	10	50.00	
CADMIUM	0.224	0.266	17	50.00	
CALCIUM	2860	3310	15	50.00	
CHROMIUM	19.6	21.7	10	50.00	
COBALT	6.15	7.84	24	50.00	
COPPER	10.1	10.5	4	50.00	
IRON	19000	23400	21	50.00	
LEAD	7.11	7.20	1	50.00	No Qualifiers Applied
LITHIUM	17.2	20.0	15	50.00	
MAGNESIUM	4350	5030	14	50.00	
NICKEL	12.9	15.4	18	50.00	
PHOSPHORUS	230	312	30	50.00	
POTASSIUM	2890	3200	10	50.00	
SODIUM	97.1	131	30	50.00	
STRONTIUM	22.4	25.4	13	50.00	
THALLIUM	0.261	0.271	4	50.00	
TITANIUM	745	824	10	50.00	
VANADIUM	34.4	40.4	16	50.00	
ZINC	50.0	62.3	22	50.00	
BORON	5.66 U	2.90	200	50.00	J(all detects) UJ(all non-detects)
MANGANESE	242	603	85	50.00	
MOLYBDENUM	0.517	0.919	56	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-587-SA5C-SB-4.0-5.0	SL-887-SA5C-SB-4.0-5.0			
EFH(C21-C30)	3.0	5.7 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-587-SA5C-SB-4.0-5.0	SL-887-SA5C-SB-4.0-5.0			
PH	7.95	8.00	1		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3

LDC #: 28578Q4
SDG #: 12F146
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11/6/12
Page: 1 of 1
Reviewer: CA
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, Fe, Mn, Ti >4x)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=EB2-062112 (12F162), FB=1, FB-060512 (12F037)

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

Validated Samples: Soil/water

1	FB-062012 W	11		21		31	
2	SL-587-SA5C-SB-4.0-5.0	12		22		32	
3	SL-887-SA5C-SB-4.0-5.0	13		23		33	
4	SL-587-SA5C-SB-8.5-9.5	14		24		34	
5	SL-604-SA5C-SB-4.0-5.0	15		25		35	
6	SL-628-SA5C-SB-11.5-12.5	16		26		36	
7	SL-630-SA5C-SB-8.0-9.0	17		27		37	
8	SL-587-SA5C-SB-4.0-5.0MS	18		28		38	
9	SL-587-SA5C-SB-4.0-5.0MSD	19		29		39	
10		20		30		40	

Notes:

LDC #: 28578Q 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: W

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/21/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	EB2-062112	Action Limit	No Qualifiers									
Al	0.0723	18.075										
B	0.00560	1.4										
Ca	0.0304	7.6										
Cu	0.00245	0.6125										
Fe	0.0220	5.5										
Mn	0.000336	0.084										
Na	0.104	26										

LDC #: 28578Q 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: MC

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg
Sampling date: 6/20/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: None

Analyte	Blank ID	Sample Identification										
	FB-062012	Action Limit	No Qualifiers									
Al	0.0271	6.775										
B	0.00916											
Ca	0.0438	10.95										
Cu	0.00112	0.28										

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".

SAMPLE DELIVERY GROUP

12F162

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2012	TB-062112	F162-03	TB	5030B	8015B GRO	III
21-Jun-2012	TB-062112	F162-03	TB	5030B	8260B	III
21-Jun-2012	TB-062112	F162-03	TB	5030B	8260B SIM	III
21-Jun-2012	SL-585-SA5C-SB-5.0	F162-14	N	5035	8015B GRO	III
21-Jun-2012	SL-585-SA5C-SB-4.0-5.0	F162-15	N	3550B	8015B EFH	III
21-Jun-2012	SL-585-SA5C-SB-4.0-5.0	F162-15	N	3550B	8082	III
21-Jun-2012	SL-585-SA5C-SB-4.0-5.0	F162-15	N	3550B	8270C SIM	III
21-Jun-2012	SL-585-SA5C-SB-4.0-5.0	F162-15	N	7471A	7471A	III
21-Jun-2012	SL-585-SA5C-SB-4.0-5.0	F162-15	N	TOTAL	6020	III
21-Jun-2012	SL-600-SA5C-SB-5.0	F162-13	N	5035	8015B GRO	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	3550B	8015B EFH	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	3550B	8082	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	3550B	8270C SIM	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	7471A	7471A	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	GEN PREP	6850	III
21-Jun-2012	SL-600-SA5C-SB-4.0-5.0	F162-04	N	TOTAL	6020	III
21-Jun-2012	SL-599-SA5C-SB-5.0	F162-12	N	5035	8015B GRO	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	3550B	8015B EFH	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	3550B	8082	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	3550B	8270C SIM	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	7471A	7471A	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	GEN PREP	6850	III
21-Jun-2012	SL-599-SA5C-SB-4.0-5.0	F162-11	N	TOTAL	6020	III
21-Jun-2012	SL-584-SA5C-SB-5.0	F162-09	N	5035	8015B GRO	III
21-Jun-2012	SL-584-SA5C-SB-4.0-5.0	F162-10	N	3550B	8015B EFH	III
21-Jun-2012	SL-584-SA5C-SB-4.0-5.0	F162-10	N	3550B	8082	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2012	SL-584-SA5C-SB-4.0-5.0	F162-10	N	3550B	8270C SIM	III
21-Jun-2012	SL-584-SA5C-SB-4.0-5.0	F162-10	N	7471A	7471A	III
21-Jun-2012	SL-584-SA5C-SB-4.0-5.0	F162-10	N	TOTAL	6020	III
21-Jun-2012	SL-603-SA5C-SB-5.0	F162-08	N	5035	8015B GRO	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	3550B	8015B EFH	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	3550B	8082	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	3550B	8270C SIM	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	7471A	7471A	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	GEN PREP	6850	III
21-Jun-2012	SL-603-SA5C-SB-4.0-5.0	F162-07	N	TOTAL	6020	III
21-Jun-2012	SL-602-SA5C-SB-5.0	F162-06	N	5035	8015B GRO	III
21-Jun-2012	SL-602-SA5C-SB-4.0-5.0	F162-05	N	3550B	8015B EFH	III
21-Jun-2012	SL-602-SA5C-SB-4.0-5.0	F162-05	N	3550B	8082	III
21-Jun-2012	SL-602-SA5C-SB-4.0-5.0	F162-05	N	3550B	8270C SIM	III
21-Jun-2012	SL-602-SA5C-SB-4.0-5.0	F162-05	N	GEN PREP	6850	III
21-Jun-2012	SL-594-SA5C-SB-6.0	F162-20	N	5035	8260B	III
21-Jun-2012	SL-594-SA5C-SB-6.0	F162-20	N	5035	8260B SIM	III
21-Jun-2012	SL-594-SA5C-SB-6.0	F162-20W	N	5035	8015B GRO	III
21-Jun-2012	SL-594-SA5C-SB-9.0	F162-19	N	5035	8260B	III
21-Jun-2012	SL-594-SA5C-SB-9.0	F162-19	N	5035	8260B SIM	III
21-Jun-2012	SL-594-SA5C-SB-9.0	F162-19W	N	5035	8015B GRO	III
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	3550B	8015B EFH	III
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	3550B	8082	III
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	3550B	8270C SIM	III
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	7471A	7471A	III
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	GEN PREP	6850	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2012	SL-594-SA5C-SB-0.0-0.5	F162-16	N	TOTAL	6020	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	3550B	8015B EFH	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	3550B	8082	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	3550B	8270C SIM	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	7471A	7471A	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	GEN PREP	6850	III
21-Jun-2012	SL-594-SA5C-SB-5.0-6.0	F162-17	N	TOTAL	6020	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	3550B	8015B EFH	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	3550B	8082	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	3550B	8270C SIM	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	7471A	7471A	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	GEN PREP	6850	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0	F162-18	N	TOTAL	6020	III
21-Jun-2012	SL-594-SA5C-SB-9.0-10.0MS	F162-18M	MS	TOTAL	6020	III
21-Jun-2012	EB2-062112	F162-01	EB	3520C	8015B EFH	III
21-Jun-2012	EB2-062112	F162-01	EB	3520C	8082	III
21-Jun-2012	EB2-062112	F162-01	EB	3520C	8270C SIM	III
21-Jun-2012	EB2-062112	F162-01	EB	5030B	8015B GRO	III
21-Jun-2012	EB2-062112	F162-01	EB	5030B	8260B	III
21-Jun-2012	EB2-062112	F162-01	EB	5030B	8260B SIM	III
21-Jun-2012	EB2-062112	F162-01	EB	7470A	7470A	III
21-Jun-2012	EB2-062112	F162-01	EB	GEN PREP	7199	III
21-Jun-2012	EB2-062112	F162-01	EB	GEN PREP	8015B	III
21-Jun-2012	EB2-062112	F162-01	EB	GEN PREP	8015M	III
21-Jun-2012	EB2-062112	F162-01	EB	NONE	314.0	III
21-Jun-2012	EB2-062112	F162-01	EB	TOTAL	6020	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Jun-2012	EB1-062112	F162-02	EB	3520C	8082	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB2-062112 *Collected:* 6/21/2012 3:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	0.0723	J	0.0200	MDL	0.100	PQL	MG/L	J	Z
BORON	0.00560	J	0.00500	MDL	0.0100	PQL	MG/L	J	Z
CALCIUM	0.0304	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
IRON	0.0220	J	0.0100	MDL	0.100	PQL	MG/L	J	Z
MANGANESE	0.000336	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-584-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 10:35:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.230	J	0.114	MDL	0.569	PQL	MG/KG	J	Z, Q
CADMIUM	0.283	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
MANGANESE	226		0.285	MDL	0.569	PQL	MG/KG	J	E
MOLYBDENUM	0.352	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
SILVER	0.0636	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
THALLIUM	0.315	J	0.0569	MDL	0.456	PQL	MG/KG	J	Z
Zirconium	5.69	U	2.85	MDL	5.69	PQL	MG/KG	UJ	Q

Sample ID: SL-585-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 8:25:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.179	J	0.104	MDL	0.520	PQL	MG/KG	J	Z, Q
BERYLLIUM	0.488	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
CADMIUM	0.147	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
MANGANESE	195		0.260	MDL	0.520	PQL	MG/KG	J	E
MOLYBDENUM	0.245	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
THALLIUM	0.232	J	0.0520	MDL	0.416	PQL	MG/KG	J	Z
Zirconium	5.20	U	2.60	MDL	5.20	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-594-SA5C-SB-0.0-0.5 *Collected:* 6/21/2012 2:05:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.230	J	0.113	MDL	0.563	PQL	MG/KG	J	Z, Q
CADMIUM	0.251	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
MANGANESE	330		0.282	MDL	0.563	PQL	MG/KG	J	E
SILVER	0.0691	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
THALLIUM	0.256	J	0.0563	MDL	0.451	PQL	MG/KG	J	Z
Zirconium	5.63	U	2.82	MDL	5.63	PQL	MG/KG	UJ	Q

Sample ID: SL-594-SA5C-SB-5.0-6.0 *Collected:* 6/21/2012 2:10:00 *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	0.237	J	0.111	MDL	0.556	PQL	MG/KG	J	Z, Q
BORON	3.71	J	2.78	MDL	5.56	PQL	MG/KG	J	Z
CADMIUM	0.232	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
MANGANESE	312		0.278	MDL	0.556	PQL	MG/KG	J	E
SILVER	0.0969	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
THALLIUM	0.282	J	0.0556	MDL	0.445	PQL	MG/KG	J	Z
Zirconium	5.56	U	2.78	MDL	5.56	PQL	MG/KG	UJ	Q

Sample ID: SL-594-SA5C-SB-9.0-10.0 *Collected:* 6/21/2012 2:15:00 *Analysis Type:* RES/TOT *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.262	J	0.121	MDL	0.606	PQL	MG/KG	J	Z, Q
BORON	3.38	J	3.03	MDL	6.06	PQL	MG/KG	J	Z
CADMIUM	0.384	J	0.0606	MDL	0.606	PQL	MG/KG	J	Z
MANGANESE	336		0.303	MDL	0.606	PQL	MG/KG	J	E
MOLYBDENUM	0.531	J	0.0606	MDL	0.606	PQL	MG/KG	J	Z
SILVER	0.0746	J	0.0606	MDL	0.606	PQL	MG/KG	J	Z
THALLIUM	0.356	J	0.0606	MDL	0.485	PQL	MG/KG	J	Z
Zirconium	6.06	U	3.03	MDL	6.06	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-599-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 10:00:00 *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	0.236	J	0.102	MDL	0.509	PQL	MG/KG	J	Z, Q
CADMIUM	0.171	J	0.0509	MDL	0.509	PQL	MG/KG	J	Z
MANGANESE	198		0.254	MDL	0.509	PQL	MG/KG	J	E
MOLYBDENUM	0.352	J	0.0509	MDL	0.509	PQL	MG/KG	J	Z
THALLIUM	0.215	J	0.0509	MDL	0.407	PQL	MG/KG	J	Z
Zirconium	5.09	U	2.54	MDL	5.09	PQL	MG/KG	UJ	Q

Sample ID: SL-600-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 9:35:00 *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	0.146	J	0.103	MDL	0.515	PQL	MG/KG	J	Z, Q
BERYLLIUM	0.445	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
CADMIUM	0.165	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
MANGANESE	218		0.257	MDL	0.515	PQL	MG/KG	J	E
MOLYBDENUM	0.251	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
THALLIUM	0.217	J	0.0515	MDL	0.412	PQL	MG/KG	J	Z
Zirconium	5.15	U	2.57	MDL	5.15	PQL	MG/KG	UJ	Q

Sample ID: SL-603-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 11:05:00 *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	0.198	J	0.106	MDL	0.530	PQL	MG/KG	J	Z, Q
CADMIUM	0.282	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
MANGANESE	424		0.265	MDL	0.530	PQL	MG/KG	J	E
SILVER	0.0746	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
THALLIUM	0.352	J	0.0530	MDL	0.424	PQL	MG/KG	J	Z
Zirconium	5.30	U	2.65	MDL	5.30	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: **SL-585-SA5C-SB-4.0-5.0** ***Collected:*** **6/21/2012 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
2-METHYLNAPHTHALENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
ACENAPHTHENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
ANTHRACENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.2	U	2.6	MDL	5.2	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
CHRYSENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
FLUORANTHENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
FLUORENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
NAPHTHALENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
PHENANTHRENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S
PYRENE	10	U	2.6	MDL	10	PQL	UG/KG	UJ	S

Sample ID: **SL-594-SA5C-SB-0.0-0.5** ***Collected:*** **6/21/2012 2:05:00** ***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(E)PYRENE	6.9	J	5.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-599-SA5C-SB-4.0-5.0** ***Collected:*** **6/21/2012 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
2-METHYLNAPHTHALENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

Method: 8270C SIM *Matrix:* SO

Sample ID: SL-599-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.3	U	2.6	MDL	5.3	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.6	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-600-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 9:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.3	U	2.7	MDL	5.3	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-600-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 9:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-603-SA5C-SB-4.0-5.0 *Collected:* 6/21/2012 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.8	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: EB2-062112 *Collected:* 6/21/2012 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
GASOLINE RANGE ORGANICS (C5-C12)	32	J	10	MDL	50	PQL	UG/L	J	Z

Sample ID: TB-062112 *Collected:* 6/21/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	28	J	10	MDL	50	PQL	UG/L	J	Z

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: EB2-062112 *Collected:* 6/21/2012 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
METHYLENE CHLORIDE	0.91	J	0.50	MDL	1.0	PQL	UG/L	J	Z

Sample ID: TB-062112 *Collected:* 6/21/2012 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
METHYLENE CHLORIDE	0.51	J	0.50	MDL	1.0	PQL	UG/L	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-594-SA5C-SB-9.0 *Collected:* 6/21/2012 1:50:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.9	J	5.1	MDL	10	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
E	Matrix Spike Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F162

Surrogate Outlier Report

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-584-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	44.3	45.00-130.00	No Affected Compounds	
SL-585-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	35.3 35	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-594-SA5C-SB-0.0-0.5	2-FLUOROBIPHENYL	44.3	45.00-130.00	No Affected Compounds	
SL-594-SA5C-SB-5.0-6.0	2-FLUOROBIPHENYL	40.4	45.00-130.00	No Affected Compounds	
SL-594-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL	34.1	45.00-130.00	No Affected Compounds	
SL-599-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	35.7 33.7	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-600-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	33.9 35.6	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-602-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	44.7	45.00-130.00	No Affected Compounds	
SL-603-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	22.5 25.2	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-594-SA5C-SB-9.0-10.0MS (TOT) **SL-594-SA5C-SB-9.0-10.0MSD (TOT)** (SL-584-SA5C-SB-4.0-5.0 SL-585-SA5C-SB-4.0-5.0 SL-594-SA5C-SB-0.0-0.5 SL-594-SA5C-SB-5.0-6.0 SL-594-SA5C-SB-9.0-10.0 SL-599-SA5C-SB-4.0-5.0 SL-600-SA5C-SB-4.0-5.0 SL-603-SA5C-SB-4.0-5.0)	ALUMINUM BARIUM IRON TITANIUM	- - - 410	147 144 132 553	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM BARIUM IRON TITANIUM	No Qual, >4x
SL-594-SA5C-SB-9.0-10.0MS (TOT) **SL-594-SA5C-SB-9.0-10.0MSD (TOT)** (SL-584-SA5C-SB-4.0-5.0 SL-585-SA5C-SB-4.0-5.0 SL-594-SA5C-SB-0.0-0.5 SL-594-SA5C-SB-5.0-6.0 SL-594-SA5C-SB-9.0-10.0 SL-599-SA5C-SB-4.0-5.0 SL-600-SA5C-SB-4.0-5.0 SL-603-SA5C-SB-4.0-5.0)	MANGANESE	-14	409	75.00-125.00	32 (20.00)	MANGANESE	J(all detects) UJ(all non-detects) No Qual %R >4x
SL-594-SA5C-SB-9.0-10.0MS (TOT) **SL-594-SA5C-SB-9.0-10.0MSD (TOT)** (SL-584-SA5C-SB-4.0-5.0 SL-585-SA5C-SB-4.0-5.0 SL-594-SA5C-SB-0.0-0.5 SL-594-SA5C-SB-5.0-6.0 SL-594-SA5C-SB-9.0-10.0 SL-599-SA5C-SB-4.0-5.0 SL-600-SA5C-SB-4.0-5.0 SL-603-SA5C-SB-4.0-5.0)	ANTIMONY Zirconium	67 72	71 74	75.00-125.00 75.00-125.00	- -	ANTIMONY Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB2-062112	ALUMINUM	J	0.0723	0.100	PQL	MG/L	J (all detects)
	BORON	J	0.00560	0.0100	PQL	MG/L	
	CALCIUM	J	0.0304	0.100	PQL	MG/L	
	IRON	J	0.0220	0.100	PQL	MG/L	
	MANGANESE	J	0.000336	0.00100	PQL	MG/L	

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB2-062112	GASOLINE RANGE ORGANICS (C5-C12)	J	32	50	PQL	UG/L	J (all detects)
TB-062112	GASOLINE RANGE ORGANICS (C5-C12)	J	28	50	PQL	UG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB2-062112	METHYLENE CHLORIDE	J	0.91	1.0	PQL	UG/L	J (all detects)
TB-062112	METHYLENE CHLORIDE	J	0.51	1.0	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-584-SA5C-SB-4.0-5.0	ANTIMONY	J	0.230	0.569	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.283	0.569	PQL	MG/KG	
	MOLYBDENUM	J	0.352	0.569	PQL	MG/KG	
	SILVER	J	0.0636	0.569	PQL	MG/KG	
	THALLIUM	J	0.315	0.456	PQL	MG/KG	
SL-585-SA5C-SB-4.0-5.0	ANTIMONY	J	0.179	0.520	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.488	0.520	PQL	MG/KG	
	CADMIUM	J	0.147	0.520	PQL	MG/KG	
	MOLYBDENUM	J	0.245	0.520	PQL	MG/KG	
	THALLIUM	J	0.232	0.416	PQL	MG/KG	
SL-594-SA5C-SB-0.0-0.5	ANTIMONY	J	0.230	0.563	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.251	0.563	PQL	MG/KG	
	SILVER	J	0.0691	0.563	PQL	MG/KG	
	THALLIUM	J	0.256	0.451	PQL	MG/KG	
SL-594-SA5C-SB-5.0-6.0	ANTIMONY	J	0.237	0.556	PQL	MG/KG	J (all detects)
	BORON	J	3.71	5.56	PQL	MG/KG	
	CADMIUM	J	0.232	0.556	PQL	MG/KG	
	SILVER	J	0.0969	0.556	PQL	MG/KG	
	THALLIUM	J	0.282	0.445	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F162 **Laboratory: EMXT**

EDD Filename: 12F162 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-594-SA5C-SB-9.0-10.0	ANTIMONY	J	0.262	0.606	PQL	MG/KG	J (all detects)
	BORON	J	3.38	6.06	PQL	MG/KG	
	CADMIUM	J	0.384	0.606	PQL	MG/KG	
	MOLYBDENUM	J	0.531	0.606	PQL	MG/KG	
	SILVER	J	0.0746	0.606	PQL	MG/KG	
	THALLIUM	J	0.356	0.485	PQL	MG/KG	
SL-599-SA5C-SB-4.0-5.0	ANTIMONY	J	0.236	0.509	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.171	0.509	PQL	MG/KG	
	MOLYBDENUM	J	0.352	0.509	PQL	MG/KG	
	THALLIUM	J	0.215	0.407	PQL	MG/KG	
SL-600-SA5C-SB-4.0-5.0	ANTIMONY	J	0.146	0.515	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.445	0.515	PQL	MG/KG	
	CADMIUM	J	0.165	0.515	PQL	MG/KG	
	MOLYBDENUM	J	0.251	0.515	PQL	MG/KG	
	THALLIUM	J	0.217	0.412	PQL	MG/KG	
SL-603-SA5C-SB-4.0-5.0	ANTIMONY	J	0.198	0.530	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.282	0.530	PQL	MG/KG	
	SILVER	J	0.0746	0.530	PQL	MG/KG	
	THALLIUM	J	0.352	0.424	PQL	MG/KG	

Method: 8260B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-594-SA5C-SB-9.0	ACETONE	J	7.9	10	PQL	UG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-594-SA5C-SB-0.0-0.5	BENZO(E)PYRENE	J	6.9	11	PQL	UG/KG	J (all detects)

LDC #: 28578R4 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/6/12

SDG #: 12F162 ADR Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: CY

2nd Reviewer: V

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

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

	Validation Area		Comments
I.	Technical holding times	~	Sampling dates:
II.	ICP/MS Tune	~	
III.	Calibration	~	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	~	
VI.	Matrix Spike Analysis	N	MS/D (Al, Ba, Fe, Mn, Ti 74X) → RPD out
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	~	
XV	Field Blanks	SW	EB=1, FB= FB-060512 (12AF037)

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	EB2-062112 ✓	11	SL-594-SA5C-SB-9.0-10.0MSD	21		31	
2	SL-600-SA5C-SB-4.0-5.0	12		22		32	
3	SL-603-SA5C-SB-4.0-5.0	13		23		33	
4	SL-584-SA5C-SB-4.0-5.0	14		24		34	
5	SL-599-SA5C-SB-4.0-5.0	15		25		35	
6	SL-585-SA5C-SB-4.0-5.0	16		26		36	
7	SL-594-SA5C-SB-0.0-0.5	17		27		37	
8	SL-594-SA5C-SB-5.0-6.0	18		28		38	
9	SL-594-SA5C-SB-9.0-10.0	19		29		39	
10	SL-594-SA5C-SB-9.0-10.0MS	20		30		40	

Notes: _____

LDC #: 28578R 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/21/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	EB2-062112	Action Limit	No Qualifiers									
Al	0.0723	18.075										
B	0.00560	1.4										
Ca	0.0304	7.6										
Cu	0.00245	0.6125										
Fe	0.0220	5.5										
Mn	0.000336	0.084										
Na	0.104	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".

SAMPLE DELIVERY GROUP

12F182

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
25-Jun-2012	TB-062512	F182-02	TB	5030B	8015B GRO	III
25-Jun-2012	SL-575-SA5C-SB-4.0-5.0	F182-01	N	3550B	8082	III
25-Jun-2012	SL-575-SA5C-SB-4.0-5.0	F182-01	N	3550B	8270C SIM	III
25-Jun-2012	SL-575-SA5C-SB-4.0-5.0	F182-01	N	7471A	7471A	III
25-Jun-2012	SL-575-SA5C-SB-4.0-5.0	F182-01	N	GEN PREP	6850	III
25-Jun-2012	SL-575-SA5C-SB-4.0-5.0	F182-01	N	TOTAL	6020	III
25-Jun-2012	SL-515-SA5C-SB-5.0	F182-05	N	5035	8015B GRO	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	3550B	8015B EFH	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	3550B	8082	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	3550B	8270C SIM	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	7471A	7471A	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	GEN PREP	6850	III
25-Jun-2012	SL-515-SA5C-SB-4.0-5.0	F182-04	N	TOTAL	6020	III
25-Jun-2012	SL-515-SA5C-SB-10.0	F182-03	N	5035	8015B GRO	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	3550B	8015B EFH	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	3550B	8082	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	3550B	8270C SIM	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	7471A	7471A	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	GEN PREP	6850	III
25-Jun-2012	SL-515-SA5C-SB-9.0-10.0	F182-06	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-515-SA5C-SB-4.0-5.0 **Collected:** 6/25/2012 2:45:00 **Analysis Type:** RES/TOT **Dilution:** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.297	J	0.112	MDL	0.562	PQL	MG/KG	J	Z, Q
BORON	3.16	J	2.81	MDL	5.62	PQL	MG/KG	J	Z
CADMIUM	0.315	J	0.0562	MDL	0.562	PQL	MG/KG	J	Z
MANGANESE	971		0.281	MDL	0.562	PQL	MG/KG	J	E
THALLIUM	0.266	J	0.0562	MDL	0.449	PQL	MG/KG	J	Z
Zirconium	3.52	J	2.81	MDL	5.62	PQL	MG/KG	J	Z, Q

Sample ID: SL-515-SA5C-SB-9.0-10.0 **Collected:** 6/25/2012 3:30:00 **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	0.159	J	0.108	MDL	0.538	PQL	MG/KG	J	Z, Q
CADMIUM	0.203	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z
MANGANESE	191		0.269	MDL	0.538	PQL	MG/KG	J	E
MOLYBDENUM	0.203	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z
SILVER	0.0542	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z
THALLIUM	0.262	J	0.0538	MDL	0.430	PQL	MG/KG	J	Z
Zirconium	5.38	U	2.69	MDL	5.38	PQL	MG/KG	UJ	Q

Sample ID: SL-575-SA5C-SB-4.0-5.0 **Collected:** 6/25/2012 10:30:00 **Analysis Type:** RES/TOT **Dilution:** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.245	J	0.109	MDL	0.547	PQL	MG/KG	J	Z, Q
CADMIUM	0.229	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
MANGANESE	373		0.273	MDL	0.547	PQL	MG/KG	J	E
MOLYBDENUM	0.290	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
SILVER	0.0571	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
THALLIUM	0.259	J	0.0547	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.47	U	2.73	MDL	5.47	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-515-SA5C-SB-9.0-10.0 *Collected:* 6/25/2012 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.7	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-575-SA5C-SB-4.0-5.0 *Collected:* 6/25/2012 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.5	U	2.8	MDL	5.5	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-575-SA5C-SB-4.0-5.0 *Collected:* 6/25/2012 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-062512 *Collected:* 6/25/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	25	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
E	Matrix Spike Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F182

Surrogate Outlier Report

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-515-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL Nitrobenzene-d5	21.8 29.7	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J (all detects) UJ (all non-detects)
SL-575-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	29.4 37.3	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12F182 **Laboratory: EMXT**

EDD Filename: 12F182 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-062512	GASOLINE RANGE ORGANICS (C5-C12)	J	25	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA5C-SB-4.0-5.0	ANTIMONY	J	0.297	0.562	PQL	MG/KG	
	BORON	J	3.16	5.62	PQL	MG/KG	
	CADMIUM	J	0.315	0.562	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.266	0.449	PQL	MG/KG	
	Zirconium	J	3.52	5.62	PQL	MG/KG	
SL-515-SA5C-SB-9.0-10.0	ANTIMONY	J	0.159	0.538	PQL	MG/KG	
	CADMIUM	J	0.203	0.538	PQL	MG/KG	
	MOLYBDENUM	J	0.203	0.538	PQL	MG/KG	J (all detects)
	SILVER	J	0.0542	0.538	PQL	MG/KG	
	THALLIUM	J	0.262	0.430	PQL	MG/KG	
SL-575-SA5C-SB-4.0-5.0	ANTIMONY	J	0.245	0.547	PQL	MG/KG	
	CADMIUM	J	0.229	0.547	PQL	MG/KG	
	MOLYBDENUM	J	0.290	0.547	PQL	MG/KG	J (all detects)
	SILVER	J	0.0571	0.547	PQL	MG/KG	
	THALLIUM	J	0.259	0.438	PQL	MG/KG	

LDC #: 28578S4
SDG #: 12F182
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 1-6-12
Page: 1 of 1
Reviewer: CR
2nd Reviewer: ✓

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	SW CR	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (From 12F162)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB=EB060812 (12F232) FB=FB060512 (12F037)

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-575-SA5C-SB-4.0-5.0	11		21		31	
2	SL-515-SA5C-SB-4.0-5.0	12		22		32	
3	SL-515-SA5C-SB-9.0-10.0	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 28578S 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: LW

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/28/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-062812	Action Limit	No Qualifiers									
B	0.00600	1.5										

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".

SAMPLE DELIVERY GROUP

12F197

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Jun-2012	TB-062612	F197-07	TB	5030B	8015B GRO	III
26-Jun-2012	SL-581-SA5C-SB-5.0	F197-02	N	5035	8015B GRO	III
26-Jun-2012	SL-581-SA5C-SB-5.0MS	F197-02M	MS	5035	8015B GRO	III
26-Jun-2012	SL-581-SA5C-SB-5.0MSD	F197-02S	MSD	5035	8015B GRO	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	3550B	8015B EFH	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	3550B	8082	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	3550B	8270C SIM	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	7471A	7471A	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	GEN PREP	6850	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	GEN PREP	7199	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0	F197-01	N	TOTAL	6020	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	3550B	8015B EFH	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	3550B	8082	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	3550B	8270C SIM	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	7471A	7471A	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	GEN PREP	6850	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	GEN PREP	7199	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MS	F197-01M	MS	TOTAL	6020	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	3550B	8015B EFH	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	3550B	8082	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	3550B	8270C SIM	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	7471A	7471A	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	GEN PREP	6850	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	GEN PREP	7199	III
26-Jun-2012	SL-581-SA5C-SB-4.0-5.0MSD	F197-01S	MSD	TOTAL	6020	III
26-Jun-2012	SL-881-SA5C-SB-5.0	F197-04	FD	5035	8015B GRO	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	3550B	8015B EFH	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	3550B	8082	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	3550B	8270C SIM	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	7471A	7471A	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	GEN PREP	6850	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	GEN PREP	7199	III
26-Jun-2012	SL-881-SA5C-SB-4.0-5.0	F197-03	FD	TOTAL	6020	III
26-Jun-2012	SL-747-SA5C-SB-3.5	F197-06	N	5035	8015B GRO	III
26-Jun-2012	SL-747-SA5C-SB-2.5-3.5	F197-05	N	3550B	8015B EFH	III
26-Jun-2012	SL-747-SA5C-SB-2.5-3.5	F197-05	N	3550B	8082	III
26-Jun-2012	SL-747-SA5C-SB-2.5-3.5	F197-05	N	3550B	8270C SIM	III
26-Jun-2012	SL-747-SA5C-SB-2.5-3.5	F197-05	N	7471A	7471A	III
26-Jun-2012	SL-747-SA5C-SB-2.5-3.5	F197-05	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F197 **Laboratory: EMXT**

EDD Filename: 12F197 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-581-SA5C-SB-4.0-5.0** ***Collected:*** **6/26/2012 10:31:00** ***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	0.181	J	0.111	MDL	0.556	PQL	MG/KG	J	Z, Q
BORON	3.74	J	2.78	MDL	5.56	PQL	MG/KG	J	Z
CADMIUM	0.301	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
CHROMIUM	20.3		0.223	MDL	0.556	PQL	MG/KG	J	Q
MAGNESIUM	4350		5.56	MDL	11.1	PQL	MG/KG	J	Q
MOLYBDENUM	0.138	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
SILVER	0.0705	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
THALLIUM	0.185	J	0.0556	MDL	0.445	PQL	MG/KG	J	Z
VANADIUM	33.9		0.0556	MDL	0.556	PQL	MG/KG	J	Q

Sample ID: **SL-747-SA5C-SB-2.5-3.5** ***Collected:*** **6/26/2012 2:01:00** ***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	0.240	J	0.108	MDL	0.540	PQL	MG/KG	J	Z, Q
CADMIUM	0.252	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CHROMIUM	21.6		0.216	MDL	0.540	PQL	MG/KG	J	Q
MAGNESIUM	4090		5.40	MDL	10.8	PQL	MG/KG	J	Q
MOLYBDENUM	0.263	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
SILVER	0.0575	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.253	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z
VANADIUM	44.3		0.0540	MDL	0.540	PQL	MG/KG	J	Q

Sample ID: **SL-881-SA5C-SB-4.0-5.0** ***Collected:*** **6/26/2012 10:33:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.183	J	0.110	MDL	0.551	PQL	MG/KG	J	Z, Q
BORON	3.57	J	2.76	MDL	5.51	PQL	MG/KG	J	Z
CADMIUM	0.293	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z
CHROMIUM	20.2		0.221	MDL	0.551	PQL	MG/KG	J	Q
MAGNESIUM	4230		5.51	MDL	11.0	PQL	MG/KG	J	Q
MOLYBDENUM	0.135	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z
SILVER	0.0722	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F197 **Laboratory: EMXT**

EDD Filename: 12F197 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

Sample ID: SL-881-SA5C-SB-4.0-5.0 *Collected:* 6/26/2012 10:33:00 *Analysis Type:* RES/TOT *Dilution:* 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.180	J	0.0551	MDL	0.441	PQL	MG/KG	J	Z
VANADIUM	31.3		0.0551	MDL	0.551	PQL	MG/KG	J	Q

Method Category: VOA
Method: 8015B GRO **Matrix:** AQ

Sample ID: TB-062612 *Collected:* 6/26/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	26	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F197 **Laboratory: EMXT**

EDD Filename: 12F197 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F197

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12F197 **Laboratory: EMXT**

EDD Filename: 12F197 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-581-SA5C-SB-4.0-5.0MSD (TOT) (SL-581-SA5C-SB-4.0-5.0 SL-747-SA5C-SB-2.5-3.5 SL-881-SA5C-SB-4.0-5.0)	CALCIUM	-	378	75.00-125.00	-	CALCIUM	No Qual, >4x
SL-581-SA5C-SB-4.0-5.0MS (TOT)	ALUMINUM	-	-18	75.00-125.00	-	ALUMINUM	No Qual, >4x
	BARIUM	-	23	75.00-125.00	-	BARIUM	
SL-581-SA5C-SB-4.0-5.0MSD (TOT) (SL-581-SA5C-SB-4.0-5.0 SL-747-SA5C-SB-2.5-3.5 SL-881-SA5C-SB-4.0-5.0)	IRON	-	9	75.00-125.00	-	IRON	
	TITANIUM	166	-270	75.00-125.00	-	TITANIUM	
SL-581-SA5C-SB-4.0-5.0MS (TOT)	ANTIMONY	59	70	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)
	CHROMIUM	-	73	75.00-125.00	-	CHROMIUM	
SL-581-SA5C-SB-4.0-5.0MSD (TOT) (SL-581-SA5C-SB-4.0-5.0 SL-747-SA5C-SB-2.5-3.5 SL-881-SA5C-SB-4.0-5.0)	MAGNESIUM	-	57	75.00-125.00	-	MAGNESIUM	
	MANGANESE	-	39	75.00-125.00	-	MANGANESE	Mn, No Qual, >4x
	VANADIUM	-	72	75.00-125.00	-	VANADIUM	

Reporting Limit Outliers

Lab Reporting Batch ID: 12F197 **Laboratory: EMXT**

EDD Filename: 12F197 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-062612	GASOLINE RANGE ORGANICS (C5-C12)	J	26	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-581-SA5C-SB-4.0-5.0	ANTIMONY	J	0.181	0.556	PQL	MG/KG	J (all detects)
	BORON	J	3.74	5.56	PQL	MG/KG	
	CADMIUM	J	0.301	0.556	PQL	MG/KG	
	MOLYBDENUM	J	0.138	0.556	PQL	MG/KG	
	SILVER	J	0.0705	0.556	PQL	MG/KG	
	THALLIUM	J	0.185	0.445	PQL	MG/KG	
SL-747-SA5C-SB-2.5-3.5	ANTIMONY	J	0.240	0.540	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.252	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.263	0.540	PQL	MG/KG	
	SILVER	J	0.0575	0.540	PQL	MG/KG	
	THALLIUM	J	0.253	0.432	PQL	MG/KG	
SL-881-SA5C-SB-4.0-5.0	ANTIMONY	J	0.183	0.551	PQL	MG/KG	J (all detects)
	BORON	J	3.57	5.51	PQL	MG/KG	
	CADMIUM	J	0.293	0.551	PQL	MG/KG	
	MOLYBDENUM	J	0.135	0.551	PQL	MG/KG	
	SILVER	J	0.0722	0.551	PQL	MG/KG	
	THALLIUM	J	0.180	0.441	PQL	MG/KG	

LDC #: 28578T4
SDG #: 12F197
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11-6-12
Page: 1 of 1
Reviewer: CL
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, Ba, Ca, Fe, Mn, Ti >4X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB= EB-060812 FB= FB060512 (12F232) (12F037)

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-581-SA5C-SB-4.0-5.0	11		21		31	
2	SL-881-SA5C-SB-4.0-5.0	12		22		32	
3	SL-747-SA5C-SB-2.5-3.5	13		23		33	
4	SL-581-SA5C-SB-4.0-5.0MS	14		24		34	
5	SL-581-SA5C-SB-4.0-5.0MSD	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 #: 28578T 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/28/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-062812	Action Limit	No Qualifiers									
B	0.00600	1.5										

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".

SAMPLE DELIVERY GROUP

12F215

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Jun-2012	SL-578-SA5C-SB-4.0-5.0	F215-01	N	3550B	8082	III
27-Jun-2012	SL-578-SA5C-SB-4.0-5.0	F215-01	N	3550B	8270C SIM	III
27-Jun-2012	SL-578-SA5C-SB-4.0-5.0	F215-01	N	7471A	7471A	III
27-Jun-2012	SL-578-SA5C-SB-4.0-5.0	F215-01	N	GEN PREP	6850	III
27-Jun-2012	SL-578-SA5C-SB-4.0-5.0	F215-01	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F215 **Laboratory: EMXT**

EDD Filename: 12F215 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 *Matrix:* SO

Sample ID: SL-578-SA5C-SB-4.0-5.0 *Collected:* 6/27/2012 10:15:00 *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	0.205	J	0.108	MDL	0.542	PQL	MG/KG	J	Z, Q
CADMIUM	0.295	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
CHROMIUM	21.4		0.217	MDL	0.542	PQL	MG/KG	J	Q
MAGNESIUM	4180		5.42	MDL	10.8	PQL	MG/KG	J	Q
MOLYBDENUM	0.157	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
SILVER	0.0752	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
THALLIUM	0.242	J	0.0542	MDL	0.434	PQL	MG/KG	J	Z
VANADIUM	34.1		0.0542	MDL	0.542	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F215 **Laboratory: EMXT**

EDD Filename: 12F215 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F215

Reporting Limit Outliers

Lab Reporting Batch ID: 12F215 **Laboratory: EMXT**

EDD Filename: 12F215 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **6020**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-578-SA5C-SB-4.0-5.0	ANTIMONY	J	0.205	0.542	PQL	MG/KG	
	CADMIUM	J	0.295	0.542	PQL	MG/KG	
	MOLYBDENUM	J	0.157	0.542	PQL	MG/KG	J (all detects)
	SILVER	J	0.0752	0.542	PQL	MG/KG	
	THALLIUM	J	0.242	0.434	PQL	MG/KG	

LDC #: 28578U4
SDG #: 12F215
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11-6-12
Page: 1 of 1
Reviewer: CR
2nd Reviewer: V

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (from 12F197)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB= EB062812 (12F232) FB= FB060512 (12F037)

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-578-SA5C-SB-4.0-5.0	11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 28578U 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/28/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-062812	Action Limit	No Qualifiers									
B	0.00600	1.5										

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".

SAMPLE DELIVERY GROUP

12F232

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-Jun-2012	SL-501-SA5C-SB-4.0-5.0	F232-02	N	3550B	8082	III
28-Jun-2012	SL-501-SA5C-SB-4.0-5.0	F232-02	N	3550B	8270C SIM	III
28-Jun-2012	SL-501-SA5C-SB-4.0-5.0	F232-02	N	7471A	7471A	III
28-Jun-2012	SL-501-SA5C-SB-4.0-5.0	F232-02	N	GEN PREP	6850	III
28-Jun-2012	SL-501-SA5C-SB-4.0-5.0	F232-02	N	TOTAL	6020	III
28-Jun-2012	SL-502-SA5C-SB-4.5-5.5	F232-03	N	3550B	8082	III
28-Jun-2012	SL-502-SA5C-SB-4.5-5.5	F232-03	N	3550B	8270C SIM	III
28-Jun-2012	SL-502-SA5C-SB-4.5-5.5	F232-03	N	7471A	7471A	III
28-Jun-2012	SL-502-SA5C-SB-4.5-5.5	F232-03	N	GEN PREP	6850	III
28-Jun-2012	SL-502-SA5C-SB-4.5-5.5	F232-03	N	TOTAL	6020	III
28-Jun-2012	EB-062812	F232-01	EB	3520C	8015B EFH	III
28-Jun-2012	EB-062812	F232-01	EB	3520C	8082	III
28-Jun-2012	EB-062812	F232-01	EB	5030B	8015B GRO	III
28-Jun-2012	EB-062812	F232-01	EB	7470A	7470A	III
28-Jun-2012	EB-062812	F232-01	EB	GEN PREP	6850	III
28-Jun-2012	EB-062812	F232-01	EB	GEN PREP	7199	III
28-Jun-2012	EB-062812	F232-01	EB	TOTAL	6020	III
28-Jun-2012	EB-062812	F232-01W	EB	3520C	8270C SIM	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12F232 **Laboratory: EMXT**

EDD Filename: 12F232 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB-062812 *Collected:* 6/28/2012 3:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.00600	J	0.00500	MDL	0.0100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-501-SA5C-SB-4.0-5.0 *Collected:* 6/28/2012 9:00:00 *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	0.219	J	0.109	MDL	0.543	PQL	MG/KG	J	Z, Q
BORON	3.05	J	2.72	MDL	5.43	PQL	MG/KG	J	Z
CADMIUM	0.233	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z
CHROMIUM	26.8		0.217	MDL	0.543	PQL	MG/KG	J	Q
MAGNESIUM	4940		5.43	MDL	10.9	PQL	MG/KG	J	Q
MOLYBDENUM	0.404	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z
SILVER	0.154	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z
THALLIUM	0.292	J	0.0543	MDL	0.434	PQL	MG/KG	J	Z
VANADIUM	49.3		0.0543	MDL	0.543	PQL	MG/KG	J	Q

Sample ID: SL-502-SA5C-SB-4.5-5.5 *Collected:* 6/28/2012 10:30:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.263	J	0.111	MDL	0.556	PQL	MG/KG	J	Z, Q
BORON	3.23	J	2.78	MDL	5.56	PQL	MG/KG	J	Z
CADMIUM	0.235	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
CHROMIUM	22.8		0.222	MDL	0.556	PQL	MG/KG	J	Q
MAGNESIUM	4480		5.56	MDL	11.1	PQL	MG/KG	J	Q
MOLYBDENUM	0.231	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
SILVER	0.0887	J	0.0556	MDL	0.556	PQL	MG/KG	J	Z
THALLIUM	0.232	J	0.0556	MDL	0.444	PQL	MG/KG	J	Z
VANADIUM	42.0		0.0556	MDL	0.556	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F232 **Laboratory: EMXT**

EDD Filename: 12F232 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: **EB-062812** ***Collected:*** **6/28/2012 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*
GASOLINE RANGE ORGANICS (C5-C12)	17	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12F232 **Laboratory: EMXT**

EDD Filename: 12F232 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12F232

Surrogate Outlier Report

Lab Reporting Batch ID: 12F232 **Laboratory: EMXT**

EDD Filename: 12F232 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **8082**
Matrix: **AQ**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB-062812	DECACHLOROBIPHENYL	127	45.00-120.00	All Target Analytes	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12F232 **Laboratory: EMXT**

EDD Filename: 12F232 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-062812	BORON	J	0.00600	0.0100	PQL	MG/L	J (all detects)

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-062812	GASOLINE RANGE ORGANICS (C5-C12)	J	17	50	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5C-SB-4.0-5.0	ANTIMONY	J	0.219	0.543	PQL	MG/KG	J (all detects)
	BORON	J	3.05	5.43	PQL	MG/KG	
	CADMIUM	J	0.233	0.543	PQL	MG/KG	
	MOLYBDENUM	J	0.404	0.543	PQL	MG/KG	
	SILVER	J	0.154	0.543	PQL	MG/KG	
	THALLIUM	J	0.292	0.434	PQL	MG/KG	
SL-502-SA5C-SB-4.5-5.5	ANTIMONY	J	0.263	0.556	PQL	MG/KG	J (all detects)
	BORON	J	3.23	5.56	PQL	MG/KG	
	CADMIUM	J	0.235	0.556	PQL	MG/KG	
	MOLYBDENUM	J	0.231	0.556	PQL	MG/KG	
	SILVER	J	0.0887	0.556	PQL	MG/KG	
	THALLIUM	J	0.232	0.444	PQL	MG/KG	

LDC #: 28578V4
SDG #: 12F232
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 1-6-12
Page: 1 of 1
Reviewer: CL
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	~	Sampling dates:
II.	ICP/MS Tune	~	
III.	Calibration	~	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	~	
VI.	Matrix Spike Analysis	N	MS/D (see 12F197)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	~	
XV	Field Blanks	SW	EB=1 FB= FB-060512 (12F037)

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 W

1	EB-062812	11		21		31	
2	SL-501-SA5C-SB-4.0-5.0	12		22		32	
3	SL-502-SA5C-SB-4.5-5.5	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 28578V 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: AL
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 6/28/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All Soil

Analyte	Blank ID	Sample Identification										
	EB-062812	Action Limit	No Qualifiers									
B	0.00600	1.5										

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".

SAMPLE DELIVERY GROUP

12G030

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-522-SA5C-SB-4.0-5.0 *Collected:* 7/9/2012 10:05:00 *Analysis Type:* RES/TOT *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.200	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.246	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
COBALT	5.72		0.0536	MDL	0.536	PQL	MG/KG	J	A
MOLYBDENUM	0.512	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
SILVER	0.0616	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
THALLIUM	0.260	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z

Sample ID: SL-522-SA5C-SB-9.0-10.0 *Collected:* 7/9/2012 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.117	J	0.105	MDL	0.526	PQL	MG/KG	J	Z
BERYLLIUM	0.404	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
CADMIUM	0.165	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
COBALT	4.64		0.0526	MDL	0.526	PQL	MG/KG	J	A
MOLYBDENUM	0.393	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
SODIUM	92.3	J	52.6	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.189	J	0.0526	MDL	0.421	PQL	MG/KG	J	Z

Sample ID: SL-523-SA5C-SB-4.0-5.0 *Collected:* 7/9/2012 1:20:00 PM *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	0.171	J	0.103	MDL	0.515	PQL	MG/KG	J	Z
CADMIUM	0.226	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
COBALT	7.51		0.0515	MDL	0.515	PQL	MG/KG	J	A
MOLYBDENUM	0.350	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
SILVER	0.0584	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
THALLIUM	0.227	J	0.0515	MDL	0.412	PQL	MG/KG	J	Z

Sample ID: SL-523-SA5C-SB-9.0-10.0 *Collected:* 7/9/2012 1:25:00 PM *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.132	J	0.109	MDL	0.547	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-523-SA5C-SB-9.0-10.0 **Collected:** 7/9/2012 1:25:00 PM **Analysis Type:** RES/TOT **Dilution:** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.192	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
COBALT	5.22		0.0547	MDL	0.547	PQL	MG/KG	J	A
THALLIUM	0.212	J	0.0547	MDL	0.437	PQL	MG/KG	J	Z

Sample ID: SL-530-SA5C-SB-4.0-5.0 **Collected:** 7/9/2012 9:05:00 AM **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	0.223	J	0.107	MDL	0.534	PQL	MG/KG	J	Z
CADMIUM	0.147	J	0.0534	MDL	0.534	PQL	MG/KG	J	Z
COBALT	6.17		0.0534	MDL	0.534	PQL	MG/KG	J	A
THALLIUM	0.247	J	0.0534	MDL	0.427	PQL	MG/KG	J	Z

Sample ID: SL-530-SA5C-SB-9.0-10.0 **Collected:** 7/9/2012 9:20:00 AM **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	0.107	J	0.103	MDL	0.517	PQL	MG/KG	J	Z
BERYLLIUM	0.367	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
CADMIUM	0.126	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
COBALT	4.52		0.0517	MDL	0.517	PQL	MG/KG	J	A
MOLYBDENUM	0.227	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
THALLIUM	0.191	J	0.0517	MDL	0.413	PQL	MG/KG	J	Z

Sample ID: SL-531-SA5C-SB-4.0-5.0 **Collected:** 7/9/2012 11:30:00 **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	0.181	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
CADMIUM	0.231	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
COBALT	9.23		0.0542	MDL	0.542	PQL	MG/KG	J	A
MOLYBDENUM	0.196	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
SILVER	0.0804	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
THALLIUM	0.239	J	0.0542	MDL	0.434	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-531-SA5C-SB-9.0-10.0** ***Collected:*** **7/9/2012 11:35:00** ***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	0.149	J	0.108	MDL	0.541	PQL	MG/KG	J	Z
CADMIUM	0.251	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
COBALT	5.47		0.0541	MDL	0.541	PQL	MG/KG	J	A
SILVER	0.0569	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
THALLIUM	0.252	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: **SL-533-SA5C-SB-4.0-5.0** ***Collected:*** **7/9/2012 1:55:00 PM** ***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	0.189	J	0.108	MDL	0.541	PQL	MG/KG	J	Z
CADMIUM	0.217	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
COBALT	13.6		0.0541	MDL	0.541	PQL	MG/KG	J	A
MOLYBDENUM	0.311	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SILVER	0.0599	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
THALLIUM	0.204	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: **SL-533-SA5C-SB-9.0-10.0** ***Collected:*** **7/9/2012 2:00:00 PM** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.990**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ANTIMONY	0.209	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
COBALT	11.0		0.0548	MDL	0.548	PQL	MG/KG	J	A
THALLIUM	0.258	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z

Sample ID: **SL-623-SA5C-SB-4.0-5.0** ***Collected:*** **7/9/2012 10:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ANTIMONY	0.186	J	0.107	MDL	0.537	PQL	MG/KG	J	Z
CADMIUM	0.153	J	0.0537	MDL	0.537	PQL	MG/KG	J	Z
COBALT	5.56		0.0537	MDL	0.537	PQL	MG/KG	J	A
MOLYBDENUM	0.358	J	0.0537	MDL	0.537	PQL	MG/KG	J	Z
SILVER	0.0551	J	0.0537	MDL	0.537	PQL	MG/KG	J	Z
THALLIUM	0.234	J	0.0537	MDL	0.429	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-623-SA5C-SB-9.0-10.0** ***Collected:*** **7/9/2012 11:00:00** ***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	0.144	J	0.103	MDL	0.517	PQL	MG/KG	J	Z
BERYLLIUM	0.451	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
CADMIUM	0.147	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
COBALT	4.38		0.0517	MDL	0.517	PQL	MG/KG	J	A
MOLYBDENUM	0.439	J	0.0517	MDL	0.517	PQL	MG/KG	J	Z
THALLIUM	0.190	J	0.0517	MDL	0.414	PQL	MG/KG	J	Z

Sample ID: **SL-754-SA5C-SB-0.0-0.5** ***Collected:*** **7/9/2012 2:40:00 PM** ***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	0.137	J	0.103	MDL	0.516	PQL	MG/KG	J	Z
BORON	3.42	J	2.58	MDL	5.16	PQL	MG/KG	J	Z
CADMIUM	0.222	J	0.0516	MDL	0.516	PQL	MG/KG	J	Z
COBALT	5.99		0.0516	MDL	0.516	PQL	MG/KG	J	A
MOLYBDENUM	0.498	J	0.0516	MDL	0.516	PQL	MG/KG	J	Z
SILVER	0.0560	J	0.0516	MDL	0.516	PQL	MG/KG	J	Z
SODIUM	90.1	J	51.6	MDL	103	PQL	MG/KG	J	Z
THALLIUM	0.253	J	0.0516	MDL	0.413	PQL	MG/KG	J	Z

Sample ID: **SL-754-SA5C-SB-4.0-5.0** ***Collected:*** **7/9/2012 2:45:00 PM** ***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	0.195	J	0.109	MDL	0.545	PQL	MG/KG	J	Z
CADMIUM	0.222	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
COBALT	7.79		0.0545	MDL	0.545	PQL	MG/KG	J	A
SILVER	0.0768	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
THALLIUM	0.265	J	0.0545	MDL	0.436	PQL	MG/KG	J	Z

Sample ID: **SL-754-SA5C-SB-6.5-7.5** ***Collected:*** **7/9/2012 2:50:00 PM** ***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	0.109	J	0.101	MDL	0.505	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-754-SA5C-SB-6.5-7.5 *Collected:* 7/9/2012 2:50:00 PM *Analysis Type:* RES/TOT *Dilution:* 0.957

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.322	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
CADMIUM	0.104	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
COBALT	3.75		0.0505	MDL	0.505	PQL	MG/KG	J	A
MOLYBDENUM	0.246	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
SODIUM	92.9	J	50.5	MDL	101	PQL	MG/KG	J	Z
THALLIUM	0.181	J	0.0505	MDL	0.404	PQL	MG/KG	J	Z

Sample ID: SL-822-SA5C-SB-4.0-5.0 *Collected:* 7/9/2012 10:30:00 *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	0.167	J	0.106	MDL	0.531	PQL	MG/KG	J	Z
CADMIUM	0.267	J	0.0531	MDL	0.531	PQL	MG/KG	J	Z
COBALT	6.50		0.0531	MDL	0.531	PQL	MG/KG	J	A
MOLYBDENUM	0.447	J	0.0531	MDL	0.531	PQL	MG/KG	J	Z
SILVER	0.0620	J	0.0531	MDL	0.531	PQL	MG/KG	J	Z
THALLIUM	0.277	J	0.0531	MDL	0.425	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: Prep12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
*#	Professional Judgment
A	ICP Serial Dilution
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12G030

Surrogate Outlier Report

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-522-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL	36.6	45.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-522-SA5C-SB-4.0-5.0MS	ALUMINUM	138	156	75.00-125.00	-	ALUMINUM	
(TOT)	IRON	-	150	75.00-125.00	-	IRON	
SL-522-SA5C-SB-4.0-5.0MSD	MANGANESE	165	419	75.00-125.00	-	MANGANESE	
(TOT)	TITANIUM	318	128	75.00-125.00	-	TITANIUM	
(SL-522-SA5C-SB-4.0-5.0							
SL-522-SA5C-SB-9.0-10.0							
SL-523-SA5C-SB-4.0-5.0							
SL-523-SA5C-SB-9.0-10.0							
SL-530-SA5C-SB-4.0-5.0							
SL-530-SA5C-SB-9.0-10.0							
SL-531-SA5C-SB-4.0-5.0							No Qual, >4x
SL-531-SA5C-SB-9.0-10.0							
SL-533-SA5C-SB-4.0-5.0							
SL-533-SA5C-SB-9.0-10.0							
SL-623-SA5C-SB-4.0-5.0							
SL-623-SA5C-SB-9.0-10.0							
SL-754-SA5C-SB-0.0-0.5							
SL-754-SA5C-SB-4.0-5.0							
SL-754-SA5C-SB-6.5-7.5							
SL-822-SA5C-SB-4.0-5.0)							

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-522-SA5C-SB-4.0-5.0	ANTIMONY	J	0.200	0.536	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.246	0.536	PQL	MG/KG	
	MOLYBDENUM	J	0.512	0.536	PQL	MG/KG	
	SILVER	J	0.0616	0.536	PQL	MG/KG	
	THALLIUM	J	0.260	0.429	PQL	MG/KG	
SL-522-SA5C-SB-9.0-10.0	ANTIMONY	J	0.117	0.526	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.404	0.526	PQL	MG/KG	
	CADMIUM	J	0.165	0.526	PQL	MG/KG	
	MOLYBDENUM	J	0.393	0.526	PQL	MG/KG	
	SODIUM	J	92.3	105	PQL	MG/KG	
	THALLIUM	J	0.189	0.421	PQL	MG/KG	
SL-523-SA5C-SB-4.0-5.0	ANTIMONY	J	0.171	0.515	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.226	0.515	PQL	MG/KG	
	MOLYBDENUM	J	0.350	0.515	PQL	MG/KG	
	SILVER	J	0.0584	0.515	PQL	MG/KG	
	THALLIUM	J	0.227	0.412	PQL	MG/KG	
SL-523-SA5C-SB-9.0-10.0	ANTIMONY	J	0.132	0.547	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.192	0.547	PQL	MG/KG	
	THALLIUM	J	0.212	0.437	PQL	MG/KG	
SL-530-SA5C-SB-4.0-5.0	ANTIMONY	J	0.223	0.534	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.147	0.534	PQL	MG/KG	
	THALLIUM	J	0.247	0.427	PQL	MG/KG	
SL-530-SA5C-SB-9.0-10.0	ANTIMONY	J	0.107	0.517	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.367	0.517	PQL	MG/KG	
	CADMIUM	J	0.126	0.517	PQL	MG/KG	
	MOLYBDENUM	J	0.227	0.517	PQL	MG/KG	
	THALLIUM	J	0.191	0.413	PQL	MG/KG	
SL-531-SA5C-SB-4.0-5.0	ANTIMONY	J	0.181	0.542	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.231	0.542	PQL	MG/KG	
	MOLYBDENUM	J	0.196	0.542	PQL	MG/KG	
	SILVER	J	0.0804	0.542	PQL	MG/KG	
	THALLIUM	J	0.239	0.434	PQL	MG/KG	
SL-531-SA5C-SB-9.0-10.0	ANTIMONY	J	0.149	0.541	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.251	0.541	PQL	MG/KG	
	SILVER	J	0.0569	0.541	PQL	MG/KG	
	THALLIUM	J	0.252	0.433	PQL	MG/KG	
SL-533-SA5C-SB-4.0-5.0	ANTIMONY	J	0.189	0.541	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.217	0.541	PQL	MG/KG	
	MOLYBDENUM	J	0.311	0.541	PQL	MG/KG	
	SILVER	J	0.0599	0.541	PQL	MG/KG	
	THALLIUM	J	0.204	0.433	PQL	MG/KG	
SL-533-SA5C-SB-9.0-10.0	ANTIMONY	J	0.209	0.548	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.258	0.438	PQL	MG/KG	
SL-623-SA5C-SB-4.0-5.0	ANTIMONY	J	0.186	0.537	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.153	0.537	PQL	MG/KG	
	MOLYBDENUM	J	0.358	0.537	PQL	MG/KG	
	SILVER	J	0.0551	0.537	PQL	MG/KG	
	THALLIUM	J	0.234	0.429	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G030 **Laboratory: EMXT**

EDD Filename: 12G030 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **6020**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-623-SA5C-SB-9.0-10.0	ANTIMONY	J	0.144	0.517	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.451	0.517	PQL	MG/KG	
	CADMIUM	J	0.147	0.517	PQL	MG/KG	
	MOLYBDENUM	J	0.439	0.517	PQL	MG/KG	
	THALLIUM	J	0.190	0.414	PQL	MG/KG	
SL-754-SA5C-SB-0.0-0.5	ANTIMONY	J	0.137	0.516	PQL	MG/KG	J (all detects)
	BORON	J	3.42	5.16	PQL	MG/KG	
	CADMIUM	J	0.222	0.516	PQL	MG/KG	
	MOLYBDENUM	J	0.498	0.516	PQL	MG/KG	
	SILVER	J	0.0560	0.516	PQL	MG/KG	
	SODIUM	J	90.1	103	PQL	MG/KG	
	THALLIUM	J	0.253	0.413	PQL	MG/KG	
SL-754-SA5C-SB-4.0-5.0	ANTIMONY	J	0.195	0.545	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.222	0.545	PQL	MG/KG	
	SILVER	J	0.0768	0.545	PQL	MG/KG	
	THALLIUM	J	0.265	0.436	PQL	MG/KG	
SL-754-SA5C-SB-6.5-7.5	ANTIMONY	J	0.109	0.505	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.322	0.505	PQL	MG/KG	
	CADMIUM	J	0.104	0.505	PQL	MG/KG	
	MOLYBDENUM	J	0.246	0.505	PQL	MG/KG	
	SODIUM	J	92.9	101	PQL	MG/KG	
	THALLIUM	J	0.181	0.404	PQL	MG/KG	
SL-822-SA5C-SB-4.0-5.0	ANTIMONY	J	0.167	0.531	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.267	0.531	PQL	MG/KG	
	MOLYBDENUM	J	0.447	0.531	PQL	MG/KG	
	SILVER	J	0.0620	0.531	PQL	MG/KG	
	THALLIUM	J	0.277	0.425	PQL	MG/KG	

LDC #: 28578W4
SDG #: 12G030
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11612
Page: 1 of 1
Reviewer:
2nd Reviewer:

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

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

	Validation Area		Comments
I.	Technical holding times	✓	Sampling dates:
II.	ICP/MS Tune	✓	
III.	Calibration	✓	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	✓	
VI.	Matrix Spike Analysis	N	MS/D (Al, Fe, Mn, Ti 74X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Co: 11% :J/UJ/A
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	✓	
XV	Field Blanks	SW	EB = EB071212 FB = FB060512 (SDG: 12G081 C12F037)

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-530-SA5C-SB-4.0-5.0	11	SL-523-SA5C-SB-9.0-10.0	21		31	
2	SL-530-SA5C-SB-9.0-10.0	12	SL-533-SA5C-SB-4.0-5.0	22		32	
3	SL-522-SA5C-SB-4.0-5.0	13	SL-533-SA5C-SB-9.0-10.0	23		33	
4	SL-522-SA5C-SB-9.0-10.0	14	SL-754-SA5C-SB-0.0-0.5	24		34	
5	SL-822-SA5C-SB-4.0-5.0	15	SL-754-SA5C-SB-4.0-5.0	25		35	
6	SL-531-SA5C-SB-4.0-5.0	16	SL-754-SA5C-SB-6.5-7.5	26		36	
7	SL-531-SA5C-SB-9.0-10.0	17	SL-522-SA5C-SB-4.0-5.0MS	27		37	
8	SL-623-SA5C-SB-4.0-5.0	18	SL-522-SA5C-SB-4.0-5.0MSD	28		38	
9	SL-623-SA5C-SB-9.0-10.0	19		29		39	
10	SL-523-SA5C-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 28578W 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

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 #: 28578W 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 7/12/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	EB-071212	Action Limit	No Qualifiers										
Al	0.0450	11.25											
B	0.00535	1.3375											
Ca	0.0367	9.175											
Cu	0.00157	0.3925											
Fe	0.0119	2.975											
Mn	0.000308	0.077											
Ni	0.000277	0.06925											

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".

SAMPLE DELIVERY GROUP

12G048

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jul-2012	SL-755-SA5C-SB-0.0-0.5	G048-01	N	3550B	8015B EFH	III
10-Jul-2012	SL-755-SA5C-SB-0.0-0.5	G048-01	N	3550B	8082	III
10-Jul-2012	SL-755-SA5C-SB-0.0-0.5	G048-01	N	3550B	8270C SIM	III
10-Jul-2012	SL-755-SA5C-SB-0.0-0.5	G048-01	N	7471A	7471A	III
10-Jul-2012	SL-755-SA5C-SB-0.0-0.5	G048-01	N	TOTAL	6020	III
10-Jul-2012	SL-755-SA5C-SB-4.5	G048-03	N	5035	8015B GRO	III
10-Jul-2012	SL-755-SA5C-SB-4.0-5.0	G048-02	N	3550B	8015B EFH	III
10-Jul-2012	SL-755-SA5C-SB-4.0-5.0	G048-02	N	3550B	8082	III
10-Jul-2012	SL-755-SA5C-SB-4.0-5.0	G048-02	N	3550B	8270C SIM	III
10-Jul-2012	SL-755-SA5C-SB-4.0-5.0	G048-02	N	7471A	7471A	III
10-Jul-2012	SL-755-SA5C-SB-4.0-5.0	G048-02	N	TOTAL	6020	III
10-Jul-2012	SL-755-SA5C-SB-6.0	G048-05	N	5035	8015B GRO	III
10-Jul-2012	SL-755-SA5C-SB-5.5-6.5	G048-04	N	3550B	8015B EFH	III
10-Jul-2012	SL-755-SA5C-SB-5.5-6.5	G048-04	N	3550B	8082	III
10-Jul-2012	SL-755-SA5C-SB-5.5-6.5	G048-04	N	7471A	7471A	III
10-Jul-2012	SL-755-SA5C-SB-5.5-6.5	G048-04	N	TOTAL	6020	III
10-Jul-2012	SL-755-SA5C-SB-5.5-6.5	G048-04R	N	3550B	8270C SIM	III
10-Jul-2012	TB-071012	G048-14	TB	5030B	8015B GRO	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	3550B	8082	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	3550B	8270C SIM	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	7471A	7471A	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	GEN PREP	6850	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	GEN PREP	7199	III
10-Jul-2012	SL-640-SA5C-SB-5.0-6.0	G048-06	N	TOTAL	6020	III
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	3550B	8082	III
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	3550B	8270C SIM	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	7471A	7471A	III
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	GEN PREP	6850	III
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	GEN PREP	7199	III
10-Jul-2012	SL-640-SA5C-SB-10.0-11.0	G048-07	N	TOTAL	6020	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	3550B	8082	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	3550B	8270C SIM	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	7471A	7471A	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	GEN PREP	6850	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	GEN PREP	7199	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0	G048-08	N	TOTAL	6020	III
10-Jul-2012	SL-640-SA5C-SB-15.0-16.0M	G048-08M	MS	7471A	7471A	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	3550B	8082	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	3550B	8270C SIM	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	7471A	7471A	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	GEN PREP	6850	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	GEN PREP	7199	III
10-Jul-2012	SL-640-SA5C-SB-19.0-20.0	G048-09	N	TOTAL	6020	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	3550B	8082	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	3550B	8270C SIM	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	7471A	7471A	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	GEN PREP	6850	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	GEN PREP	7199	III
10-Jul-2012	SL-641-SA5C-SB-4.0-5.0	G048-10	N	TOTAL	6020	III
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11	N	3550B	8082	III
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11	N	7471A	7471A	III
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11	N	GEN PREP	6850	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11	N	GEN PREP	7199	III
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11	N	TOTAL	6020	III
10-Jul-2012	SL-641-SA5C-SB-9.0-10.0	G048-11R	N	3550B	8270C SIM	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	3550B	8082	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	3550B	8270C SIM	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	7471A	7471A	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	GEN PREP	6850	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	GEN PREP	7199	III
10-Jul-2012	SL-641-SA5C-SB-14.0-15.0	G048-12	N	TOTAL	6020	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	3550B	8082	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	3550B	8270C SIM	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	7471A	7471A	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	GEN PREP	6850	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	GEN PREP	7199	III
10-Jul-2012	SL-641-SA5C-SB-18.5-19.5	G048-13	N	TOTAL	6020	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	3550B	8082	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	3550B	8270C SIM	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	7471A	7471A	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	GEN PREP	6850	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	GEN PREP	7199	III
10-Jul-2012	SL-642-SA5C-SB-4.0-5.0	G048-15	N	TOTAL	6020	III
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16	N	3550B	8082	III
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16	N	7471A	7471A	III
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16	N	GEN PREP	6850	III
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16	N	GEN PREP	7199	III
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16	N	TOTAL	6020	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jul-2012	SL-642-SA5C-SB-9.0-10.0	G048-16R	N	3550B	8270C SIM	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	3550B	8082	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	3550B	8270C SIM	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	7471A	7471A	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	GEN PREP	6850	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	GEN PREP	7199	III
10-Jul-2012	SL-642-SA5C-SB-14.0-15.0	G048-17	N	TOTAL	6020	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18	N	3550B	8082	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18	N	7471A	7471A	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18	N	GEN PREP	6850	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18	N	GEN PREP	7199	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18	N	TOTAL	6020	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5M	G048-18M	MS	3550B	8082	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5M	G048-18M	MS	GEN PREP	7199	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5M	G048-18M	MS	TOTAL	6020	III
10-Jul-2012	SL-642-SA5C-SB-17.5-18.5	G048-18R	N	3550B	8270C SIM	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-640-SA5C-SB-10.0-11.0 *Collected:* 7/10/2012 8:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.191	J	0.109	MDL	0.546	PQL	MG/KG	J	Z
BARIUM	113		0.218	MDL	0.546	PQL	MG/KG	J	Q
CADMIUM	0.319	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
THALLIUM	0.314	J	0.0546	MDL	0.437	PQL	MG/KG	J	Z

Sample ID: SL-640-SA5C-SB-15.0-16.0 *Collected:* 7/10/2012 8:50:00 *Analysis Type:* RES/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.220	J	0.116	MDL	0.582	PQL	MG/KG	J	Z
BARIUM	85.2		0.233	MDL	0.582	PQL	MG/KG	J	Q
CADMIUM	0.322	J	0.0582	MDL	0.582	PQL	MG/KG	J	Z
MOLYBDENUM	0.330	J	0.0582	MDL	0.582	PQL	MG/KG	J	Z
THALLIUM	0.262	J	0.0582	MDL	0.466	PQL	MG/KG	J	Z
Zirconium	3.39	J	2.91	MDL	5.82	PQL	MG/KG	J	Z

Sample ID: SL-640-SA5C-SB-19.0-20.0 *Collected:* 7/10/2012 8:55:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.192	J	0.120	MDL	0.602	PQL	MG/KG	J	Z
BARIUM	98.1		0.241	MDL	0.602	PQL	MG/KG	J	Q
CADMIUM	0.566	J	0.0602	MDL	0.602	PQL	MG/KG	J	Z
MOLYBDENUM	0.513	J	0.0602	MDL	0.602	PQL	MG/KG	J	Z
THALLIUM	0.275	J	0.0602	MDL	0.482	PQL	MG/KG	J	Z
Zirconium	3.11	J	3.01	MDL	6.02	PQL	MG/KG	J	Z

Sample ID: SL-640-SA5C-SB-5.0-6.0 *Collected:* 7/10/2012 8:40:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.194	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BARIUM	133		0.224	MDL	0.559	PQL	MG/KG	J	Q
CADMIUM	0.172	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
MOLYBDENUM	0.328	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-640-SA5C-SB-5.0-6.0** ***Collected:*** **7/10/2012 8:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.995**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.298	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z

Sample ID: **SL-641-SA5C-SB-14.0-15.0** ***Collected:*** **7/10/2012 10:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.204	J	0.114	MDL	0.571	PQL	MG/KG	J	Z
BARIUM	84.7		0.228	MDL	0.571	PQL	MG/KG	J	Q
BORON	2.97	J	2.85	MDL	5.71	PQL	MG/KG	J	Z
CADMIUM	0.215	J	0.0571	MDL	0.571	PQL	MG/KG	J	Z
MOLYBDENUM	0.188	J	0.0571	MDL	0.571	PQL	MG/KG	J	Z
THALLIUM	0.264	J	0.0571	MDL	0.457	PQL	MG/KG	J	Z
Zirconium	3.48	J	2.85	MDL	5.71	PQL	MG/KG	J	Z

Sample ID: **SL-641-SA5C-SB-18.5-19.5** ***Collected:*** **7/10/2012 10:30:00** ***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	0.167	J	0.113	MDL	0.567	PQL	MG/KG	J	Z
BARIUM	68.1		0.227	MDL	0.567	PQL	MG/KG	J	Q
BERYLLIUM	0.416	J	0.0567	MDL	0.567	PQL	MG/KG	J	Z
CADMIUM	0.346	J	0.0567	MDL	0.567	PQL	MG/KG	J	Z
MOLYBDENUM	0.407	J	0.0567	MDL	0.567	PQL	MG/KG	J	Z
THALLIUM	0.183	J	0.0567	MDL	0.454	PQL	MG/KG	J	Z

Sample ID: **SL-641-SA5C-SB-4.0-5.0** ***Collected:*** **7/10/2012 10:10:00** ***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	0.161	J	0.111	MDL	0.554	PQL	MG/KG	J	Z
BARIUM	154		0.222	MDL	0.554	PQL	MG/KG	J	Q
CADMIUM	0.190	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
MOLYBDENUM	0.227	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
SILVER	0.0576	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
THALLIUM	0.285	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-641-SA5C-SB-9.0-10.0 *Collected:* 7/10/2012 10:20:00 *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	0.157	J	0.108	MDL	0.539	PQL	MG/KG	J	Z
BARIUM	86.1		0.216	MDL	0.539	PQL	MG/KG	J	Q
BERYLLIUM	0.493	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
CADMIUM	0.393	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
MOLYBDENUM	0.342	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
THALLIUM	0.228	J	0.0539	MDL	0.431	PQL	MG/KG	J	Z

Sample ID: SL-642-SA5C-SB-14.0-15.0 *Collected:* 7/10/2012 12:50:00 *Analysis Type:* RES/TOT *Dilution:* 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.209	J	0.114	MDL	0.568	PQL	MG/KG	J	Z
BARIUM	82.5		0.227	MDL	0.568	PQL	MG/KG	J	Q
BERYLLIUM	0.534	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
CADMIUM	0.192	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
MOLYBDENUM	0.467	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0568	MDL	0.454	PQL	MG/KG	J	Z

Sample ID: SL-642-SA5C-SB-17.5-18.5 *Collected:* 7/10/2012 12:55:00 *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	0.138	J	0.107	MDL	0.533	PQL	MG/KG	J	Z
BARIUM	57.4		0.213	MDL	0.533	PQL	MG/KG	J	Q
BERYLLIUM	0.439	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
CADMIUM	0.151	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
MOLYBDENUM	0.295	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
THALLIUM	0.202	J	0.0533	MDL	0.427	PQL	MG/KG	J	Z

Sample ID: SL-642-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 12:40:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.162	J	0.111	MDL	0.553	PQL	MG/KG	J	Z
BARIUM	147		0.221	MDL	0.553	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-642-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 12:40:00 *Analysis Type:* RES/TOT *Dilution:* 4.98

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.866	J	0.277	MDL	2.77	PQL	MG/KG	J	Z
CADMIUM	0.232	J	0.0553	MDL	0.553	PQL	MG/KG	J	Z
MOLYBDENUM	0.222	J	0.0553	MDL	0.553	PQL	MG/KG	J	Z
THALLIUM	0.277	J	0.0553	MDL	0.443	PQL	MG/KG	J	Z
Zirconium	3.05	J	2.77	MDL	5.53	PQL	MG/KG	J	Z

Sample ID: SL-642-SA5C-SB-9.0-10.0 *Collected:* 7/10/2012 12:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	66.6		0.222	MDL	0.554	PQL	MG/KG	J	Q
CADMIUM	0.174	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
MOLYBDENUM	0.183	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
SILVER	0.0670	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
THALLIUM	0.239	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

Sample ID: SL-755-SA5C-SB-0.0-0.5 *Collected:* 7/10/2012 7:15:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	138		0.212	MDL	0.530	PQL	MG/KG	J	Q
BORON	2.74	J	2.65	MDL	5.30	PQL	MG/KG	J	Z
SILVER	0.128	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0530	MDL	0.424	PQL	MG/KG	J	Z
TIN	6.37	J	5.30	MDL	10.6	PQL	MG/KG	J	Z

Sample ID: SL-755-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 7:20:00 *Analysis Type:* RES/TOT *Dilution:* 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.318	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BARIUM	126		0.217	MDL	0.542	PQL	MG/KG	J	Q
CADMIUM	0.430	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
SILVER	0.121	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
THALLIUM	0.258	J	0.0542	MDL	0.434	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-755-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 7:20:00 *Analysis Type:* RES/TOT *Dilution:* 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	6.38	J	5.42	MDL	10.8	PQL	MG/KG	J	Z
Zirconium	2.73	J	2.71	MDL	5.42	PQL	MG/KG	J	Z

Sample ID: SL-755-SA5C-SB-5.5-6.5 *Collected:* 7/10/2012 7:30:00 *Analysis Type:* RES/TOT *Dilution:* 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	167		0.211	MDL	0.527	PQL	MG/KG	J	Q
CADMIUM	0.502	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
SILVER	0.177	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
Zirconium	2.98	J	2.63	MDL	5.27	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-755-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 7:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.9	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-755-SA5C-SB-0.0-0.5 *Collected:* 7/10/2012 7:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	15	J	11	MDL	21	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-755-SA5C-SB-0.0-0.5 *Collected:* 7/10/2012 7:15:00 *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	8.4	J	5.3	MDL	21	PQL	UG/KG	J	Z
BENZO(E)PYRENE	9.0	J	5.3	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-755-SA5C-SB-4.0-5.0 *Collected:* 7/10/2012 7:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	4.5	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	4.5	J	2.8	MDL	5.6	PQL	UG/KG	J	Z
FLUORANTHENE	5.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	4.5	J	2.8	MDL	11	PQL	UG/KG	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: AQ**

Sample ID: TB-071012 *Collected:* 7/10/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	15	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12G048

Surrogate Outlier Report

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8082
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-640-SA5C-SB-19.0-20.0	DECACHLOROBIPHENYL	121	45.00-120.00	All Target Analytes	J(all detects)
SL-641-SA5C-SB-18.5-19.5	DECACHLOROBIPHENYL	126	45.00-120.00	All Target Analytes	J(all detects)
SL-641-SA5C-SB-4.0-5.0	DECACHLOROBIPHENYL	122	45.00-120.00	All Target Analytes	J(all detects)
SL-641-SA5C-SB-9.0-10.0	DECACHLOROBIPHENYL	126	45.00-120.00	All Target Analytes	J(all detects)
SL-642-SA5C-SB-17.5-18.5	DECACHLOROBIPHENYL	126	45.00-120.00	All Target Analytes	J(all detects)
SL-642-SA5C-SB-9.0-10.0	DECACHLOROBIPHENYL	121	45.00-120.00	All Target Analytes	J(all detects)

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-640-SA5C-SB-10.0-11.0	2-FLUOROBIPHENYL	43.8	45.00-130.00	No Affected Compounds	
SL-640-SA5C-SB-15.0-16.0	2-FLUOROBIPHENYL	35.3	45.00-130.00	No Affected Compounds	
SL-640-SA5C-SB-19.0-20.0	2-FLUOROBIPHENYL	43.6	45.00-130.00	No Affected Compounds	
SL-642-SA5C-SB-14.0-15.0	2-FLUOROBIPHENYL	35.9	45.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-642-SA5C-SB-17.5-18.5MSD (TOT)	ALUMINUM	-	134	75.00-125.00	-	ALUMINUM	
(SL-640-SA5C-SB-10.0-11.0	BARIUM	-	159	75.00-125.00	-	BARIUM	
SL-640-SA5C-SB-15.0-16.0	IRON	-	136	75.00-125.00	-	IRON	
SL-640-SA5C-SB-19.0-20.0	MANGANESE	-	177	75.00-125.00	-	MANGANESE	
SL-640-SA5C-SB-5.0-6.0							J (all detects)
SL-641-SA5C-SB-14.0-15.0							
SL-641-SA5C-SB-18.5-19.5							
SL-641-SA5C-SB-4.0-5.0							Al, Fe, Mn, No Qual, >4x
SL-641-SA5C-SB-9.0-10.0							
SL-642-SA5C-SB-14.0-15.0							
SL-642-SA5C-SB-17.5-18.5							
SL-642-SA5C-SB-4.0-5.0							
SL-642-SA5C-SB-9.0-10.0							
SL-755-SA5C-SB-0.0-0.5							
SL-755-SA5C-SB-4.0-5.0							
SL-755-SA5C-SB-5.5-6.5)							
SL-642-SA5C-SB-17.5-18.5MS (TOT)	TITANIUM	3	-	75.00-125.00	-	TITANIUM	
(SL-640-SA5C-SB-10.0-11.0							
SL-640-SA5C-SB-15.0-16.0							
SL-640-SA5C-SB-19.0-20.0							
SL-640-SA5C-SB-5.0-6.0							
SL-641-SA5C-SB-14.0-15.0							
SL-641-SA5C-SB-18.5-19.5							
SL-641-SA5C-SB-4.0-5.0							No Qual, >4x
SL-641-SA5C-SB-9.0-10.0							
SL-642-SA5C-SB-14.0-15.0							
SL-642-SA5C-SB-17.5-18.5							
SL-642-SA5C-SB-4.0-5.0							
SL-642-SA5C-SB-9.0-10.0							
SL-755-SA5C-SB-0.0-0.5							
SL-755-SA5C-SB-4.0-5.0							
SL-755-SA5C-SB-5.5-6.5)							

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-071012	GASOLINE RANGE ORGANICS (C5-C12)	J	15	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-640-SA5C-SB-10.0-11.0	ANTIMONY	J	0.191	0.546	PQL	MG/KG	
	CADMIUM	J	0.319	0.546	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.314	0.437	PQL	MG/KG	
SL-640-SA5C-SB-15.0-16.0	ANTIMONY	J	0.220	0.582	PQL	MG/KG	
	CADMIUM	J	0.322	0.582	PQL	MG/KG	
	MOLYBDENUM	J	0.330	0.582	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.262	0.466	PQL	MG/KG	
	Zirconium	J	3.39	5.82	PQL	MG/KG	
SL-640-SA5C-SB-19.0-20.0	ANTIMONY	J	0.192	0.602	PQL	MG/KG	
	CADMIUM	J	0.566	0.602	PQL	MG/KG	
	MOLYBDENUM	J	0.513	0.602	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.275	0.482	PQL	MG/KG	
	Zirconium	J	3.11	6.02	PQL	MG/KG	
SL-640-SA5C-SB-5.0-6.0	ANTIMONY	J	0.194	0.559	PQL	MG/KG	
	CADMIUM	J	0.172	0.559	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.328	0.559	PQL	MG/KG	
	THALLIUM	J	0.298	0.447	PQL	MG/KG	
SL-641-SA5C-SB-14.0-15.0	ANTIMONY	J	0.204	0.571	PQL	MG/KG	
	BORON	J	2.97	5.71	PQL	MG/KG	
	CADMIUM	J	0.215	0.571	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.188	0.571	PQL	MG/KG	
	THALLIUM	J	0.264	0.457	PQL	MG/KG	
	Zirconium	J	3.48	5.71	PQL	MG/KG	
SL-641-SA5C-SB-18.5-19.5	ANTIMONY	J	0.167	0.567	PQL	MG/KG	
	BERYLLIUM	J	0.416	0.567	PQL	MG/KG	
	CADMIUM	J	0.346	0.567	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.407	0.567	PQL	MG/KG	
	THALLIUM	J	0.183	0.454	PQL	MG/KG	
SL-641-SA5C-SB-4.0-5.0	ANTIMONY	J	0.161	0.554	PQL	MG/KG	
	CADMIUM	J	0.190	0.554	PQL	MG/KG	
	MOLYBDENUM	J	0.227	0.554	PQL	MG/KG	J (all detects)
	SILVER	J	0.0576	0.554	PQL	MG/KG	
	THALLIUM	J	0.285	0.443	PQL	MG/KG	
SL-641-SA5C-SB-9.0-10.0	ANTIMONY	J	0.157	0.539	PQL	MG/KG	
	BERYLLIUM	J	0.493	0.539	PQL	MG/KG	
	CADMIUM	J	0.393	0.539	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.342	0.539	PQL	MG/KG	
	THALLIUM	J	0.228	0.431	PQL	MG/KG	
SL-642-SA5C-SB-14.0-15.0	ANTIMONY	J	0.209	0.568	PQL	MG/KG	
	BERYLLIUM	J	0.534	0.568	PQL	MG/KG	
	CADMIUM	J	0.192	0.568	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.467	0.568	PQL	MG/KG	
	THALLIUM	J	0.255	0.454	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-642-SA5C-SB-17.5-18.5	ANTIMONY	J	0.138	0.533	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.439	0.533	PQL	MG/KG	
	CADMIUM	J	0.151	0.533	PQL	MG/KG	
	MOLYBDENUM	J	0.295	0.533	PQL	MG/KG	
	THALLIUM	J	0.202	0.427	PQL	MG/KG	
SL-642-SA5C-SB-4.0-5.0	ANTIMONY	J	0.162	0.553	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.866	2.77	PQL	MG/KG	
	CADMIUM	J	0.232	0.553	PQL	MG/KG	
	MOLYBDENUM	J	0.222	0.553	PQL	MG/KG	
	THALLIUM	J	0.277	0.443	PQL	MG/KG	
	Zirconium	J	3.05	5.53	PQL	MG/KG	
SL-642-SA5C-SB-9.0-10.0	CADMIUM	J	0.174	0.554	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.183	0.554	PQL	MG/KG	
	SILVER	J	0.0670	0.554	PQL	MG/KG	
	THALLIUM	J	0.239	0.443	PQL	MG/KG	
SL-755-SA5C-SB-0.0-0.5	BORON	J	2.74	5.30	PQL	MG/KG	J (all detects)
	SILVER	J	0.128	0.530	PQL	MG/KG	
	THALLIUM	J	0.255	0.424	PQL	MG/KG	
	TIN	J	6.37	10.6	PQL	MG/KG	
SL-755-SA5C-SB-4.0-5.0	ANTIMONY	J	0.318	0.542	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.430	0.542	PQL	MG/KG	
	SILVER	J	0.121	0.542	PQL	MG/KG	
	THALLIUM	J	0.258	0.434	PQL	MG/KG	
	TIN	J	6.38	10.8	PQL	MG/KG	
	Zirconium	J	2.73	5.42	PQL	MG/KG	
SL-755-SA5C-SB-5.5-6.5	CADMIUM	J	0.502	0.527	PQL	MG/KG	J (all detects)
	SILVER	J	0.177	0.527	PQL	MG/KG	
	Zirconium	J	2.98	5.27	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-755-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	4.9	5.6	PQL	MG/KG	J (all detects)

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-755-SA5C-SB-0.0-0.5	AROCLOR 1260	J	15	21	PQL	UG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G048 **Laboratory: EMXT**

EDD Filename: 12G048 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-755-SA5C-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	8.4	21	PQL	UG/KG	J (all detects)
	BENZO(E)PYRENE	J	9.0	11	PQL	UG/KG	
SL-755-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	4.5	11	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	4.0	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	4.5	5.6	PQL	UG/KG	
	FLUORANTHENE	J	5.1	11	PQL	UG/KG	
	PYRENE	J	4.5	11	PQL	UG/KG	

LDC #: 28578X4
SDG #: 12G048
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11612
Page: 1 of 1
Reviewer: CL
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, Fe, Mn, Ti >4X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB= EB071212 FB= FB060512 (12F037 (SDG: 12G081))

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-755-SA5C-SB-0.0-0.5	11	SL-641-SA5C-SB-18.5-19.5	21		31	
2	SL-755-SA5C-SB-4.0-5.0	12	SL-642-SA5C-SB-4.0-5.0	22		32	
3	SL-755-SA5C-SB-5.5-6.5	13	SL-642-SA5C-SB-9.0-10.0	23		33	
4	SL-640-SA5C-SB-5.0-6.0	14	SL-642-SA5C-SB-14.0-15.0	24		34	
5	SL-640-SA5C-SB-10.0-11.0	15	SL-642-SA5C-SB-17.5-18.5	25		35	
6	SL-640-SA5C-SB-15.0-16.0	16	SL-640-SA5C-SB-15.0-16.0MS	26		36	
7	SL-640-SA5C-SB-19.0-20.0	17	SL-640-SA5C-SB-15.0-16.0MSD	27		37	
8	SL-641-SA5C-SB-4.0-5.0	18	SL-642-SA5C-SB-17.5-18.5MS	28		38	
9	SL-641-SA5C-SB-9.0-10.0	19	SL-642-SA5C-SB-17.5-18.5MSD	29		39	
10	SL-641-SA5C-SB-14.0-15.0	20		30		40	

Notes:

LDC #: 28578X 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

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 #: 28578X 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 7/12/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-071212	Action Limit	No Qualifiers									
Al	0.0450	11.25										
B	0.00535	1.3375										
Ca	0.0367	9.175										
Cu	0.00157	0.3925										
Fe	0.0119	2.975										
Mn	0.000308	0.077										
Ni	0.000277	0.06925										

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".

SAMPLE DELIVERY GROUP

12G064

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
11-Jul-2012	SL-592-SA5C-SB-5.0-6.0	G064-09	N	7471A	7471A	III
11-Jul-2012	SL-592-SA5C-SB-5.0-6.0	G064-09	N	TOTAL	6020	III
11-Jul-2012	TB-071112	G064-02	TB	5030B	8015B GRO	III
11-Jul-2012	SL-586-SA5C-SB-4.5	G064-04	N	5035	8015B GRO	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	3550B	8015B EFH	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	3550B	8082	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	3550B	8270C SIM	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	7471A	7471A	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	GEN PREP	6850	III
11-Jul-2012	SL-586-SA5C-SB-4.0-5.0	G064-03	N	TOTAL	6020	III
11-Jul-2012	SL-586-SA5C-SB-9.5	G064-06	N	5035	8015B GRO	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	3550B	8015B EFH	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	3550B	8082	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	3550B	8270C SIM	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	7471A	7471A	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	GEN PREP	6850	III
11-Jul-2012	SL-586-SA5C-SB-9.0-10.0	G064-05	N	TOTAL	6020	III
11-Jul-2012	SL-591-SA5C-SB-4.0-5.0	G064-08	N	3550B	8270C SIM	III
11-Jul-2012	SL-591-SA5C-SB-4.0-5.0	G064-08	N	7471A	7471A	III
11-Jul-2012	SL-591-SA5C-SB-4.0-5.0	G064-08	N	TOTAL	6020	III
11-Jul-2012	SL-591-SA5C-SB-4.0-5.0MS	G064-08M	MS	7471A	7471A	III
11-Jul-2012	SL-591-SA5C-SB-4.0-5.0MSD	G064-08S	MSD	7471A	7471A	III
11-Jul-2012	SL-589-SA5C-SB-4.0-5.0	G064-07	N	3550B	8270C SIM	III
11-Jul-2012	SL-589-SA5C-SB-4.0-5.0	G064-07	N	7471A	7471A	III
11-Jul-2012	SL-589-SA5C-SB-4.0-5.0	G064-07	N	TOTAL	6020	III
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	3550B	8015B EFH	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	3550B	8082	III
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	3550B	8270C SIM	III
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	7471A	7471A	III
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	GEN PREP	6850	III
11-Jul-2012	SL-607-SA5C-SB-0.0-0.5	G064-10	N	TOTAL	6020	III
11-Jul-2012	SL-607-SA5C-SB-4.5	G064-12	N	5035	8015B GRO	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	3550B	8015B EFH	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	3550B	8082	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	3550B	8270C SIM	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	7471A	7471A	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	GEN PREP	6850	III
11-Jul-2012	SL-607-SA5C-SB-4.0-5.0	G064-11	N	TOTAL	6020	III
11-Jul-2012	SL-607-SA5C-SB-9.5	G064-14	N	5035	8015B GRO	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	3550B	8015B EFH	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	3550B	8082	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	3550B	8270C SIM	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	7471A	7471A	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	GEN PREP	6850	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0	G064-13	N	TOTAL	6020	III
11-Jul-2012	SL-607-SA5C-SB-9.0-10.0MS	G064-13M	MS	3550B	8270C SIM	III
11-Jul-2012	FB-071112	G064-01	FB	3520C	8015B EFH	III
11-Jul-2012	FB-071112	G064-01	FB	3520C	8081A	III
11-Jul-2012	FB-071112	G064-01	FB	3520C	8082	III
11-Jul-2012	FB-071112	G064-01	FB	3520C	8270C SIM	III
11-Jul-2012	FB-071112	G064-01	FB	5030B	8015B GRO	III
11-Jul-2012	FB-071112	G064-01	FB	5030B	8260B	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Jul-2012	FB-071112	G064-01	FB	5030B	8260B SIM	III
11-Jul-2012	FB-071112	G064-01	FB	7470A	7470A	III
11-Jul-2012	FB-071112	G064-01	FB	GEN PREP	6850	III
11-Jul-2012	FB-071112	G064-01	FB	GEN PREP	7199	III
11-Jul-2012	FB-071112	G064-01	FB	GEN PREP	8015B	III
11-Jul-2012	FB-071112	G064-01	FB	GEN PREP	8015M	III
11-Jul-2012	FB-071112	G064-01	FB	GEN PREP	8151A	III
11-Jul-2012	FB-071112	G064-01	FB	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS
Method: 6020 **Matrix: AQ**

Sample ID: FB-071112 *Collected:* 7/11/2012 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	0.0296	J	0.0200	MDL	0.100	PQL	MG/L	J	Z
NICKEL	0.000204	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z

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

Sample ID: SL-586-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 8:40:00 *Analysis Type:* RES/TOT *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.243	J	0.108	MDL	0.541	PQL	MG/KG	J	Z
BORON	3.04	J	2.70	MDL	5.41	PQL	MG/KG	J	Z
CADMIUM	0.255	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SILVER	0.0577	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SODIUM	101	J	54.1	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.317	J	0.0541	MDL	0.432	PQL	MG/KG	J	Z

Sample ID: SL-586-SA5C-SB-9.0-10.0 *Collected:* 7/11/2012 8:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.267	J	0.113	MDL	0.563	PQL	MG/KG	J	Z
BORON	3.30	J	2.82	MDL	5.63	PQL	MG/KG	J	Z
CADMIUM	0.234	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
MOLYBDENUM	0.483	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
SILVER	0.0658	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
THALLIUM	0.277	J	0.0563	MDL	0.451	PQL	MG/KG	J	Z
Zirconium	3.93	J	2.82	MDL	5.63	PQL	MG/KG	J	Z

Sample ID: SL-589-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 10:10:00 *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	0.202	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BORON	3.03	J	2.70	MDL	5.40	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-589-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.402	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
MOLYBDENUM	0.447	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.315	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z

Sample ID: SL-591-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 9:50:00 *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	0.197	J	0.110	MDL	0.549	PQL	MG/KG	J	Z
BORON	3.23	J	2.74	MDL	5.49	PQL	MG/KG	J	Z
CADMIUM	0.357	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
MOLYBDENUM	0.476	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
THALLIUM	0.281	J	0.0549	MDL	0.439	PQL	MG/KG	J	Z

Sample ID: SL-592-SA5C-SB-5.0-6.0 *Collected:* 7/11/2012 7:35:00 *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	0.205	J	0.105	MDL	0.524	PQL	MG/KG	J	Z
CADMIUM	0.254	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
THALLIUM	0.247	J	0.0524	MDL	0.419	PQL	MG/KG	J	Z

Sample ID: SL-607-SA5C-SB-0.0-0.5 *Collected:* 7/11/2012 11:00:00 *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	0.123	J	0.111	MDL	0.554	PQL	MG/KG	J	Z
BERYLLIUM	0.525	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
CADMIUM	0.178	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
MOLYBDENUM	0.422	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
THALLIUM	0.236	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

Sample ID: SL-607-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 11:05:00 *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	0.165	J	0.113	MDL	0.566	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-607-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 11:05:00 *Analysis Type:* RES/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.123	J	0.0566	MDL	0.566	PQL	MG/KG	J	Z
THALLIUM	0.241	J	0.0566	MDL	0.453	PQL	MG/KG	J	Z

Sample ID: SL-607-SA5C-SB-9.0-10.0 *Collected:* 7/11/2012 11:10:00 *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	0.470	J	0.111	MDL	0.555	PQL	MG/KG	J	Z
CADMIUM	0.217	J	0.0555	MDL	0.555	PQL	MG/KG	J	Z
SILVER	0.0989	J	0.0555	MDL	0.555	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-607-SA5C-SB-0.0-0.5 *Collected:* 7/11/2012 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	5.9	J	5.6	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-607-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	5.5	J	2.9	MDL	5.7	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-586-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 8:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **SVOA**

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

Sample ID: SL-586-SA5C-SB-4.0-5.0 ***Collected:*** 7/11/2012 8:40:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.4	U	2.7	MDL	5.4	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-591-SA5C-SB-4.0-5.0 ***Collected:*** 7/11/2012 9:50:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	10	J	8.4	MDL	34	PQL	UG/KG	J	Z
BENZO(E)PYRENE	9.6	J	8.4	MDL	17	PQL	UG/KG	J	Z

Sample ID: SL-607-SA5C-SB-0.0-0.5 ***Collected:*** 7/11/2012 11:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **SVOA**

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

Sample ID: **SL-607-SA5C-SB-0.0-0.5** ***Collected:*** **7/11/2012 11:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.6	U	2.8	MDL	5.6	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

Sample ID: **SL-607-SA5C-SB-4.0-5.0** ***Collected:*** **7/11/2012 11:05:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
2-METHYLNAPHTHALENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	3.8	J	2.9	MDL	11	PQL	UG/KG	J	Z, S
BENZO(A)PYRENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.7	U	2.9	MDL	5.7	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: SVOA

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

Sample ID: SL-607-SA5C-SB-4.0-5.0 *Collected:* 7/11/2012 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.9	MDL	11	PQL	UG/KG	UJ	S

Sample ID: SL-607-SA5C-SB-9.0-10.0 *Collected:* 7/11/2012 11:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ACENAPHTHYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(E)PYRENE	5.6	U	2.8	MDL	5.6	PQL	UG/KG	UJ	S
BENZO(G,H,I)PERYLENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
DIBENZO(A,H)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
FLUORENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
INDENO(1,2,3-CD)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
NAPHTHALENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
N-NITROSODIMETHYLAMINE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	S

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: FB-071112 ***Collected:*** 7/11/2012 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)	26	J	10	MDL	50	PQL	UG/L	U	T

Method Category: **VOA**

Method: **8260B SIM** ***Matrix:*** **AQ**

Sample ID: FB-071112 ***Collected:*** 7/11/2012 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
1,4-DIOXANE	1.9	J	1.0	MDL	2.0	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Reason Code Legend

Reason Code	*Description*
L	Laboratory Control Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12G064

Trip Blank Outlier Report

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **8015B GRO**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-071112(RES)	7/11/2012 8:00:00 AM	GASOLINE RANGE ORGANICS (C5-C12)	50 UG/L	FB-071112 SL-586-SA5C-SB-4.0-5.0 SL-586-SA5C-SB-4.5 SL-586-SA5C-SB-9.0-10.0 SL-586-SA5C-SB-9.5 SL-589-SA5C-SB-4.0-5.0 SL-591-SA5C-SB-4.0-5.0 SL-592-SA5C-SB-5.0-6.0 SL-607-SA5C-SB-0.0-0.5 SL-607-SA5C-SB-4.0-5.0 SL-607-SA5C-SB-4.5 SL-607-SA5C-SB-9.0-10.0 SL-607-SA5C-SB-9.5

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
FB-071112(RES)	GASOLINE RANGE ORGANICS (C5-C12)	26 UG/L	50U UG/L

Project Name and Number: PHASE3 - SSFL PHASE 3

Surrogate Outlier Report

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 8082
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-586-SA5C-SB-9.0-10.0	DECACHLOROBIPHENYL	123	45.00-120.00	All Target Analytes	J(all detects)
SL-607-SA5C-SB-9.0-10.0	DECACHLOROBIPHENYL	121	45.00-120.00	All Target Analytes	J(all detects)

Method: 8270C SIM
Matrix: SO

Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-586-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	30.7 23.4	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J (all detects) UJ (all non-detects)
SL-607-SA5C-SB-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5	31.1 32.9	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-607-SA5C-SB-4.0-5.0	2-FLUOROBIPHENYL Nitrobenzene-d5	39.3 37.3	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)
SL-607-SA5C-SB-9.0-10.0	2-FLUOROBIPHENYL Nitrobenzene-d5	31.7 29.4	45.00-130.00 40.00-130.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: **8260B**
Matrix: **AQ**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
VOF3G12L (FB-071112)	1,2-DIBROMO-3-CHLOROPROP	132	-	60.00-130.00	-	1,2-DIBROMO-3-CHLOROPRO	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB-071112	ALUMINUM	J	0.0296	0.100	PQL	MG/L	J (all detects)
	NICKEL	J	0.000204	0.00100	PQL	MG/L	

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB-071112	GASOLINE RANGE ORGANICS (C5-C12)	J	26	50	PQL	UG/L	J (all detects)

Method: 8260B SIM
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB-071112	1,4-DIOXANE	J	1.9	2.0	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-586-SA5C-SB-4.0-5.0	ANTIMONY	J	0.243	0.541	PQL	MG/KG	J (all detects)
	BORON	J	3.04	5.41	PQL	MG/KG	
	CADMIUM	J	0.255	0.541	PQL	MG/KG	
	SILVER	J	0.0577	0.541	PQL	MG/KG	
	SODIUM	J	101	108	PQL	MG/KG	
	THALLIUM	J	0.317	0.432	PQL	MG/KG	
SL-586-SA5C-SB-9.0-10.0	ANTIMONY	J	0.267	0.563	PQL	MG/KG	J (all detects)
	BORON	J	3.30	5.63	PQL	MG/KG	
	CADMIUM	J	0.234	0.563	PQL	MG/KG	
	MOLYBDENUM	J	0.483	0.563	PQL	MG/KG	
	SILVER	J	0.0658	0.563	PQL	MG/KG	
	THALLIUM	J	0.277	0.451	PQL	MG/KG	
	Zirconium	J	3.93	5.63	PQL	MG/KG	
SL-589-SA5C-SB-4.0-5.0	ANTIMONY	J	0.202	0.540	PQL	MG/KG	J (all detects)
	BORON	J	3.03	5.40	PQL	MG/KG	
	CADMIUM	J	0.402	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.447	0.540	PQL	MG/KG	
	THALLIUM	J	0.315	0.432	PQL	MG/KG	
SL-591-SA5C-SB-4.0-5.0	ANTIMONY	J	0.197	0.549	PQL	MG/KG	J (all detects)
	BORON	J	3.23	5.49	PQL	MG/KG	
	CADMIUM	J	0.357	0.549	PQL	MG/KG	
	MOLYBDENUM	J	0.476	0.549	PQL	MG/KG	
	THALLIUM	J	0.281	0.439	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12G064 **Laboratory: EMXT**

EDD Filename: 12G064 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-592-SA5C-SB-5.0-6.0	ANTIMONY	J	0.205	0.524	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.254	0.524	PQL	MG/KG	
	THALLIUM	J	0.247	0.419	PQL	MG/KG	
SL-607-SA5C-SB-0.0-0.5	ANTIMONY	J	0.123	0.554	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.525	0.554	PQL	MG/KG	
	CADMIUM	J	0.178	0.554	PQL	MG/KG	
	MOLYBDENUM	J	0.422	0.554	PQL	MG/KG	
	THALLIUM	J	0.236	0.443	PQL	MG/KG	
SL-607-SA5C-SB-4.0-5.0	ANTIMONY	J	0.165	0.566	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.123	0.566	PQL	MG/KG	
	THALLIUM	J	0.241	0.453	PQL	MG/KG	
SL-607-SA5C-SB-9.0-10.0	ANTIMONY	J	0.470	0.555	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.217	0.555	PQL	MG/KG	
	SILVER	J	0.0989	0.555	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-607-SA5C-SB-0.0-0.5	EFH(C30-C40)	J	5.9	11	PQL	MG/KG	J (all detects)
SL-607-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	5.5	5.7	PQL	MG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-591-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	10	34	PQL	UG/KG	J (all detects)
	BENZO(E)PYRENE	J	9.6	17	PQL	UG/KG	
SL-607-SA5C-SB-4.0-5.0	BENZO(A)ANTHRACENE	J	3.8	11	PQL	UG/KG	J (all detects)

LDC #: 28578Y4
SDG #: 12G064
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11-6-12
Page: 1 of 1
Reviewer: AL
2nd Reviewer: L

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

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

	Validation Area		Comments
I.	Technical holding times	/	Sampling dates:
II.	ICP/MS Tune	/	
III.	Calibration	/	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	/	
VI.	Matrix Spike Analysis	N	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	/	
XV	Field Blanks	SW	EB= EB-071212 (12G081) FB=1, FB-060512 (12F037)

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

Validated Samples: soil/water

1	FB-071112 W	11	SL-591-SA5C-SB-4.0-5.0MSD	21		31	
2	SL-586-SA5C-SB-4.0-5.0	12		22		32	
3	SL-586-SA5C-SB-9.0-10.0	13		23		33	
4	SL-589-SA5C-SB-4.0-5.0	14		24		34	
5	SL-591-SA5C-SB-4.0-5.0	15		25		35	
6	SL-592-SA5C-SB-5.0-6.0	16		26		36	
7	SL-607-SA5C-SB-0.0-0.5	17		27		37	
8	SL-607-SA5C-SB-4.0-5.0	18		28		38	
9	SL-607-SA5C-SB-9.0-10.0	19		29		39	
10	SL-591-SA5C-SB-4.0-5.0MS	20		30		40	

Notes:

LDC #: 28578Y 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 6/5/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All soil

Analyte	Blank ID	Sample Identification										
	FB-060512	Action Limit	No Qualifiers									
Al	0.0270	6.75										
Ca	0.0263	6.575										
Cu	0.000954	0.2385										

Sampling date: 7/11/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: None

Analyte	Blank ID	Sample Identification										
	FB-071112	Action Limit	No Qualifiers									
Al	0.0296	7.4										
Cu	0.00102	0.255										
Ni	0.000204	0.051										

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 #: 28578Y 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 7/12/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-071212	Action Limit	No Qualifiers									
Al	0.0450	11.25										
B	0.00535	1.3375										
Ca	0.0367	9.175										
Cu	0.00157	0.3925										
Fe	0.0119	2.975										
Mn	0.000308	0.077										
Ni	0.000277	0.06925										

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".

SAMPLE DELIVERY GROUP

12G199

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
24-Jul-2012	SL-583-SA5C-SB-0.0-0.5	G199-01	N	3550B	8270C SIM	III
24-Jul-2012	SL-583-SA5C-SB-0.0-0.5	G199-01	N	7471A	7471A	III
24-Jul-2012	SL-583-SA5C-SB-0.0-0.5	G199-01	N	TOTAL	6020	III
24-Jul-2012	SL-583-SA5C-SB-4.0-5.0	G199-02	N	3550B	8270C SIM	III
24-Jul-2012	SL-583-SA5C-SB-4.0-5.0	G199-02	N	7471A	7471A	III
24-Jul-2012	SL-583-SA5C-SB-4.0-5.0	G199-02	N	TOTAL	6020	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	3550B	8015B EFH	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	3550B	8082	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	3550B	8270C SIM	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	7471A	7471A	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	GEN PREP	7199	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5	G199-08	N	TOTAL	6020	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5MS	G199-08M	MS	TOTAL	6020	III
24-Jul-2012	SL-742-SA5C-SB-0.0-0.5MSD	G199-08S	MSD	TOTAL	6020	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	3550B	8015B EFH	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	3550B	8082	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	3550B	8270C SIM	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	7471A	7471A	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	GEN PREP	7199	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5	G199-03	N	TOTAL	6020	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5MS	G199-03M	MS	7471A	7471A	III
24-Jul-2012	SL-741-SA5C-SB-0.0-0.5MSD	G199-03S	MSD	7471A	7471A	III
24-Jul-2012	SL-741-SA5C-SB-4.5	G199-06	N	5035	8015B GRO	III
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	3550B	8015B EFH	III
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	3550B	8082	III
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	3550B	8270C SIM	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	7471A	7471A	III
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	GEN PREP	7199	III
24-Jul-2012	SL-741-SA5C-SB-4.0-5.0	G199-04	N	TOTAL	6020	III
24-Jul-2012	SL-741-SA5C-SB-9.5	G199-07	N	5035	8015B GRO	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	3550B	8015B EFH	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	3550B	8082	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	3550B	8270C SIM	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	7471A	7471A	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	GEN PREP	7199	III
24-Jul-2012	SL-741-SA5C-SB-9.0-10.0	G199-05	N	TOTAL	6020	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12G199

Laboratory: EMXT

EDD Filename: Prep12G199

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

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

Sample ID: SL-583-SA5C-SB-0.0-0.5 ***Collected:*** 7/24/2012 7:30:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.240	J	0.109	MDL	0.546	PQL	MG/KG	J	Z
BERYLLIUM	0.533	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
CADMIUM	0.248	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
THALLIUM	0.254	J	0.0546	MDL	0.437	PQL	MG/KG	J	Z

Sample ID: SL-583-SA5C-SB-4.0-5.0 ***Collected:*** 7/24/2012 7:35:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.268	J	0.119	MDL	0.596	PQL	MG/KG	J	Z
BORON	4.94	J	2.98	MDL	5.96	PQL	MG/KG	J	Z
CADMIUM	0.398	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
THALLIUM	0.314	J	0.0596	MDL	0.477	PQL	MG/KG	J	Z

Sample ID: SL-741-SA5C-SB-0.0-0.5 ***Collected:*** 7/24/2012 9:20:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.184	J	0.108	MDL	0.539	PQL	MG/KG	J	Z
BERYLLIUM	0.495	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
CADMIUM	0.185	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
MOLYBDENUM	0.452	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
SODIUM	91.7	J	53.9	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.231	J	0.0539	MDL	0.431	PQL	MG/KG	J	Z

Sample ID: SL-741-SA5C-SB-4.0-5.0 ***Collected:*** 7/24/2012 9:25:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.165	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BERYLLIUM	0.558	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
CADMIUM	0.131	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
THALLIUM	0.213	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z

Sample ID: SL-741-SA5C-SB-9.0-10.0 ***Collected:*** 7/24/2012 9:30:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.157	J	0.114	MDL	0.569	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G199 **Laboratory: EMXT**

EDD Filename: Prep12G199 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-741-SA5C-SB-9.0-10.0 *Collected:* 7/24/2012 9:30:00 *Analysis Type:* RES/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.0864	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
MOLYBDENUM	0.516	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
THALLIUM	0.192	J	0.0569	MDL	0.455	PQL	MG/KG	J	Z

Sample ID: SL-742-SA5C-SB-0.0-0.5 *Collected:* 7/24/2012 8:45:00 *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	0.285	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BERYLLIUM	0.514	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.171	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
MOLYBDENUM	0.495	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
SODIUM	87.6	J	53.6	MDL	107	PQL	MG/KG	J	Z
THALLIUM	0.236	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-741-SA5C-SB-4.0-5.0 *Collected:* 7/24/2012 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
EFH(C21-C30)	3.3	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-583-SA5C-SB-0.0-0.5 *Collected:* 7/24/2012 7:30:00 *Analysis Type:* RES *Dilution:* 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	24	J	8.3	MDL	33	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	31	J	8.3	MDL	33	PQL	UG/KG	J	Z
BENZO(A)PYRENE	10	J	8.3	MDL	33	PQL	UG/KG	J	Z
BENZO(E)PYRENE	11	J	8.3	MDL	17	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	11	J	8.3	MDL	33	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	11	J	8.3	MDL	33	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G199

Laboratory: EMXT

EDD Filename: Prep12G199

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

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

Sample ID: SL-583-SA5C-SB-0.0-0.5 **Collected:** 7/24/2012 7:30:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	9.9	J	8.3	MDL	33	PQL	UG/KG	J	Z

Sample ID: SL-583-SA5C-SB-4.0-5.0 **Collected:** 7/24/2012 7:35:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	9.6	J	9.0	MDL	36	PQL	UG/KG	J	Z

Sample ID: SL-742-SA5C-SB-0.0-0.5 **Collected:** 7/24/2012 8:45:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	15	J	8.2	MDL	33	PQL	UG/KG	J	Z
PYRENE	8.9	J	8.2	MDL	33	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Data Qualifier Summary

Lab Reporting Batch ID: 12G199

EDD Filename: Prep12G199

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	*Description*
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12G199

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12G199 **Laboratory: EMXT**

EDD Filename: 12G199 **eQAPP Name: CDM_SSFL_120730_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-742-SA5C-SB-0.0-0.5MS (TOT)	ALUMINUM	-	126	75.00-125.00	-	ALUMINUM	No Qual, >4x
SL-742-SA5C-SB-0.0-0.5MSD (TOT)	IRON	-	129	75.00-125.00	-	IRON	
(SL-583-SA5C-SB-0.0-0.5 SL-583-SA5C-SB-4.0-5.0 SL-741-SA5C-SB-0.0-0.5 SL-741-SA5C-SB-4.0-5.0 SL-741-SA5C-SB-9.0-10.0 SL-742-SA5C-SB-0.0-0.5)	TITANIUM	283	410	75.00-125.00	-	TITANIUM	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G199 **Laboratory: EMXT**

EDD Filename: 12G199 **eQAPP Name: CDM_SSFL_120730_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-583-SA5C-SB-0.0-0.5	ANTIMONY	J	0.240	0.546	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.533	0.546	PQL	MG/KG	
	CADMIUM	J	0.248	0.546	PQL	MG/KG	
	THALLIUM	J	0.254	0.437	PQL	MG/KG	
SL-583-SA5C-SB-4.0-5.0	ANTIMONY	J	0.268	0.596	PQL	MG/KG	J (all detects)
	BORON	J	4.94	5.96	PQL	MG/KG	
	CADMIUM	J	0.398	0.596	PQL	MG/KG	
	THALLIUM	J	0.314	0.477	PQL	MG/KG	
SL-741-SA5C-SB-0.0-0.5	ANTIMONY	J	0.184	0.539	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.495	0.539	PQL	MG/KG	
	CADMIUM	J	0.185	0.539	PQL	MG/KG	
	MOLYBDENUM	J	0.452	0.539	PQL	MG/KG	
	SODIUM	J	91.7	108	PQL	MG/KG	
	THALLIUM	J	0.231	0.431	PQL	MG/KG	
SL-741-SA5C-SB-4.0-5.0	ANTIMONY	J	0.165	0.559	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.558	0.559	PQL	MG/KG	
	CADMIUM	J	0.131	0.559	PQL	MG/KG	
	THALLIUM	J	0.213	0.447	PQL	MG/KG	
SL-741-SA5C-SB-9.0-10.0	ANTIMONY	J	0.157	0.569	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.0864	0.569	PQL	MG/KG	
	MOLYBDENUM	J	0.516	0.569	PQL	MG/KG	
	THALLIUM	J	0.192	0.455	PQL	MG/KG	
SL-742-SA5C-SB-0.0-0.5	ANTIMONY	J	0.285	0.536	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.514	0.536	PQL	MG/KG	
	CADMIUM	J	0.171	0.536	PQL	MG/KG	
	MOLYBDENUM	J	0.495	0.536	PQL	MG/KG	
	SODIUM	J	87.6	107	PQL	MG/KG	
	THALLIUM	J	0.236	0.429	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-741-SA5C-SB-4.0-5.0	EFH(C21-C30)	J	3.3	5.6	PQL	MG/KG	J (all detects)

Method: 8270C SIM
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-583-SA5C-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	24	33	PQL	UG/KG	J (all detects)
	2-METHYLNAPHTHALENE	J	31	33	PQL	UG/KG	
	BENZO(A)PYRENE	J	10	33	PQL	UG/KG	
	BENZO(E)PYRENE	J	11	17	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	11	33	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	11	33	PQL	UG/KG	
	PHENANTHRENE	J	9.9	33	PQL	UG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3

Reporting Limit Outliers

Lab Reporting Batch ID: 12G199

Laboratory: EMXT

EDD Filename: 12G199

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-583-SA5C-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	9.6	36	PQL	UG/KG	J (all detects)
SL-742-SA5C-SB-0.0-0.5	PHENANTHRENE	J	15	33	PQL	UG/KG	J (all detects)
	PYRENE	J	8.9	33	PQL	UG/KG	

LDC #: 28578Z4
SDG #: 12G199
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 11-6-12
Page: 1 of 1
Reviewer: CL
2nd Reviewer: W

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, Fe, Ti 74X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB= EB-072612 (12G238) FB= FB062012 (12F146)

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

Validated Samples: 50.1

1	SL-583-SA5C-SB-0.0-0.5	11		21		31	
2	SL-583-SA5C-SB-4.0-5.0	12		22		32	
3	SL-741-SA5C-SB-0.0-0.5	13		23		33	
4	SL-741-SA5C-SB-4.0-5.0	14		24		34	
5	SL-741-SA5C-SB-9.0-10.0	15		25		35	
6	SL-742-SA5C-SB-0.0-0.5	16		26		36	
7	SL-741-SA5C-SB-0.0-0.5MS	17		27		37	
8	SL-741-SA5C-SB-0.0-0.5MSD	18		28		38	
9	SL-742-SA5C-SB-0.0-0.5MS	19		29		39	
10	SL-742-SA5C-SB-0.0-0.5MSD	20		30		40	

Notes: _____

LDC #: 28578Q 4 (2)

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CL
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: ug/L **Associated sample units:** mg/Kg
Sampling date: 6/20/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-062012	Action Limit	No Qualifiers									
Al	0.0271	6.775										
B	0.00916	2.29										
Ca	0.0438	10.95										
Cu	0.00112	0.28										

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 #: 28578Z 4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Blank units: mg/L **Associated sample units:** mg/Kg

Sampling date: 7/26/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	EB-072612	Action Limit	No Qualifiers									
Al	0.0229	5.725										
B	0.00910	2.275										
Cu	0.000581	0.14525										
Fe	0.0121	3.025										
Mn	0.000265	0.06625										

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".

SAMPLE DELIVERY GROUP

PH001

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
12-Apr-2012	SL-735-SA5C-SB-0.0-0.5	6617042	N	METHOD	1613B	III
12-Apr-2012	SL-737-SA5C-SB-0.0-0.5	6617043	N	METHOD	1613B	III
12-Apr-2012	SL-686-SA5C-SB-0.0-0.5	6617041	N	METHOD	1613B	III
12-Apr-2012	SL-685-SA5C-SB-0.0-0.5	6617040	N	METHOD	1613B	III
12-Apr-2012	SL-684-SA5C-SB-0.0-0.5	6617039	N	METHOD	1613B	III
12-Apr-2012	SL-683-SA5C-SB-0.0-0.5	6617044	N	METHOD	1613B	III
12-Apr-2012	SL-681-SA5C-SB-0.0-0.5	6617046	N	METHOD	1613B	III
12-Apr-2012	SL-679-SA5C-SB-0.0-0.5	6617045	N	METHOD	1613B	III
16-Apr-2012	SL-688-SA5C-SB-0.0-0.5	6620864	N	METHOD	1613B	III
16-Apr-2012	SL-687-SA5C-SB-0.0-0.5	6620865	N	METHOD	1613B	III
16-Apr-2012	SL-689-SA5C-SB-0.0-0.5	6620863	N	METHOD	1613B	III
16-Apr-2012	SL-690-SA5C-SB-0.0-0.5	6620862	N	METHOD	1613B	III
16-Apr-2012	SL-691-SA5C-SB-0.0-0.5	6620861	N	METHOD	1613B	III
16-Apr-2012	SL-692-SA5C-SB-0.0-0.5	6620866	N	METHOD	1613B	III
16-Apr-2012	SL-693-SA5C-SB-0.0-0.5	6620867	N	METHOD	1613B	III
17-Apr-2012	SL-680-SA5C-SB-0.0-0.5	6620873	N	METHOD	1613B	III
17-Apr-2012	SL-814-SA5C-SB-0.0-0.5	6620871	FD	METHOD	1613B	III
17-Apr-2012	SL-514-SA5C-SB-0.0-0.5	6620868	N	METHOD	1613B	III
17-Apr-2012	SL-514-SA5C-SB-0.0-0.5 MS	6620869	MS	METHOD	1613B	III
17-Apr-2012	SL-578-SA5C-SB-0.0-0.5	6620872	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: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-514-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 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	0.569	JB	0.0410	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.661	JB	0.0346	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.605	JB	0.0323	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.45	JB	0.0319	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.487	JB	0.0298	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.96	JB	0.0348	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.737	JB	0.0354	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.495	JB	0.0518	MDL	5.93	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.908	JB	0.0405	MDL	5.93	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.513	JB	0.0308	MDL	5.93	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.450	JBQ	0.0392	MDL	5.93	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0875	JBQ	0.0344	MDL	1.19	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.313	J	0.0772	MDL	1.19	PQL	ng/Kg	J	Z
OCDD	570	B	0.0390	MDL	11.9	PQL	ng/Kg	J	Q
OCDF	18.2	B	0.0229	MDL	11.9	PQL	ng/Kg	J	FD

Sample ID: **SL-578-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 11:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.94	JB	0.0134	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.276	JB	0.0310	MDL	5.81	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.489	JB	0.0302	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.431	JB	0.0356	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.76	JB	0.0286	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.279	JB	0.0284	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.82	JB	0.0286	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.07	JB	0.0399	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.438	JB	0.0434	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.10	JB	0.0321	MDL	5.81	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.356	JB	0.0344	MDL	5.81	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.370	JB	0.0338	MDL	5.81	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0697	JB	0.0262	MDL	1.16	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.252	J	0.0537	MDL	1.16	PQL	ng/Kg	J	Z
OCDF	7.92	JB	0.0364	MDL	11.6	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID:SL-679-SA5C-SB-0.0-0.5 **Collected: 4/12/2012 3:07:00** **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	1.09	JB	0.0483	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.10	JB	0.0443	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.892	JB	0.0368	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.66	JB	0.0401	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.636	JB	0.0335	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.93	JB	0.0429	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.343	JB	0.0385	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.706	JB	0.0401	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.894	JB	0.0337	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.716	JB	0.0343	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.547	JB	0.0342	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.163	JB	0.0369	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.231	J	0.0460	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID:SL-680-SA5C-SB-0.0-0.5 **Collected: 4/17/2012 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	0.880	JB	0.0345	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.753	JB	0.0506	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.697	JB	0.0323	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.27	JB	0.0503	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.469	JB	0.0310	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.34	JB	0.0452	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.530	JB	0.0318	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.306	JB	0.0282	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.34	JB	0.0433	MDL	5.74	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.584	JB	0.0308	MDL	5.74	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.845	JB	0.0403	MDL	5.74	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0692	JB	0.0221	MDL	1.15	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.411	J	0.0883	MDL	1.15	PQL	ng/Kg	J	Z

Sample ID:SL-681-SA5C-SB-0.0-0.5 **Collected: 4/12/2012 2:35:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.523	JB	0.0441	MDL	5.53	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-681-SA5C-SB-0.0-0.5 *Collected:* 4/12/2012 2:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	2.02	JB	0.0489	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.413	JB	0.0365	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.04	JB	0.0509	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.387	JB	0.0343	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.08	JB	0.0476	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.232	JB	0.0339	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.139	JB	0.0289	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.714	JB	0.0309	MDL	5.53	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.544	JB	0.0322	MDL	5.53	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.380	JB	0.0294	MDL	5.53	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0791	JB	0.0265	MDL	1.11	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.138	JQ	0.0568	MDL	1.11	PQL	ng/Kg	J	Z

Sample ID: SL-683-SA5C-SB-0.0-0.5 *Collected:* 4/12/2012 2:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.969	JB	0.0451	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.960	JB	0.0516	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.20	JB	0.0463	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.84	JB	0.0520	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.802	JB	0.0423	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.30	JB	0.0510	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.318	JB	0.0492	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.437	JB	0.0344	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.13	JB	0.0457	MDL	5.60	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.968	JB	0.0443	MDL	5.60	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.598	JB	0.0438	MDL	5.60	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.112	JB	0.0298	MDL	1.12	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.408	J	0.0998	MDL	1.12	PQL	ng/Kg	J	Z

Sample ID: SL-684-SA5C-SB-0.0-0.5 *Collected:* 4/12/2012 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	4.90	JB	0.0302	MDL	5.94	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.993	JB	0.0130	MDL	5.94	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-684-SA5C-SB-0.0-0.5 **Collected:** 4/12/2012 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
1,2,3,4,7,8,9-HPCDF	0.132	JB	0.0209	MDL	5.94	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0916	JB	0.0360	MDL	5.94	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.203	JB	0.0272	MDL	5.94	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.272	JB	0.0350	MDL	5.94	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.128	JB	0.0266	MDL	5.94	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.287	JB	0.0356	MDL	5.94	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.259	JB	0.0278	MDL	5.94	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0952	JB	0.0227	MDL	5.94	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.452	JB	0.0241	MDL	5.94	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.111	JB	0.0258	MDL	5.94	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.118	JB	0.0235	MDL	5.94	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0503	JB	0.0263	MDL	1.19	PQL	ng/Kg	U	B
OCDF	1.97	JB	0.0240	MDL	11.9	PQL	ng/Kg	J	Z

Sample ID: SL-685-SA5C-SB-0.0-0.5 **Collected:** 4/12/2012 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-HPCDF	5.56	JB	0.0176	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.359	JB	0.0266	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.341	JB	0.0364	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.372	JB	0.0258	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.956	JB	0.0354	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.321	JB	0.0230	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.530	JB	0.0401	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.236	JB	0.0275	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.131	JB	0.0242	MDL	5.57	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.336	JB	0.0225	MDL	5.57	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.359	JB	0.0237	MDL	5.57	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.229	JB	0.0231	MDL	5.57	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0395	JB	0.0271	MDL	1.11	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0889	J	0.0324	MDL	1.11	PQL	ng/Kg	J	Z
OCDF	7.14	JB	0.0206	MDL	11.1	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-686-SA5C-SB-0.0-0.5** ***Collected:*** **4/12/2012 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
1,2,3,4,7,8,9-HPCDF	1.04	JB	0.0361	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.331	JB	0.0328	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.615	JB	0.0275	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.90	JB	0.0339	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.550	JB	0.0246	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.837	JB	0.0361	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.285	JB	0.0291	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.221	JB	0.0244	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	1.04	JB	0.0310	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.713	JB	0.0244	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.592	JB	0.0319	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0319	JB	0.0241	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.123	J	0.0522	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID: **SL-687-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 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-HPCDF	2.81	JB	0.0291	MDL	5.92	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.222	JB	0.0403	MDL	5.92	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.138	JB	0.0404	MDL	5.92	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.199	JB	0.0297	MDL	5.92	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.628	JB	0.0368	MDL	5.92	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.141	JB	0.0263	MDL	5.92	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.357	JB	0.0371	MDL	5.92	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.236	JB	0.0299	MDL	5.92	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.113	JB	0.0255	MDL	5.92	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.178	JB	0.0206	MDL	5.92	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.204	JB	0.0267	MDL	5.92	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.107	JB	0.0199	MDL	5.92	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0558	JB	0.0289	MDL	1.18	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0475	J	0.0352	MDL	1.18	PQL	ng/Kg	J	Z
OCDF	8.92	JB	0.0259	MDL	11.8	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-688-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 9:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.90	JB	0.0261	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.456	JB	0.0335	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.396	JB	0.0401	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.02	JB	0.0365	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.20	JB	0.0355	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.604	JB	0.0349	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.845	JB	0.0347	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.235	JB	0.0337	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.260	JB	0.0372	MDL	5.58	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.725	JB	0.0477	MDL	5.58	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.834	JB	0.0345	MDL	5.58	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.997	JB	0.0449	MDL	5.58	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0785	JB	0.0315	MDL	1.12	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.328	J	0.0687	MDL	1.12	PQL	ng/Kg	J	Z

Sample ID: **SL-689-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 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	5.93	JB	0.0323	MDL	6.04	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.878	JB	0.0144	MDL	6.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.127	JB	0.0245	MDL	6.04	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0893	JB	0.0343	MDL	6.04	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.133	JB	0.0241	MDL	6.04	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.318	JB	0.0353	MDL	6.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0972	JB	0.0214	MDL	6.04	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.323	JB	0.0346	MDL	6.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.192	JB	0.0259	MDL	6.04	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0886	JB	0.0203	MDL	6.04	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.193	JB	0.0170	MDL	6.04	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.110	JB	0.0244	MDL	6.04	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0781	JB	0.0169	MDL	6.04	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0477	JBQ	0.0306	MDL	1.21	PQL	ng/Kg	U	B
OCDF	2.12	JB	0.0224	MDL	12.1	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-690-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 11:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.985	JBQ	0.0432	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.899	JB	0.0343	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.878	JB	0.0221	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.90	JB	0.0357	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.775	JB	0.0221	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.82	JB	0.0339	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.720	JB	0.0225	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.550	JB	0.0403	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.590	JB	0.0317	MDL	5.69	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.999	JB	0.0212	MDL	5.69	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.05	JB	0.0295	MDL	5.69	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.173	JB	0.0269	MDL	1.14	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.338	J	0.0513	MDL	1.14	PQL	ng/Kg	J	Z

Sample ID: **SL-691-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 11:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.950	JB	0.0144	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.197	JB	0.0266	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0896	JB	0.0322	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.136	JB	0.0251	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.320	JBQ	0.0324	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.111	JB	0.0223	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.240	JB	0.0335	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.184	JB	0.0284	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0638	JB	0.0237	MDL	5.53	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.132	JB	0.0166	MDL	5.53	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.120	JB	0.0236	MDL	5.53	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.144	JB	0.0163	MDL	5.53	PQL	ng/Kg	U	B
OCDF	1.49	JB	0.0254	MDL	11.1	PQL	ng/Kg	J	Z

Sample ID: **SL-692-SA5C-SB-0.0-0.5** ***Collected:*** **4/16/2012 1:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.05	JB	0.0306	MDL	6.02	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-692-SA5C-SB-0.0-0.5 ***Collected:*** 4/16/2012 1:05:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.196	JB	0.0130	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0798	JB	0.0273	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0874	JBQ	0.0187	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.160	JB	0.0231	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0565	JBQ	0.0152	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.233	JBQ	0.0237	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.217	JB	0.0223	MDL	6.02	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0786	JBQ	0.0253	MDL	6.02	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.103	JB	0.0193	MDL	6.02	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0560	JB	0.0178	MDL	6.02	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0770	JBQ	0.0198	MDL	6.02	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0497	JBQ	0.0349	MDL	1.20	PQL	ng/Kg	U	B
OCDD	8.09	JB	0.0306	MDL	12.0	PQL	ng/Kg	J	Z
OCDF	0.346	JB	0.0363	MDL	12.0	PQL	ng/Kg	U	B

Sample ID: SL-693-SA5C-SB-0.0-0.5 ***Collected:*** 4/16/2012 1:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.65	JB	0.0254	MDL	6.09	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.272	JB	0.0125	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0773	JB	0.0274	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0397	JBQ	0.0217	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.119	JB	0.0197	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.147	JBQ	0.0216	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0934	JB	0.0164	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.214	JBQ	0.0216	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.166	JB	0.0234	MDL	6.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.111	JBQ	0.0233	MDL	6.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.135	JB	0.0156	MDL	6.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0972	JB	0.0188	MDL	6.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.147	JB	0.0166	MDL	6.09	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0522	JBQ	0.0333	MDL	1.22	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0447	JQ	0.0325	MDL	1.22	PQL	ng/Kg	J	Z
OCDF	0.500	JB	0.0315	MDL	12.2	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-735-SA5C-SB-0.0-0.5** ***Collected:*** **4/12/2012 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-HPCDF	2.00	JB	0.0181	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.174	JB	0.0243	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.152	JBQ	0.0362	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.207	JB	0.0265	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.545	JB	0.0326	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.145	JB	0.0256	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.284	JB	0.0342	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.152	JB	0.0264	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0663	JB	0.0236	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.668	JB	0.0211	MDL	5.45	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.225	JB	0.0247	MDL	5.45	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0684	JB	0.0199	MDL	5.45	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0354	J	0.0258	MDL	1.09	PQL	ng/Kg	J	Z
OCDF	3.43	JB	0.0188	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: **SL-737-SA5C-SB-0.0-0.5** ***Collected:*** **4/12/2012 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	3.42	JB	0.0251	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.295	JB	0.0345	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.267	JB	0.0485	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.344	JB	0.0343	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.831	JB	0.0460	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.209	JB	0.0325	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.463	JB	0.0478	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0516	JB	0.0361	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.138	JBQ	0.0347	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.248	JB	0.0252	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.282	JB	0.0335	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.168	JB	0.0236	MDL	5.37	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0567	JB	0.0309	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0591	JQ	0.0421	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	7.86	JB	0.0298	MDL	10.7	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B *Matrix:* SO

Sample ID: SL-814-SA5C-SB-0.0-0.5 *Collected:* 4/17/2012 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-HPCDF	4.57	JB	0.0194	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.479	JB	0.0361	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.512	JB	0.0384	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.451	JB	0.0309	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.16	JB	0.0365	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.401	JB	0.0270	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.72	JB	0.0388	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.839	JB	0.0345	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.390	JB	0.0433	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.529	JB	0.0288	MDL	5.73	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.469	JB	0.0302	MDL	5.73	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.416	JBQ	0.0292	MDL	5.73	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0776	JB	0.0294	MDL	1.15	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.284	J	0.0412	MDL	1.15	PQL	ng/Kg	J	Z
OCDF	10.9	JB	0.0326	MDL	11.5	PQL	ng/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PrepPH001 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

PH001

Method Blank Outlier Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1160B371710	4/26/2012 5:10:00 PM	1,2,3,4,6,7,8-HPCDD	0.329 ng/Kg	SL-514-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.135 ng/Kg	SL-578-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0657 ng/Kg	SL-679-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0333 ng/Kg	SL-680-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0459 ng/Kg	SL-681-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0480 ng/Kg	SL-683-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0498 ng/Kg	SL-684-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0509 ng/Kg	SL-685-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0309 ng/Kg	SL-686-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0530 ng/Kg	SL-687-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0529 ng/Kg	SL-688-SA5C-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0816 ng/Kg	SL-689-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.103 ng/Kg	SL-690-SA5C-SB-0.0-0.5
		2,3,7,8-TCDD	0.0739 ng/Kg	SL-691-SA5C-SB-0.0-0.5
		OCDD	0.967 ng/Kg	SL-692-SA5C-SB-0.0-0.5
		OCDF	0.161 ng/Kg	SL-693-SA5C-SB-0.0-0.5
				SL-735-SA5C-SB-0.0-0.5
				SL-737-SA5C-SB-0.0-0.5
				SL-814-SA5C-SB-0.0-0.5

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-514-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.450 ng/Kg	0.450U ng/Kg
SL-514-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0875 ng/Kg	0.0875U ng/Kg
SL-578-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.276 ng/Kg	0.276U ng/Kg
SL-578-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.356 ng/Kg	0.356U ng/Kg
SL-578-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.370 ng/Kg	0.370U ng/Kg
SL-578-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0697 ng/Kg	0.0697U ng/Kg
SL-679-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.163 ng/Kg	0.163U ng/Kg
SL-680-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0692 ng/Kg	0.0692U ng/Kg
SL-681-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.139 ng/Kg	0.139U ng/Kg
SL-681-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.380 ng/Kg	0.380U ng/Kg
SL-681-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0791 ng/Kg	0.0791U ng/Kg
SL-683-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.112 ng/Kg	0.112U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.132 ng/Kg	0.132U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0916 ng/Kg	0.0916U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.203 ng/Kg	0.203U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.128 ng/Kg	0.128U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0952 ng/Kg	0.0952U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.111 ng/Kg	0.111U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.118 ng/Kg	0.118U ng/Kg
SL-684-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0503 ng/Kg	0.0503U ng/Kg
SL-685-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.131 ng/Kg	0.131U ng/Kg
SL-685-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.359 ng/Kg	0.359U ng/Kg
SL-685-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.229 ng/Kg	0.229U ng/Kg
SL-685-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0395 ng/Kg	0.0395U ng/Kg
SL-686-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.221 ng/Kg	0.221U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-686-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0319 ng/Kg	0.0319U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.222 ng/Kg	0.222U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.138 ng/Kg	0.138U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.199 ng/Kg	0.199U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.141 ng/Kg	0.141U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.113 ng/Kg	0.113U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.178 ng/Kg	0.178U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.204 ng/Kg	0.204U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.107 ng/Kg	0.107U ng/Kg
SL-687-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0558 ng/Kg	0.0558U ng/Kg
SL-688-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.260 ng/Kg	0.260U ng/Kg
SL-688-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0785 ng/Kg	0.0785U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.127 ng/Kg	0.127U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0893 ng/Kg	0.0893U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.133 ng/Kg	0.133U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0972 ng/Kg	0.0972U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0886 ng/Kg	0.0886U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.193 ng/Kg	0.193U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.110 ng/Kg	0.110U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0781 ng/Kg	0.0781U ng/Kg
SL-689-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0477 ng/Kg	0.0477U ng/Kg
SL-690-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.173 ng/Kg	0.173U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.197 ng/Kg	0.197U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0896 ng/Kg	0.0896U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.136 ng/Kg	0.136U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.111 ng/Kg	0.111U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.240 ng/Kg	0.240U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0638 ng/Kg	0.0638U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.132 ng/Kg	0.132U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.120 ng/Kg	0.120U ng/Kg
SL-691-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.144 ng/Kg	0.144U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	1.05 ng/Kg	1.05U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.196 ng/Kg	0.196U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0798 ng/Kg	0.0798U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0874 ng/Kg	0.0874U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.160 ng/Kg	0.160U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0565 ng/Kg	0.0565U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.233 ng/Kg	0.233U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0786 ng/Kg	0.0786U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.103 ng/Kg	0.103U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0560 ng/Kg	0.0560U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0770 ng/Kg	0.0770U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0497 ng/Kg	0.0497U ng/Kg
SL-692-SA5C-SB-0.0-0.5(RES)	OCDF	0.346 ng/Kg	0.346U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.272 ng/Kg	0.272U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0773 ng/Kg	0.0773U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0397 ng/Kg	0.0397U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.119 ng/Kg	0.119U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.147 ng/Kg	0.147U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0934 ng/Kg	0.0934U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.214 ng/Kg	0.214U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.111 ng/Kg	0.111U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.135 ng/Kg	0.135U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0972 ng/Kg	0.0972U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.147 ng/Kg	0.147U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0522 ng/Kg	0.0522U ng/Kg
SL-693-SA5C-SB-0.0-0.5(RES)	OCDF	0.500 ng/Kg	0.500U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.174 ng/Kg	0.174U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.152 ng/Kg	0.152U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.207 ng/Kg	0.207U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.145 ng/Kg	0.145U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.152 ng/Kg	0.152U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0663 ng/Kg	0.0663U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.225 ng/Kg	0.225U ng/Kg
SL-735-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0684 ng/Kg	0.0684U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.295 ng/Kg	0.295U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.209 ng/Kg	0.209U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0516 ng/Kg	0.0516U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.138 ng/Kg	0.138U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.248 ng/Kg	0.248U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.282 ng/Kg	0.282U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.168 ng/Kg	0.168U ng/Kg
SL-737-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0567 ng/Kg	0.0567U ng/Kg
SL-814-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.416 ng/Kg	0.416U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-814-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0776 ng/Kg	0.0776U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-514-SA5C-SB-0.0-0.5 MS (SL-514-SA5C-SB-0.0-0.5)	OCDD	55	-	78.00-144.00	-	OCDD	J (all detects) UJ (all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-514-SA5C-SB-0.0-0.5	SL-814-SA5C-SB-0.0-0.5			
MOISTURE	15.8	12.7	22		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-514-SA5C-SB-0.0-0.5	SL-814-SA5C-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	48.3	35.6	30	50.00	
1,2,3,4,6,7,8-HPCDF	6.59	4.57	36	50.00	
1,2,3,4,7,8,9-HPCDF	0.569	0.479	17	50.00	
1,2,3,4,7,8-HxCDD	0.661	0.512	25	50.00	
1,2,3,4,7,8-HXCDF	0.605	0.451	29	50.00	
1,2,3,6,7,8-HXCDD	2.45	2.16	13	50.00	
1,2,3,6,7,8-HXCDF	0.487	0.401	19	50.00	
1,2,3,7,8,9-HXCDD	1.96	1.72	13	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDF	0.737	0.839	13	50.00	
1,2,3,7,8-PECDD	0.495	0.390	24	50.00	
2,3,4,6,7,8-HXCDF	0.513	0.469	9	50.00	
2,3,4,7,8-PECDF	0.450	0.416	8	50.00	
2,3,7,8-TCDD	0.0875	0.0776	12	50.00	
2,3,7,8-TCDF	0.313	0.284	10	50.00	
OCDD	570	394	37	50.00	
1,2,3,7,8-PECDF	0.908	0.529	53	50.00	J(all detects)
OCDF	18.2	10.9	50	50.00	

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-514-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.569	5.93	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.661	5.93	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.605	5.93	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.45	5.93	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.487	5.93	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.96	5.93	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.737	5.93	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.495	5.93	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.908	5.93	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.513	5.93	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.450	5.93	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0875	1.19	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.313	1.19	PQL	ng/Kg	
SL-578-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.94	5.81	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.276	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.489	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.431	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.76	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.279	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.82	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.07	5.81	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.438	5.81	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.10	5.81	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.356	5.81	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.370	5.81	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0697	1.16	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.252	1.16	PQL	ng/Kg	
	OCDF	JB	7.92	11.6	PQL	ng/Kg	
SL-679-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.09	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	1.10	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.892	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.66	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.636	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.93	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.343	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.706	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.894	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.716	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.547	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.163	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.231	1.10	PQL	ng/Kg	
SL-680-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.880	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.753	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.697	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.27	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.469	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.34	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.530	5.74	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.306	5.74	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.34	5.74	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.584	5.74	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.845	5.74	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0692	1.15	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.411	1.15	PQL	ng/Kg	

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-681-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.523	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	2.02	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.413	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.04	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.387	5.53	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.08	5.53	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.232	5.53	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.139	5.53	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.714	5.53	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.544	5.53	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.380	5.53	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0791	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.138	1.11	PQL	ng/Kg	
SL-683-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.969	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.960	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.20	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.84	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.802	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.30	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.318	5.60	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.437	5.60	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.13	5.60	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.968	5.60	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.598	5.60	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.112	1.12	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.408	1.12	PQL	ng/Kg	
SL-684-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	4.90	5.94	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.993	5.94	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.132	5.94	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0916	5.94	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.203	5.94	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.272	5.94	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.128	5.94	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.287	5.94	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.259	5.94	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0952	5.94	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.452	5.94	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.111	5.94	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.118	5.94	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0503	1.19	PQL	ng/Kg	
	OCDF	JB	1.97	11.9	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-685-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	5.56	5.57	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.359	5.57	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.341	5.57	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.372	5.57	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.956	5.57	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.321	5.57	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.530	5.57	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.236	5.57	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.131	5.57	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.336	5.57	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.359	5.57	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.229	5.57	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0395	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0889	1.11	PQL	ng/Kg	
	OCDF	JB	7.14	11.1	PQL	ng/Kg	
SL-686-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.04	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.331	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.615	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.90	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.550	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.837	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.285	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.221	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.04	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.713	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.592	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0319	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.123	1.10	PQL	ng/Kg	
SL-687-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.81	5.92	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.222	5.92	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.138	5.92	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.199	5.92	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.628	5.92	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.141	5.92	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.357	5.92	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.236	5.92	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.113	5.92	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.178	5.92	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.204	5.92	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.107	5.92	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0558	1.18	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0475	1.18	PQL	ng/Kg	
	OCDF	JB	8.92	11.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-688-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.90	5.58	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.456	5.58	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.396	5.58	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.02	5.58	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.20	5.58	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.604	5.58	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.845	5.58	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.235	5.58	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.260	5.58	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.725	5.58	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.834	5.58	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.997	5.58	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0785	1.12	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.328	1.12	PQL	ng/Kg	
SL-689-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	5.93	6.04	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.878	6.04	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.127	6.04	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0893	6.04	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.133	6.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.318	6.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0972	6.04	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.323	6.04	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.192	6.04	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0886	6.04	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.193	6.04	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.110	6.04	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0781	6.04	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0477	1.21	PQL	ng/Kg	
	OCDF	JB	2.12	12.1	PQL	ng/Kg	
SL-690-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JBQ	0.985	5.69	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.899	5.69	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.878	5.69	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.90	5.69	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.775	5.69	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.82	5.69	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.720	5.69	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.550	5.69	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.590	5.69	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.999	5.69	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.05	5.69	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.173	1.14	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.338	1.14	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-691-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.950	5.53	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.197	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0896	5.53	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.136	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.320	5.53	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.111	5.53	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.240	5.53	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.184	5.53	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0638	5.53	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.132	5.53	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.120	5.53	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.144	5.53	PQL	ng/Kg	
	OCDF	JB	1.49	11.1	PQL	ng/Kg	
SL-692-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.05	6.02	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.196	6.02	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0798	6.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0874	6.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.160	6.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0565	6.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.233	6.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.217	6.02	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0786	6.02	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.103	6.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0560	6.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0770	6.02	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0497	1.20	PQL	ng/Kg	
	OCDD	JB	8.09	12.0	PQL	ng/Kg	
	OCDF	JB	0.346	12.0	PQL	ng/Kg	
SL-693-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.65	6.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.272	6.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0773	6.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0397	6.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.119	6.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.147	6.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0934	6.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.214	6.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.166	6.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.111	6.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.135	6.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0972	6.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.147	6.09	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0522	1.22	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0447	1.22	PQL	ng/Kg	
	OCDF	JB	0.500	12.2	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH001 **Laboratory: LL**

EDD Filename: PH001_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-735-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.00	5.45	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.174	5.45	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.152	5.45	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.207	5.45	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.545	5.45	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.145	5.45	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.284	5.45	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.152	5.45	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0663	5.45	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.668	5.45	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.225	5.45	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0684	5.45	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0354	1.09	PQL	ng/Kg	
	OCDF	JB	3.43	10.9	PQL	ng/Kg	
SL-737-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.42	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.295	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.267	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.344	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.831	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.209	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.463	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0516	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.138	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.248	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.282	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.168	5.37	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0567	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0591	1.07	PQL	ng/Kg	
	OCDF	JB	7.86	10.7	PQL	ng/Kg	
SL-814-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.57	5.73	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.479	5.73	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.512	5.73	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.451	5.73	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.16	5.73	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.401	5.73	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.72	5.73	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.839	5.73	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.390	5.73	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.529	5.73	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.469	5.73	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.416	5.73	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0776	1.15	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.284	1.15	PQL	ng/Kg	
	OCDF	JB	10.9	11.5	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

PH002

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
17-Apr-2012	SL-577-SA5C-SB-0.0-0.5	6622593	N	METHOD	1613B	III
17-Apr-2012	SL-747-SA5C-SB-0.0-0.5	6622595	N	METHOD	1613B	III
17-Apr-2012	SL-581-SA5C-SB-0.0-0.5	6622594	N	METHOD	1613B	III
18-Apr-2012	SL-570-SA5C-SB-0.0-0.5	6622596	N	METHOD	1613B	III
18-Apr-2012	SL-570-SA5C-SB-2.0-3.0	6622597	N	METHOD	1613B	III
18-Apr-2012	SL-580-SA5C-SB-0.0-0.5	6622598	N	METHOD	1613B	III
18-Apr-2012	SL-580-SA5C-SB-4.0-5.0	6622599	N	METHOD	1613B	III
18-Apr-2012	SL-579-SA5C-SB-0.0-0.5	6624292	N	METHOD	1613B	III
18-Apr-2012	SL-579-SA5C-SB-4.0-5.0	6624293	N	METHOD	1613B	III
19-Apr-2012	SL-516-SA5C-SB-0.0-0.5	6624297	N	METHOD	1613B	III
19-Apr-2012	SL-516-SA5C-SB-4.0-5.0	6624298	N	METHOD	1613B	III
19-Apr-2012	SL-515-SA5C-SB-0.0-0.5	6624296	N	METHOD	1613B	III
19-Apr-2012	SL-513-SA5C-SB-0.0-0.5	6624295	N	METHOD	1613B	III
19-Apr-2012	SL-575-SA5C-SB-0.0-0.5	6624299	N	METHOD	1613B	III
19-Apr-2012	EB-041912	6624294	EB	METHOD	1613B	III
19-Apr-2012	SL-518-SA5C-SB-0.0-0.5	6625131	N	METHOD	1613B	III
19-Apr-2012	SL-510-SA5C-SB-0.0-0.5	6625130	N	METHOD	1613B	III
19-Apr-2012	SL-517-SA5C-SB-0.0-0.5	6625132	N	METHOD	1613B	III
20-Apr-2012	SL-502-SA5C-SB-0.0-0.5	6625134	N	METHOD	1613B	III
20-Apr-2012	SL-502-SA5C-SB-0.0-0.5 MS	6625135	MS	METHOD	1613B	III
20-Apr-2012	SL-802-SA5C-SB-0.0-0.5	6625137	FD	METHOD	1613B	III
20-Apr-2012	SL-501-SA5C-SB-0.0-0.5	6625133	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: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: **EB-041912** ***Collected:*** **4/19/2012 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	3.88	JB	0.336	MDL	10.4	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.987	JBQ	0.172	MDL	10.4	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.322	JB	0.180	MDL	10.4	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.380	JBQ	0.256	MDL	10.4	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.666	JB	0.177	MDL	10.4	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.630	JBQ	0.282	MDL	10.4	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.716	JB	0.169	MDL	10.4	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.721	JB	0.259	MDL	10.4	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.159	JB	0.159	MDL	10.4	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.484	JB	0.153	MDL	10.4	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.264	JBQ	0.223	MDL	10.4	PQL	pg/L	U	B
2,3,7,8-TCDF	0.257	JB	0.240	MDL	2.08	PQL	pg/L	U	B
OCDD	7.86	JB	0.461	MDL	20.8	PQL	pg/L	U	B
OCDF	1.10	JB	0.314	MDL	20.8	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-501-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 9:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	3.53	JB	0.0746	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	3.46	JB	0.0666	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.04	JB	0.0749	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	2.69	JB	0.106	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.66	JB	0.0577	MDL	5.42	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.15	JB	0.0571	MDL	5.42	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.288	J	0.0543	MDL	1.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.940	JB	0.128	MDL	1.08	PQL	ng/Kg	J	Z
OCDD	6870	EB	0.0881	MDL	10.8	PQL	ng/Kg	J	*XI

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-502-SA5C-SB-0.0-0.5 **Collected: 4/20/2012 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	149	B	0.100	MDL	5.89	PQL	ng/Kg	J	Q, Q, FD
1,2,3,4,6,7,8-HPCDF	9.95	B	0.0285	MDL	5.89	PQL	ng/Kg	J	FD
1,2,3,4,7,8,9-HPCDF	0.723	JB	0.0547	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HxCDD	1.84	JB	0.0365	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.777	JB	0.0323	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	5.53	JB	0.0329	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.375	JB	0.0270	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	4.31	JB	0.0359	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.519	JB	0.0359	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	1.05	JB	0.0380	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.306	JB	0.0239	MDL	5.89	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.526	JB	0.0295	MDL	5.89	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	0.256	JB	0.0250	MDL	5.89	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.136	J	0.0226	MDL	1.18	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDF	0.133	JB	0.0382	MDL	1.18	PQL	ng/Kg	J	Z, FD
OCDD	3350	B	0.0847	MDL	11.8	PQL	ng/Kg	J	FD
OCDF	31.3	B	0.0327	MDL	11.8	PQL	ng/Kg	J	FD

Sample ID: SL-510-SA5C-SB-0.0-0.5 **Collected: 4/19/2012 2:35:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	4.90	JB	0.0806	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	3.24	JB	0.0766	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.56	JB	0.0798	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.59	JB	0.0462	MDL	5.88	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.06	JB	0.0427	MDL	5.88	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.509	JB	0.0753	MDL	1.18	PQL	ng/Kg	J	Z
OCDD	27500	EB	0.170	MDL	11.8	PQL	ng/Kg	J	*XI

Sample ID: SL-513-SA5C-SB-0.0-0.5 **Collected: 4/19/2012 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
1,2,3,4,7,8,9-HPCDF	0.630	JB	0.0301	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.872	JB	0.0318	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.816	JB	0.0263	MDL	5.74	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-513-SA5C-SB-0.0-0.5 **Collected:** 4/19/2012 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
1,2,3,6,7,8-HXCDD	3.12	JB	0.0300	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.610	JB	0.0256	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.41	JB	0.0326	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.989	JB	0.0252	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.498	JB	0.0354	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.19	JB	0.0455	MDL	5.74	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.725	JB	0.0252	MDL	5.74	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.937	JB	0.0406	MDL	5.74	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0890	J	0.0198	MDL	1.15	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.362	JB	0.0651	MDL	1.15	PQL	ng/Kg	J	Z

Sample ID: SL-515-SA5C-SB-0.0-0.5 **Collected:** 4/19/2012 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-HPCDF	3.77	JB	0.0182	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.416	JB	0.0282	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.438	JB	0.0302	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.19	JB	0.0388	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.66	JB	0.0276	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.372	JB	0.0353	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.75	JB	0.0268	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.24	JB	0.0389	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.363	JB	0.0346	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	3.67	JB	0.0492	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.452	JB	0.0360	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.577	JB	0.0492	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0538	J	0.0181	MDL	1.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.539	JB	0.0901	MDL	1.10	PQL	ng/Kg	J	Z
OCDF	9.52	JB	0.0206	MDL	11.0	PQL	ng/Kg	J	Z

Sample ID: SL-516-SA5C-SB-0.0-0.5 **Collected:** 4/19/2012 9:15:00 **Analysis Type:** DL **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDD	105000	EB	1.12	MDL	115	PQL	ng/Kg	J	*XI

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-516-SA5C-SB-0.0-0.5** ***Collected:*** **4/19/2012 9:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,6,7,8-HPCDD	16800	EB	0.440	MDL	5.75	PQL	ng/Kg	J	*XI

Sample ID: **SL-516-SA5C-SB-4.0-5.0** ***Collected:*** **4/19/2012 9:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,7,8-HXCDF	2.76	JB	0.0700	MDL	5.70	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.66	JB	0.0642	MDL	5.70	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.813	JB	0.0729	MDL	5.70	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	4.60	JB	0.121	MDL	5.70	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.964	JB	0.0381	MDL	5.70	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	5.01	JB	0.0676	MDL	5.70	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.03	JB	0.0379	MDL	5.70	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.900	J	0.0971	MDL	1.14	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.281	JB	0.0630	MDL	1.14	PQL	ng/Kg	J	Z
OCDD	6990	EB	0.0967	MDL	11.4	PQL	ng/Kg	J	*XI

Sample ID: **SL-517-SA5C-SB-0.0-0.5** ***Collected:*** **4/19/2012 3:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,7,8,9-HPCDF	4.21	JB	0.0642	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	5.64	JB	0.0439	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.21	JB	0.0425	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.60	JB	0.0433	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.19	JB	0.0366	MDL	5.73	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.90	JB	0.0432	MDL	5.73	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.53	JB	0.0350	MDL	5.73	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.425	JB	0.0506	MDL	1.15	PQL	ng/Kg	J	Z
OCDD	32500	EB	0.177	MDL	11.5	PQL	ng/Kg	J	*XI

Sample ID: **SL-518-SA5C-SB-0.0-0.5** ***Collected:*** **4/19/2012 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*
1,2,3,4,7,8,9-HPCDF	0.520	JB	0.0332	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.865	JB	0.0347	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.726	JB	0.0233	MDL	5.08	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-518-SA5C-SB-0.0-0.5** ***Collected:*** **4/19/2012 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
1,2,3,6,7,8-HXCDF	0.417	JB	0.0230	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	3.25	JB	0.0314	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.85	JB	0.0235	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.619	JB	0.0297	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.621	JB	0.0304	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.559	JB	0.0228	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.756	JB	0.0283	MDL	5.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.111	J	0.0183	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.313	JB	0.0520	MDL	1.02	PQL	ng/Kg	J	Z

Sample ID: **SL-570-SA5C-SB-0.0-0.5** ***Collected:*** **4/18/2012 9:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.97	JB	0.0228	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.319	JB	0.0298	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.419	JB	0.0432	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.405	JB	0.0295	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.37	JB	0.0464	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.227	JB	0.0283	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.898	JB	0.0439	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.140	JB	0.0286	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.257	JB	0.0429	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.473	JB	0.0265	MDL	5.46	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.287	JB	0.0265	MDL	5.46	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.114	JB	0.0254	MDL	5.46	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0839	JB	0.0346	MDL	1.09	PQL	ng/Kg	U	B
OCDF	8.62	JB	0.0162	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: **SL-570-SA5C-SB-2.0-3.0** ***Collected:*** **4/18/2012 10:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.39	JB	0.0225	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.288	JB	0.0320	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.306	JB	0.0376	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.257	JB	0.0268	MDL	5.36	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-570-SA5C-SB-2.0-3.0** ***Collected:*** **4/18/2012 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
1,2,3,6,7,8-HXCDD	0.990	JB	0.0358	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.162	JB	0.0252	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.610	JB	0.0374	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.122	JB	0.0261	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.156	JB	0.0305	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.328	JB	0.0183	MDL	5.36	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.248	JB	0.0256	MDL	5.36	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0828	JB	0.0184	MDL	5.36	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0279	JQ	0.0202	MDL	1.07	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0781	JBQ	0.0236	MDL	1.07	PQL	ng/Kg	U	B
OCDF	6.07	JB	0.0254	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: **SL-575-SA5C-SB-0.0-0.5** ***Collected:*** **4/19/2012 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
1,2,3,4,7,8,9-HPCDF	0.753	JB	0.0711	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.792	JB	0.0484	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.85	JB	0.0639	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.82	JB	0.0446	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.697	JB	0.0598	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.75	JB	0.0479	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.31	JB	0.0676	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.592	JB	0.0519	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	5.52	JB	0.0778	MDL	5.73	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.676	JB	0.0595	MDL	5.73	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.42	JB	0.0825	MDL	5.73	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.105	J	0.0242	MDL	1.15	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.885	JB	0.151	MDL	1.15	PQL	ng/Kg	J	Z

Sample ID: **SL-577-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.16	JB	0.0379	MDL	5.78	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.823	JB	0.0550	MDL	5.78	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	4.35	JB	0.0518	MDL	5.78	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-577-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 1:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	1.95	JB	0.0787	MDL	5.78	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.80	JB	0.0542	MDL	5.78	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.366	JB	0.0571	MDL	5.78	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.09	JB	0.0763	MDL	5.78	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.40	JB	0.101	MDL	5.78	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0587	JQ	0.0228	MDL	1.16	PQL	ng/Kg	J	Z

Sample ID: **SL-579-SA5C-SB-0.0-0.5** ***Collected:*** **4/18/2012 2:04:00** ***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	0.881	JB	0.0477	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.554	JB	0.0365	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.47	JB	0.0466	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.51	JB	0.0354	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.476	JB	0.0440	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.55	JB	0.0359	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.533	JB	0.0485	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.424	JB	0.0541	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.620	JB	0.0448	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.776	JB	0.0637	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.110	J	0.0337	MDL	1.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.558	JB	0.134	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID: **SL-579-SA5C-SB-4.0-5.0** ***Collected:*** **4/18/2012 2:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.74	JB	0.0153	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.177	JB	0.0205	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.138	JB	0.0283	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.416	JB	0.0253	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.815	JB	0.0269	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.116	JB	0.0241	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.484	JB	0.0253	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.221	JB	0.0246	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.107	JB	0.0283	MDL	5.44	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-579-SA5C-SB-4.0-5.0** ***Collected:*** **4/18/2012 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	1.97	JB	0.0331	MDL	5.44	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.151	JB	0.0250	MDL	5.44	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.122	JB	0.0314	MDL	5.44	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0910	JB	0.0566	MDL	1.09	PQL	ng/Kg	U	B
OCDF	3.96	JB	0.0160	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: **SL-580-SA5C-SB-0.0-0.5** ***Collected:*** **4/18/2012 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.720	JB	0.0453	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.720	JB	0.0362	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.45	JB	0.0559	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.57	JB	0.0362	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.541	JB	0.0513	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.77	JB	0.0345	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.613	JB	0.0588	MDL	5.72	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.521	JB	0.0586	MDL	5.72	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.720	JB	0.0539	MDL	5.72	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.816	JB	0.0663	MDL	5.72	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.112	J	0.0375	MDL	1.14	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.789	JB	0.136	MDL	1.14	PQL	ng/Kg	J	Z

Sample ID: **SL-580-SA5C-SB-4.0-5.0** ***Collected:*** **4/18/2012 11:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.607	JB	0.0312	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.115	JB	0.0227	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.113	JB	0.0362	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0915	JB	0.0234	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.131	JBQ	0.0231	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.136	JB	0.0207	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.139	JB	0.0206	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.156	JBQ	0.0188	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.106	JBQ	0.0227	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.189	JB	0.0223	MDL	5.64	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-580-SA5C-SB-4.0-5.0** ***Collected:*** **4/18/2012 11:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8-PECDF	0.210	JB	0.0159	MDL	5.64	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0957	JB	0.0210	MDL	5.64	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.182	JB	0.0167	MDL	5.64	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0783	J	0.0247	MDL	1.13	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0602	JB	0.0196	MDL	1.13	PQL	ng/Kg	U	B
OCDD	4.05	JB	0.0308	MDL	11.3	PQL	ng/Kg	J	Z
OCDF	0.183	JB	0.0339	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: **SL-581-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 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-HPCDF	2.39	JB	0.0193	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.239	JB	0.0268	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.210	JB	0.0432	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.148	JB	0.0216	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	1.45	JB	0.0389	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.160	JB	0.0201	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.22	JB	0.0408	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.684	JB	0.0226	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.205	JB	0.0366	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.329	JB	0.0149	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.157	JB	0.0210	MDL	5.38	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0791	JB	0.0145	MDL	5.38	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0254	JB	0.0211	MDL	1.08	PQL	ng/Kg	U	B
OCDF	5.61	JB	0.0189	MDL	10.8	PQL	ng/Kg	J	Z

Sample ID: **SL-747-SA5C-SB-0.0-0.5** ***Collected:*** **4/17/2012 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
1,2,3,4,6,7,8-HPCDD	4900	EB	0.239	MDL	5.94	PQL	ng/Kg	J	*XI
1,2,3,7,8,9-HXCDF	5.01	JB	0.113	MDL	5.94	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	4.93	JB	0.0573	MDL	5.94	PQL	ng/Kg	J	Z
OCDD	42600	EB	0.185	MDL	11.9	PQL	ng/Kg	J	*XI

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-802-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 8:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,6,7,8-HPCDD	8.92	B	0.0403	MDL	5.89	PQL	ng/Kg	J	FD
1,2,3,4,6,7,8-HPCDF	0.658	JB	0.0194	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.212	JB	0.0324	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HxCDD	0.190	JB	0.0340	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.0894	JB	0.0238	MDL	5.89	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.477	JB	0.0310	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.0555	JBQ	0.0214	MDL	5.89	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.526	JB	0.0298	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.226	JB	0.0241	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	0.144	JB	0.0205	MDL	5.89	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.102	JB	0.0154	MDL	5.89	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0975	JB	0.0223	MDL	5.89	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0986	JB	0.0148	MDL	5.89	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.0297	J	0.0182	MDL	1.18	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDF	0.0365	JB	0.0183	MDL	1.18	PQL	ng/Kg	UJ	B, FD
OCDD	153	B	0.0299	MDL	11.8	PQL	ng/Kg	J	FD
OCDF	1.72	JB	0.0265	MDL	11.8	PQL	ng/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PrepPH002 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	ICP Serial Dilution
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

PH002

Method Blank Outlier Report

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1210B370043	5/2/2012 12:43:00 AM	1,2,3,4,6,7,8-HPCDD	3.29 pg/L	EB-041912
		1,2,3,4,6,7,8-HPCDF	0.720 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.566 pg/L	
		1,2,3,4,7,8-HxCDD	0.408 pg/L	
		1,2,3,4,7,8-HXCDF	0.479 pg/L	
		1,2,3,6,7,8-HXCDD	0.426 pg/L	
		1,2,3,6,7,8-HXCDF	0.378 pg/L	
		1,2,3,7,8,9-HXCDD	0.506 pg/L	
		1,2,3,7,8,9-HXCDF	0.336 pg/L	
		1,2,3,7,8-PECDD	0.409 pg/L	
		2,3,4,6,7,8-HXCDF	0.468 pg/L	
		2,3,4,7,8-PECDF	0.690 pg/L	
		2,3,7,8-TCDD	0.270 pg/L	
		2,3,7,8-TCDF	0.288 pg/L	
		OCDD	6.72 pg/L	
		OCDF	1.02 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-041912(RES)	1,2,3,4,6,7,8-HPCDD	3.88 pg/L	3.88U pg/L
EB-041912(RES)	1,2,3,4,6,7,8-HPCDF	0.987 pg/L	0.987U pg/L
EB-041912(RES)	1,2,3,4,7,8,9-HPCDF	0.322 pg/L	0.322U pg/L
EB-041912(RES)	1,2,3,4,7,8-HxCDD	0.380 pg/L	0.380U pg/L
EB-041912(RES)	1,2,3,4,7,8-HXCDF	0.666 pg/L	0.666U pg/L
EB-041912(RES)	1,2,3,6,7,8-HXCDD	0.630 pg/L	0.630U pg/L
EB-041912(RES)	1,2,3,6,7,8-HXCDF	0.716 pg/L	0.716U pg/L
EB-041912(RES)	1,2,3,7,8,9-HXCDD	0.721 pg/L	0.721U pg/L
EB-041912(RES)	1,2,3,7,8,9-HXCDF	0.159 pg/L	0.159U pg/L
EB-041912(RES)	2,3,4,6,7,8-HXCDF	0.484 pg/L	0.484U pg/L
EB-041912(RES)	2,3,4,7,8-PECDF	0.264 pg/L	0.264U pg/L
EB-041912(RES)	2,3,7,8-TCDF	0.257 pg/L	0.257U pg/L
EB-041912(RES)	OCDD	7.86 pg/L	7.86U pg/L
EB-041912(RES)	OCDF	1.10 pg/L	1.10U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1170B370142	4/28/2012 1:42:00 AM	1,2,3,4,6,7,8-HPCDD	0.271 ng/Kg	SL-501-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0949 ng/Kg	SL-502-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0348 ng/Kg	SL-510-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0226 ng/Kg	SL-513-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0424 ng/Kg	SL-515-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0346 ng/Kg	SL-516-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0309 ng/Kg	SL-516-SA5C-SB-4.0-5.0
		1,2,3,7,8,9-HXCDD	0.0282 ng/Kg	SL-517-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0201 ng/Kg	SL-518-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0153 ng/Kg	SL-570-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0223 ng/Kg	SL-570-SA5C-SB-2.0-3.0
		2,3,4,6,7,8-HXCDF	0.0334 ng/Kg	SL-575-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0520 ng/Kg	SL-577-SA5C-SB-0.0-0.5
		2,3,7,8-TCDF	0.0206 ng/Kg	SL-579-SA5C-SB-0.0-0.5
		OCDD	0.445 ng/Kg	SL-579-SA5C-SB-4.0-5.0
		OCDF	0.111 ng/Kg	SL-580-SA5C-SB-0.0-0.5
				SL-580-SA5C-SB-4.0-5.0
				SL-581-SA5C-SB-0.0-0.5
				SL-747-SA5C-SB-0.0-0.5
				SL-802-SA5C-SB-0.0-0.5

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-502-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.256 ng/Kg	0.256U ng/Kg
SL-570-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.114 ng/Kg	0.114U ng/Kg
SL-570-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0839 ng/Kg	0.0839U ng/Kg
SL-570-SA5C-SB-2.0-3.0(RES)	2,3,4,7,8-PECDF	0.0828 ng/Kg	0.0828U ng/Kg
SL-570-SA5C-SB-2.0-3.0(RES)	2,3,7,8-TCDF	0.0781 ng/Kg	0.0781U ng/Kg
SL-579-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.116 ng/Kg	0.116U ng/Kg
SL-579-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.151 ng/Kg	0.151U ng/Kg
SL-579-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.122 ng/Kg	0.122U ng/Kg
SL-579-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0910 ng/Kg	0.0910U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.607 ng/Kg	0.607U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.115 ng/Kg	0.115U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.113 ng/Kg	0.113U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0915 ng/Kg	0.0915U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.131 ng/Kg	0.131U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.136 ng/Kg	0.136U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.139 ng/Kg	0.139U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0957 ng/Kg	0.0957U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.182 ng/Kg	0.182U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0602 ng/Kg	0.0602U ng/Kg
SL-580-SA5C-SB-4.0-5.0(RES)	OCDF	0.183 ng/Kg	0.183U ng/Kg
SL-581-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.148 ng/Kg	0.148U ng/Kg
SL-581-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-581-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0791 ng/Kg	0.0791U ng/Kg
SL-581-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0254 ng/Kg	0.0254U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-802-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0894 ng/Kg	0.0894U ng/Kg
SL-802-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0555 ng/Kg	0.0555U ng/Kg
SL-802-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.102 ng/Kg	0.102U ng/Kg
SL-802-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0975 ng/Kg	0.0975U ng/Kg
SL-802-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0986 ng/Kg	0.0986U ng/Kg
SL-802-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0365 ng/Kg	0.0365U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-502-SA5C-SB-0.0-0.5 MS **SL-502-SA5C-SB-0.0-0.5 MSD** (SL-502-SA5C-SB-0.0-0.5)	1,2,3,4,6,7,8-HPCDD OCDD	476 4283	340 2190	70.00-140.00 78.00-144.00	27 (25.00) 46 (25.00)	1,2,3,4,6,7,8-HPCDD OCDD	J (all detects) OCDD, No Qual >4x

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Field Duplicate RPD Report

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-502-SA5C-SB-0.0-0.5	SL-802-SA5C-SB-0.0-0.5			
MOISTURE	16.4	15.8	4		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-502-SA5C-SB-0.0-0.5	SL-802-SA5C-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	149	8.92	177	50.00	
1,2,3,4,6,7,8-HPCDF	9.95	0.658	175	50.00	
1,2,3,4,7,8,9-HPCDF	0.723	0.212	109	50.00	
1,2,3,4,7,8-HxCDD	1.84	0.190	163	50.00	
1,2,3,4,7,8-HXCDF	0.777	0.0894	159	50.00	
1,2,3,6,7,8-HXCDD	5.53	0.477	168	50.00	
1,2,3,6,7,8-HXCDF	0.375	0.0555	148	50.00	
1,2,3,7,8,9-HXCDD	4.31	0.526	156	50.00	
1,2,3,7,8,9-HXCDF	0.519	0.226	79	50.00	J(all detects)
1,2,3,7,8-PECDD	1.05	0.144	152	50.00	
1,2,3,7,8-PECDF	0.306	0.102	100	50.00	
2,3,4,6,7,8-HXCDF	0.526	0.0975	137	50.00	
2,3,4,7,8-PECDF	0.256	0.0986	89	50.00	
2,3,7,8-TCDD	0.136	0.0297	128	50.00	
2,3,7,8-TCDF	0.133	0.0365	114	50.00	
OCDD	3350	153	183	50.00	
OCDF	31.3	1.72	179	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-041912	1,2,3,4,6,7,8-HPCDD	JB	3.88	10.4	PQL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.987	10.4	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JB	0.322	10.4	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JBQ	0.380	10.4	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.666	10.4	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.630	10.4	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.716	10.4	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JB	0.721	10.4	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JB	0.159	10.4	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JB	0.484	10.4	PQL	pg/L	
	2,3,4,7,8-PECDF	JBQ	0.264	10.4	PQL	pg/L	
	2,3,7,8-TCDF	JB	0.257	2.08	PQL	pg/L	
	OCDD	JB	7.86	20.8	PQL	pg/L	
	OCDF	JB	1.10	20.8	PQL	pg/L	

Method: 1613B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-501-SA5C-SB-0.0-0.5	1,2,3,4,7,8-HXCDF	JB	3.53	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,6,7,8-HXCDF	JB	3.46	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.04	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	2.69	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.66	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.15	5.42	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.288	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.940	1.08	PQL	ng/Kg	
SL-502-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.723	5.89	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	JB	1.84	5.89	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.777	5.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	5.53	5.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.375	5.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	4.31	5.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.519	5.89	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	1.05	5.89	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.306	5.89	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.526	5.89	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.256	5.89	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.136	1.18	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.133	1.18	PQL	ng/Kg	
SL-510-SA5C-SB-0.0-0.5	1,2,3,4,7,8-HXCDF	JB	4.90	5.88	PQL	ng/Kg	J (all detects)
	1,2,3,6,7,8-HXCDF	JB	3.24	5.88	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.56	5.88	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.59	5.88	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.06	5.88	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.509	1.18	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-513-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.630	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.872	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.816	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.12	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.610	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.41	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.989	5.74	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.498	5.74	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.19	5.74	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.725	5.74	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.937	5.74	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0890	1.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.362	1.15	PQL	ng/Kg	
SL-515-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.77	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.416	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.438	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.19	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.66	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.372	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.75	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.24	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.363	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	3.67	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.452	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.577	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0538	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.539	1.10	PQL	ng/Kg	
	OCDF	JB	9.52	11.0	PQL	ng/Kg	
SL-516-SA5C-SB-4.0-5.0	1,2,3,4,7,8-HXCDF	JB	2.76	5.70	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.66	5.70	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.813	5.70	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	4.60	5.70	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.964	5.70	PQL	ng/Kg	J (all detects)
	2,3,4,6,7,8-HXCDF	JB	5.01	5.70	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.03	5.70	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.900	1.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.281	1.14	PQL	ng/Kg	
SL-517-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	4.21	5.73	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	5.64	5.73	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.21	5.73	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.60	5.73	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	1.19	5.73	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.90	5.73	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.53	5.73	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.425	1.15	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.520	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.865	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.726	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.417	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	3.25	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.85	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.619	5.08	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.621	5.08	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.559	5.08	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.756	5.08	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.111	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.313	1.02	PQL	ng/Kg	
SL-570-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.97	5.46	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.319	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.419	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.405	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.37	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.227	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.898	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.140	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.257	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.473	5.46	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.287	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.114	5.46	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0839	1.09	PQL	ng/Kg	
	OCDF	JB	8.62	10.9	PQL	ng/Kg	
SL-570-SA5C-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	JB	2.39	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.288	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.306	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.257	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.990	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.162	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.610	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.122	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.156	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.328	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.248	5.36	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0828	5.36	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0279	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0781	1.07	PQL	ng/Kg	
	OCDF	JB	6.07	10.7	PQL	ng/Kg	
SL-575-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.753	5.73	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.792	5.73	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.85	5.73	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.82	5.73	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.697	5.73	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.75	5.73	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.31	5.73	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.592	5.73	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	5.52	5.73	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.676	5.73	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.42	5.73	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.105	1.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.885	1.15	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-577-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	2.16	5.78	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.823	5.78	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	4.35	5.78	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.95	5.78	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.80	5.78	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.366	5.78	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.09	5.78	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.40	5.78	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0587	1.16	PQL	ng/Kg	
SL-579-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.881	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.554	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.47	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.51	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.476	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.55	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.533	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.424	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.620	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.776	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.110	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.558	1.10	PQL	ng/Kg	
SL-579-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	1.74	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.177	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.138	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.416	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.815	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.116	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.484	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.221	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.107	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.97	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.151	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.122	5.44	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0910	1.09	PQL	ng/Kg	
	OCDF	JB	3.96	10.9	PQL	ng/Kg	
SL-580-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.720	5.72	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.720	5.72	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.45	5.72	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.57	5.72	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.541	5.72	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.77	5.72	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.613	5.72	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.521	5.72	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.720	5.72	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.816	5.72	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.112	1.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.789	1.14	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH002 **Laboratory: LL**

EDD Filename: PH002_v1. **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-580-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.607	5.64	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.115	5.64	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.113	5.64	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0915	5.64	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.131	5.64	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.136	5.64	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.139	5.64	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.156	5.64	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.106	5.64	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.189	5.64	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.210	5.64	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0957	5.64	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.182	5.64	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0783	1.13	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0602	1.13	PQL	ng/Kg	
	OCDD	JB	4.05	11.3	PQL	ng/Kg	
	OCDF	JB	0.183	11.3	PQL	ng/Kg	
SL-581-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.39	5.38	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.239	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.210	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.148	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.45	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.160	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.22	5.38	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.684	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.205	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.329	5.38	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.157	5.38	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0791	5.38	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0254	1.08	PQL	ng/Kg	
	OCDF	JB	5.61	10.8	PQL	ng/Kg	
SL-747-SA5C-SB-0.0-0.5	1,2,3,7,8,9-HXCDF	JB	5.01	5.94	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	4.93	5.94	PQL	ng/Kg	
SL-802-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.658	5.89	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.212	5.89	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.190	5.89	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0894	5.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.477	5.89	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0555	5.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.526	5.89	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.226	5.89	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.144	5.89	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.102	5.89	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0975	5.89	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0986	5.89	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0297	1.18	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0365	1.18	PQL	ng/Kg	
	OCDF	JB	1.72	11.8	PQL	ng/Kg	

LDC #: 28719

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Reviewer: APL
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".

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?

#	Date	Compared Name ~~Sample ID~~	Finding	Associated Samples	Qualifications
		OCDD	Exceeded Calibration Range	SL-501-SA5C-SB-0.0-0.5	J/A
		↓	↓	SL-510-SA5C-SB-0.0-0.5	↓
		1,2,3,4,6,7,8-HPCDD, OCDD	↓	SL-516-SA5C-SB-0.0-0.5	↓
		OCDD	↓	SL-516-SA5C-SB-4.0-5.0	↓
		1,2,3,4,6,7,8-HPCDD, OCDD	↓	SL-517-SA5C-SB-0.0-0.5	↓

Comments: _____

SAMPLE DELIVERY GROUP

PH003

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-509-SA5C-SB-0.0-0.5	6625142	N	METHOD	1613B	III
20-Apr-2012	SL-507-SA5C-SB-0.0-0.5	6625140	N	METHOD	1613B	III
20-Apr-2012	SL-508-SA5C-SB-0.0-0.5	6625141	N	METHOD	1613B	III
20-Apr-2012	SL-574-SA5C-SB-0.0-0.5	6625143	N	METHOD	1613B	III
23-Apr-2012	SL-512-SA5C-SB-0.0-0.5	6626916	N	METHOD	1613B	III
23-Apr-2012	SL-532-SA5C-SB-0.0-0.5	6626918	N	METHOD	1613B	III
23-Apr-2012	SL-520-SA5C-SB-0.0-0.5	6626917	N	METHOD	1613B	III
23-Apr-2012	SL-533-SA5C-SB-0.0-0.5	6626919	N	METHOD	1613B	III
25-Apr-2012	SL-623-SA5C-SB-0.0-0.5	6632086	N	METHOD	1613B	III
25-Apr-2012	SL-530-SA5C-SB-0.0-0.5	6632084	N	METHOD	1613B	III
25-Apr-2012	SL-522-SA5C-SB-0.0-0.5	6632082	N	METHOD	1613B	III
25-Apr-2012	SL-531-SA5C-SB-0.0-0.5	6632085	N	METHOD	1613B	III
25-Apr-2012	SL-523-SA5C-SB-0.0-0.5	6632083	N	METHOD	1613B	III
26-Apr-2012	SL-702-SA5C-SB-0.0-0.5	6632087	N	METHOD	1613B	III
26-Apr-2012	SL-708-SA5C-SB-0.0-0.5	6632089	N	METHOD	1613B	III
26-Apr-2012	SL-711-SA5C-SB-0.0-0.5	6632090	N	METHOD	1613B	III
26-Apr-2012	EB-042612	6632088	EB	METHOD	1613B	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

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

Sample ID: EB-042612 ***Collected:*** 4/26/2012 2:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.12	JB	0.204	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.597	JB	0.0861	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.307	JB	0.0987	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.371	JB	0.0839	MDL	10.2	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.339	JB	0.150	MDL	10.2	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.264	JB	0.0833	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.329	JB	0.144	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.173	JBQ	0.0806	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.312	JBQ	0.191	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.440	JB	0.141	MDL	10.2	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.161	JB	0.0752	MDL	10.2	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.623	JB	0.130	MDL	10.2	PQL	pg/L	U	B
OCDD	6.99	JB	0.270	MDL	20.3	PQL	pg/L	U	B
OCDF	0.701	JB	0.174	MDL	20.3	PQL	pg/L	U	B

Method Category: SVOA

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

Sample ID: SL-507-SA5C-SB-0.0-0.5 ***Collected:*** 4/20/2012 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	1.24	JB	0.0164	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.115	JB	0.0235	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.343	JB	0.0644	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.154	JB	0.0386	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	1.28	JB	0.0659	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.173	JB	0.0357	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.58	JB	0.0615	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.35	JB	0.0403	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.321	J	0.0453	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.405	JB	0.0264	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.208	JB	0.0341	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.292	JB	0.0255	MDL	5.34	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0720	JB	0.0349	MDL	1.07	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-507-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 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
2,3,7,8-TCDF	0.163	J	0.0405	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	4.00	JB	0.0285	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: **SL-508-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 11:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.49	JB	0.0200	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.204	JB	0.0242	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.531	JB	0.0398	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.223	JB	0.0334	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.44	JB	0.0451	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.200	JB	0.0326	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.34	JB	0.0447	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.534	JB	0.0323	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.367	J	0.0324	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.217	JB	0.0235	MDL	5.22	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.230	JB	0.0264	MDL	5.22	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.258	JB	0.0227	MDL	5.22	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.109	J	0.0314	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	7.91	JB	0.0235	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: **SL-509-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 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-HPCDF	0.833	JB	0.0132	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.134	JB	0.0212	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.157	JB	0.0304	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0950	JB	0.0294	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.765	JB	0.0331	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.118	JB	0.0277	MDL	5.22	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	1.02	JB	0.0345	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.17	JB	0.0297	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.174	J	0.0328	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.360	JB	0.0195	MDL	5.22	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.109	JB	0.0225	MDL	5.22	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-509-SA5C-SB-0.0-0.5** ***Collected:*** **4/20/2012 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
2,3,4,7,8-PECDF	0.101	JB	0.0190	MDL	5.22	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0401	JB	0.0293	MDL	1.04	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0707	J	0.0283	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	2.00	JB	0.0216	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: **SL-512-SA5C-SB-0.0-0.5** ***Collected:*** **4/23/2012 11:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.537	JB	0.0380	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.701	JB	0.0530	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.13	JB	0.0468	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.95	JB	0.0530	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.488	JB	0.0477	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.63	JB	0.0535	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.670	JB	0.0451	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.385	J	0.0335	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.10	JB	0.0570	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.565	JB	0.0370	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.620	JB	0.0514	MDL	5.41	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.136	JB	0.0289	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.310	J	0.0779	MDL	1.08	PQL	ng/Kg	J	Z

Sample ID: **SL-520-SA5C-SB-0.0-0.5** ***Collected:*** **4/23/2012 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
1,2,3,4,7,8,9-HPCDF	0.510	JB	0.0493	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.591	JB	0.0680	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.419	JB	0.0517	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.67	JB	0.0768	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.337	JB	0.0496	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.56	JB	0.0698	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.579	JB	0.0498	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.331	J	0.0382	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.499	JB	0.0442	MDL	5.49	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.427	JB	0.0421	MDL	5.49	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-520-SA5C-SB-0.0-0.5** ***Collected:*** **4/23/2012 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
2,3,4,7,8-PECDF	0.191	JB	0.0385	MDL	5.49	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0649	JB	0.0356	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.246	J	0.0714	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID: **SL-522-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 11:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.16	JB	0.0254	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.252	JB	0.0290	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.366	JB	0.0415	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.385	JB	0.0298	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.52	JB	0.0413	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.359	JB	0.0278	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.45	JB	0.0400	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.709	JB	0.0260	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.434	J	0.0310	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.429	JB	0.0320	MDL	5.35	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.360	JB	0.0245	MDL	5.35	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.553	JB	0.0303	MDL	5.35	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.111	JB	0.0195	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.146	J	0.0376	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	7.01	JB	0.0173	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: **SL-523-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 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-HPCDF	0.939	JB	0.0274	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0853	JB	0.0261	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0923	JB	0.0356	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.118	JB	0.0339	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.525	JB	0.0374	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.147	JB	0.0294	MDL	5.08	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.500	JB	0.0369	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.323	JB	0.0249	MDL	5.08	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.111	J	0.0205	MDL	5.08	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-523-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 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
1,2,3,7,8-PECDF	0.121	JB	0.0285	MDL	5.08	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.198	JB	0.0216	MDL	5.08	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.336	JB	0.0243	MDL	5.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0234	JB	0.0189	MDL	1.02	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0803	J	0.0330	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	1.58	JB	0.0245	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: **SL-530-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 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
1,2,3,4,7,8,9-HPCDF	0.452	JB	0.0344	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.650	JB	0.0358	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.331	JB	0.0319	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.84	JB	0.0400	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.285	JB	0.0297	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.47	JB	0.0379	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.354	JB	0.0286	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.367	J	0.0273	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.149	JB	0.0436	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.357	JB	0.0239	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.289	JB	0.0377	MDL	5.26	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0412	JB	0.0150	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0617	J	0.0396	MDL	1.05	PQL	ng/Kg	J	Z

Sample ID: **SL-531-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 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-HPCDF	3.08	JB	0.0227	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.261	JB	0.0263	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.273	JB	0.0383	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.326	JB	0.0300	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.36	JB	0.0411	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.296	JB	0.0309	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.01	JB	0.0398	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.523	JB	0.0289	MDL	5.36	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-531-SA5C-SB-0.0-0.5 **Collected: 4/25/2012 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
1,2,3,7,8-PECDD	0.246	J	0.0261	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.447	JB	0.0787	MDL	5.36	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.315	JB	0.0245	MDL	5.36	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.563	JB	0.0702	MDL	5.36	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0516	JB	0.0201	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.191	J	0.0849	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	6.28	JB	0.0227	MDL	10.7	PQL	ng/Kg	J	Z

Sample ID: SL-532-SA5C-SB-0.0-0.5 **Collected: 4/23/2012 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
1,2,3,6,7,8-HXCDF	4.23	JB	0.115	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.51	JB	0.0749	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.30	JB	0.0802	MDL	5.55	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.28	JB	0.0726	MDL	5.55	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	1.09	JB	0.0481	MDL	1.11	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	1.02	J	0.116	MDL	1.11	PQL	ng/Kg	J	Z
OCDD	10900	EB	0.213	MDL	11.1	PQL	ng/Kg	J	*XI

Sample ID: SL-533-SA5C-SB-0.0-0.5 **Collected: 4/23/2012 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
1,2,3,4,6,7,8-HPCDD	1.50	JB	0.0274	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.281	JB	0.0126	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0364	JB	0.0215	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0377	JB	0.0238	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0906	JBQ	0.0164	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.270	JB	0.0254	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0819	JB	0.0142	MDL	5.05	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.376	JB	0.0240	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.407	JB	0.0172	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.110	J	0.0146	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.204	JB	0.00994	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0655	JB	0.0129	MDL	5.05	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.118	JBQ	0.0100	MDL	5.05	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-533-SA5C-SB-0.0-0.5 **Collected: 4/23/2012 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
2,3,7,8-TCDD	0.0377	JB	0.0143	MDL	1.01	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0434	J	0.0108	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	0.816	JB	0.0285	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID: SL-574-SA5C-SB-0.0-0.5 **Collected: 4/20/2012 1:00:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.25	JB	0.0266	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.291	JB	0.0317	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.867	JB	0.0559	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.366	JB	0.0411	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.52	JB	0.0631	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.346	JB	0.0389	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.88	JB	0.0612	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.27	JB	0.0369	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.620	J	0.0466	MDL	5.88	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.425	JB	0.0401	MDL	5.88	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.311	JB	0.0284	MDL	5.88	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.289	JB	0.0355	MDL	5.88	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0636	JB	0.0318	MDL	1.18	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.176	J	0.0491	MDL	1.18	PQL	ng/Kg	J	Z

Sample ID: SL-623-SA5C-SB-0.0-0.5 **Collected: 4/25/2012 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
1,2,3,4,7,8,9-HPCDF	0.403	JB	0.0349	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.452	JB	0.0379	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.547	JB	0.0260	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.02	JB	0.0436	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.464	JB	0.0251	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.20	JB	0.0420	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.487	JB	0.0250	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.236	J	0.0232	MDL	5.12	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.391	JB	0.0292	MDL	5.12	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.616	JB	0.0207	MDL	5.12	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-623-SA5C-SB-0.0-0.5** ***Collected:*** **4/25/2012 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
2,3,4,7,8-PECDF	0.747	JB	0.0253	MDL	5.12	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0187	JBQ	0.0130	MDL	1.02	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.109	J	0.0322	MDL	1.02	PQL	ng/Kg	J	Z

Sample ID: **SL-702-SA5C-SB-0.0-0.5** ***Collected:*** **4/26/2012 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	1.02	JB	0.0142	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0975	JB	0.0219	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.118	JB	0.0327	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.152	JB	0.0252	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.388	JB	0.0338	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.117	JB	0.0227	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.400	JB	0.0325	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.190	JB	0.0263	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0810	JQ	0.0175	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.108	JB	0.0138	MDL	5.17	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.122	JB	0.0202	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0755	JB	0.0139	MDL	5.17	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0186	JBQ	0.0146	MDL	1.03	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0203	J	0.0164	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	2.41	JB	0.0207	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID: **SL-708-SA5C-SB-0.0-0.5** ***Collected:*** **4/26/2012 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.01	JB	0.0222	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.320	JB	0.0291	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.404	JB	0.0364	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.350	JB	0.0313	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.12	JB	0.0390	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.208	JB	0.0292	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.915	JB	0.0379	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.157	JB	0.0307	MDL	5.04	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.251	J	0.0201	MDL	5.04	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-708-SA5C-SB-0.0-0.5** ***Collected:*** **4/26/2012 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,7,8-PECDF	0.329	JB	0.0187	MDL	5.04	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.254	JB	0.0265	MDL	5.04	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0791	JB	0.0169	MDL	5.04	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0176	JB	0.0147	MDL	1.01	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0287	J	0.0260	MDL	1.01	PQL	ng/Kg	J	Z

Sample ID: **SL-711-SA5C-SB-0.0-0.5** ***Collected:*** **4/26/2012 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-HPCDF	3.88	JB	0.0307	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.374	JBQ	0.0360	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.244	JB	0.0589	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.393	JB	0.0346	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.30	JB	0.0637	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.215	JB	0.0335	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.673	JB	0.0623	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.217	JB	0.0348	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.153	JQ	0.0362	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.355	JB	0.0233	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.256	JB	0.0274	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.167	JB	0.0219	MDL	5.21	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0436	JBQ	0.0164	MDL	1.04	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PrepPH003 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	ICP Serial Dilution
B	Method Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

PH003

Method Blank Outlier Report

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1220B371440	5/3/2012 2:40:00 PM	1,2,3,4,6,7,8-HPCDD	3.60 pg/L	EB-042612
		1,2,3,4,6,7,8-HPCDF	0.669 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.452 pg/L	
		1,2,3,4,7,8-HxCDD	0.262 pg/L	
		1,2,3,4,7,8-HXCDF	0.450 pg/L	
		1,2,3,6,7,8-HXCDD	0.575 pg/L	
		1,2,3,6,7,8-HXCDF	0.475 pg/L	
		1,2,3,7,8,9-HXCDD	0.493 pg/L	
		1,2,3,7,8,9-HXCDF	0.174 pg/L	
		1,2,3,7,8-PECDD	0.441 pg/L	
		1,2,3,7,8-PECDF	0.533 pg/L	
		2,3,4,6,7,8-HXCDF	0.399 pg/L	
		2,3,4,7,8-PECDF	0.503 pg/L	
		2,3,7,8-TCDF	0.318 pg/L	
		OCDD	5.60 pg/L	
		OCDF	1.38 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-042612(RES)	1,2,3,4,6,7,8-HPCDD	3.12 pg/L	3.12U pg/L
EB-042612(RES)	1,2,3,4,6,7,8-HPCDF	0.597 pg/L	0.597U pg/L
EB-042612(RES)	1,2,3,4,7,8,9-HPCDF	0.307 pg/L	0.307U pg/L
EB-042612(RES)	1,2,3,4,7,8-HXCDF	0.371 pg/L	0.371U pg/L
EB-042612(RES)	1,2,3,6,7,8-HXCDD	0.339 pg/L	0.339U pg/L
EB-042612(RES)	1,2,3,6,7,8-HXCDF	0.264 pg/L	0.264U pg/L
EB-042612(RES)	1,2,3,7,8,9-HXCDD	0.329 pg/L	0.329U pg/L
EB-042612(RES)	1,2,3,7,8,9-HXCDF	0.173 pg/L	0.173U pg/L
EB-042612(RES)	1,2,3,7,8-PECDD	0.312 pg/L	0.312U pg/L
EB-042612(RES)	1,2,3,7,8-PECDF	0.440 pg/L	0.440U pg/L
EB-042612(RES)	2,3,4,6,7,8-HXCDF	0.161 pg/L	0.161U pg/L
EB-042612(RES)	2,3,4,7,8-PECDF	0.623 pg/L	0.623U pg/L
EB-042612(RES)	OCDD	6.99 pg/L	6.99U pg/L
EB-042612(RES)	OCDF	0.701 pg/L	0.701U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1250B371718	5/7/2012 5:18:00 PM	1,2,3,4,6,7,8-HPCDD	0.257 ng/Kg	SL-507-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0686 ng/Kg	SL-508-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0388 ng/Kg	SL-509-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0260 ng/Kg	SL-512-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0393 ng/Kg	SL-520-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0496 ng/Kg	SL-522-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0305 ng/Kg	SL-523-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0466 ng/Kg	SL-530-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0347 ng/Kg	SL-531-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0295 ng/Kg	SL-532-SA5C-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0243 ng/Kg	SL-533-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0397 ng/Kg	SL-574-SA5C-SB-0.0-0.5
		2,3,7,8-TCDD	0.0503 ng/Kg	SL-623-SA5C-SB-0.0-0.5
		OCDD	0.477 ng/Kg	SL-702-SA5C-SB-0.0-0.5
		OCDF	0.151 ng/Kg	SL-708-SA5C-SB-0.0-0.5
				SL-711-SA5C-SB-0.0-0.5

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-507-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.115 ng/Kg	0.115U ng/Kg
SL-507-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.154 ng/Kg	0.154U ng/Kg
SL-507-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0720 ng/Kg	0.0720U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.134 ng/Kg	0.134U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0950 ng/Kg	0.0950U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.118 ng/Kg	0.118U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.109 ng/Kg	0.109U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.101 ng/Kg	0.101U ng/Kg
SL-509-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0401 ng/Kg	0.0401U ng/Kg
SL-512-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.136 ng/Kg	0.136U ng/Kg
SL-520-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.191 ng/Kg	0.191U ng/Kg
SL-520-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0649 ng/Kg	0.0649U ng/Kg
SL-522-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.111 ng/Kg	0.111U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0853 ng/Kg	0.0853U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0923 ng/Kg	0.0923U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.118 ng/Kg	0.118U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.147 ng/Kg	0.147U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.121 ng/Kg	0.121U ng/Kg
SL-523-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0234 ng/Kg	0.0234U ng/Kg
SL-530-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0412 ng/Kg	0.0412U ng/Kg
SL-531-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0516 ng/Kg	0.0516U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.281 ng/Kg	0.281U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0364 ng/Kg	0.0364U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0377 ng/Kg	0.0377U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0906 ng/Kg	0.0906U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0819 ng/Kg	0.0819U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-533-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0655 ng/Kg	0.0655U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.118 ng/Kg	0.118U ng/Kg
SL-533-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0377 ng/Kg	0.0377U ng/Kg
SL-574-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0636 ng/Kg	0.0636U ng/Kg
SL-623-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0187 ng/Kg	0.0187U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0975 ng/Kg	0.0975U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.118 ng/Kg	0.118U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.152 ng/Kg	0.152U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.117 ng/Kg	0.117U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.108 ng/Kg	0.108U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0755 ng/Kg	0.0755U ng/Kg
SL-702-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0186 ng/Kg	0.0186U ng/Kg
SL-708-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-708-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0791 ng/Kg	0.0791U ng/Kg
SL-708-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0176 ng/Kg	0.0176U ng/Kg
SL-711-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.167 ng/Kg	0.167U ng/Kg
SL-711-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0436 ng/Kg	0.0436U ng/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-042612	1,2,3,4,6,7,8-HPCDD	JB	3.12	10.2	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JB	0.597	10.2	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JB	0.307	10.2	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JB	0.371	10.2	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JB	0.339	10.2	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.264	10.2	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JB	0.329	10.2	PQL	pg/L	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.173	10.2	PQL	pg/L	
	1,2,3,7,8-PECDD	JBQ	0.312	10.2	PQL	pg/L	
	1,2,3,7,8-PECDF	JB	0.440	10.2	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JB	0.161	10.2	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.623	10.2	PQL	pg/L	
	OCDD	JB	6.99	20.3	PQL	pg/L	
	OCDF	JB	0.701	20.3	PQL	pg/L	

Method: 1613B
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-507-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.24	5.34	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.115	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.343	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.154	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.28	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.173	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.58	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.35	5.34	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.321	5.34	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.405	5.34	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.208	5.34	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.292	5.34	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0720	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.163	1.07	PQL	ng/Kg	
	OCDF	JB	4.00	10.7	PQL	ng/Kg	
SL-508-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.49	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.204	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.531	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.223	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.44	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.200	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.34	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.534	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.367	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.217	5.22	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.230	5.22	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.258	5.22	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.109	1.04	PQL	ng/Kg	
	OCDF	JB	7.91	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-509-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.833	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.134	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.157	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0950	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.765	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.118	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.02	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.17	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.174	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.360	5.22	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.109	5.22	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.101	5.22	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0401	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0707	1.04	PQL	ng/Kg	
	OCDF	JB	2.00	10.4	PQL	ng/Kg	
SL-512-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.537	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.701	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.13	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.95	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.488	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.63	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.670	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.385	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.10	5.41	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.565	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.620	5.41	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.136	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.310	1.08	PQL	ng/Kg	
SL-520-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.510	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.591	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.419	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.67	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.337	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.56	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.579	5.49	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.331	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.499	5.49	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.427	5.49	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.191	5.49	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0649	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.246	1.10	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-522-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.16	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.252	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.366	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.385	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.52	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.359	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.45	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.709	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.434	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.429	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.360	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.553	5.35	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.111	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.146	1.07	PQL	ng/Kg	
	OCDF	JB	7.01	10.7	PQL	ng/Kg	
SL-523-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.939	5.08	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0853	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0923	5.08	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.118	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.525	5.08	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.147	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.500	5.08	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.323	5.08	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.111	5.08	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.121	5.08	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.198	5.08	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.336	5.08	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0234	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0803	1.02	PQL	ng/Kg	
	OCDF	JB	1.58	10.2	PQL	ng/Kg	
SL-530-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.452	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.650	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.331	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.84	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.285	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.47	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.354	5.26	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.367	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.149	5.26	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.357	5.26	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.289	5.26	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0412	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0617	1.05	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-531-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.08	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.261	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.273	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.326	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.36	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.296	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.01	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.523	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.246	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.447	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.315	5.36	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.563	5.36	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0516	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.191	1.07	PQL	ng/Kg	
	OCDF	JB	6.28	10.7	PQL	ng/Kg	
SL-532-SA5C-SB-0.0-0.5	1,2,3,6,7,8-HXCDF	JB	4.23	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.51	5.55	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.30	5.55	PQL	ng/Kg	J (all detects)
	2,3,4,7,8-PECDF	JB	2.28	5.55	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	1.09	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	J	1.02	1.11	PQL	ng/Kg	
SL-533-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.50	5.05	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.281	5.05	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0364	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0377	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0906	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.270	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0819	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.376	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.407	5.05	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.110	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.204	5.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0655	5.05	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.118	5.05	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0377	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0434	1.01	PQL	ng/Kg	
	OCDF	JB	0.816	10.1	PQL	ng/Kg	
SL-574-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.25	5.88	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.291	5.88	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.867	5.88	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.366	5.88	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.52	5.88	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.346	5.88	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.88	5.88	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.27	5.88	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.620	5.88	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.425	5.88	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.311	5.88	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.289	5.88	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0636	1.18	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.176	1.18	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-623-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.403	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.452	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.547	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.02	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.464	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.20	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.487	5.12	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.236	5.12	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.391	5.12	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.616	5.12	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.747	5.12	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0187	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.109	1.02	PQL	ng/Kg	
SL-702-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.02	5.17	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0975	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.118	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.152	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.388	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.117	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.400	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.190	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0810	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.108	5.17	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.122	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0755	5.17	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0186	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0203	1.03	PQL	ng/Kg	
	OCDF	JB	2.41	10.3	PQL	ng/Kg	
SL-708-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.01	5.04	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.320	5.04	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.404	5.04	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.350	5.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.12	5.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.208	5.04	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.915	5.04	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.157	5.04	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.251	5.04	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.329	5.04	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.254	5.04	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0791	5.04	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0176	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0287	1.01	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH003 **Laboratory: LL**

EDD Filename: PH003_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-711-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.88	5.21	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.374	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.244	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.393	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.30	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.215	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.673	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.217	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.153	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.355	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.256	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.167	5.21	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0436	1.04	PQL	ng/Kg	

LDC #: 28573A

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: SM
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 the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and CRQLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		SL-532-SA5C-SB-0.0-0.5	OCDD > cal range	SL-532-SA5C-SB-00-0.5	J det/AP

SAMPLE DELIVERY GROUP

PH004

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
30-Apr-2012	SL-712-SA5C-SB-0.0-0.5	6638643	N	METHOD	1613B	III
30-Apr-2012	SL-713-SA5C-SB-0.0-0.5	6638644	N	METHOD	1613B	III
30-Apr-2012	SL-715-SA5C-SB-0.0-0.5	6638645	N	METHOD	1613B	III
30-Apr-2012	SL-720-SA5C-SB-0.0-0.5	6638646	N	METHOD	1613B	III
01-May-2012	SL-722-SA5C-SB-0.0-0.5	6638647	N	METHOD	1613B	III
01-May-2012	SL-722-SA5C-SB-0.0-0.5 MS	6638648	MS	METHOD	1613B	III
01-May-2012	SL-1022-SA5C-SB-0.0-0.5	6638650	FD	METHOD	1613B	III
02-May-2012	SL-716-SA5C-SB-0.0-0.5	6638652	N	METHOD	1613B	III
02-May-2012	SL-717-SA5C-SB-0.0-0.5	6638653	N	METHOD	1613B	III
02-May-2012	SL-718-SA5C-SB-0.0-0.5	6638654	N	METHOD	1613B	III
02-May-2012	SL-719-SA5C-SB-0.0-0.5	6638655	N	METHOD	1613B	III
02-May-2012	SL-587-SA5C-SB-0.0-0.5	6638651	N	METHOD	1613B	III
02-May-2012	SL-600-SA5C-SB-0.0-0.5	6638657	N	METHOD	1613B	III
02-May-2012	SL-599-SA5C-SB-0.0-0.5	6638656	N	METHOD	1613B	III
02-May-2012	SL-591-SA5C-SB-0.0-0.5	6638658	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: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-1022-SA5C-SB-0.0-0.5** ***Collected:*** **5/1/2012 1:30:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.02	JB	0.0180	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,4,6,7,8-HPCDF	0.230	JB	0.00908	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0621	JB	0.0132	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0367	J	0.0128	MDL	5.15	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.0695	JB	0.0116	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0877	JBQ	0.0146	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0722	JB	0.0102	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.0690	JB	0.0139	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0625	JB	0.0115	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0822	JB	0.0133	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDF	0.116	JB	0.00908	MDL	5.15	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.0761	JBQ	0.0100	MDL	5.15	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.115	JB	0.00877	MDL	5.15	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.0217	JQ	0.0120	MDL	1.03	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDF	0.0348	JB	0.0111	MDL	1.03	PQL	ng/Kg	UJ	B, FD
OCDD	7.29	JB	0.0152	MDL	10.3	PQL	ng/Kg	J	Z, FD
OCDF	0.559	JB	0.0172	MDL	10.3	PQL	ng/Kg	J	Z, FD

Sample ID: **SL-587-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 11:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.14	JB	0.0259	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.269	JB	0.0312	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.214	J	0.0344	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.366	JB	0.0332	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.07	JB	0.0350	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.239	JB	0.0308	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.778	JB	0.0346	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.408	JB	0.0315	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.279	JBQ	0.0218	MDL	5.80	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.520	JB	0.0302	MDL	5.80	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.254	JB	0.0285	MDL	5.80	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-587-SA5C-SB-0.0-0.5 *Collected:* 5/2/2012 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	0.536	JB	0.0286	MDL	5.80	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.101	JQ	0.0163	MDL	1.16	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.164	JB	0.0443	MDL	1.16	PQL	ng/Kg	J	Z
OCDF	10.2	JB	0.0204	MDL	11.6	PQL	ng/Kg	J	Z

Sample ID: SL-591-SA5C-SB-0.0-0.5 *Collected:* 5/2/2012 3:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.73	JB	0.0348	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.217	JB	0.0331	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.164	J	0.0357	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.152	JB	0.0260	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.541	JB	0.0367	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.216	JBQ	0.0251	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.574	JB	0.0359	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.191	JB	0.0254	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.192	JB	0.0207	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.184	JB	0.0230	MDL	5.54	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.191	JB	0.0218	MDL	5.54	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.297	JB	0.0205	MDL	5.54	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0658	J	0.0195	MDL	1.11	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.155	JB	0.0387	MDL	1.11	PQL	ng/Kg	J	Z
OCDF	4.08	JB	0.0371	MDL	11.1	PQL	ng/Kg	J	Z

Sample ID: SL-599-SA5C-SB-0.0-0.5 *Collected:* 5/2/2012 2:45:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.859	JB	0.0385	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.582	J	0.0437	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.947	JB	0.0352	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.59	JB	0.0452	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.878	JB	0.0344	MDL	5.31	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-599-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 2:45:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDD	1.32	JB	0.0445	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.430	JB	0.0328	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.323	JB	0.0361	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.88	JB	0.0615	MDL	5.31	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.16	JB	0.0280	MDL	5.31	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.85	JB	0.0550	MDL	5.31	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0310	J	0.0195	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.548	JB	0.103	MDL	1.06	PQL	ng/Kg	J	Z

Sample ID: **SL-600-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 2:15:00 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-HPCDF	2.56	JB	0.0294	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.285	JB	0.0402	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.391	J	0.0321	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.657	JB	0.0366	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.16	JB	0.0374	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.932	JB	0.0313	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.49	JB	0.0360	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.675	JB	0.0316	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.338	JB	0.0441	MDL	5.84	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.662	JB	0.0439	MDL	5.84	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.71	JB	0.0280	MDL	5.84	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	4.09	JB	0.0443	MDL	5.84	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0304	J	0.0213	MDL	1.17	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.203	JB	0.0768	MDL	1.17	PQL	ng/Kg	J	Z
OCDF	5.27	JB	0.0294	MDL	11.7	PQL	ng/Kg	J	Z

Sample ID: **SL-712-SA5C-SB-0.0-0.5** ***Collected:*** **4/30/2012 11:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.23	JB	0.0237	MDL	5.21	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-712-SA5C-SB-0.0-0.5** ***Collected:*** **4/30/2012 11:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.333	JB	0.0331	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.336	J	0.0358	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.375	JB	0.0226	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.985	JB	0.0371	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.240	JB	0.0207	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.711	JB	0.0356	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.236	JB	0.0246	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.215	JB	0.0230	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.384	JB	0.0183	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.279	JB	0.0206	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.178	JB	0.0179	MDL	5.21	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0237	J	0.0161	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0591	JB	0.0289	MDL	1.04	PQL	ng/Kg	U	B

Sample ID: **SL-713-SA5C-SB-0.0-0.5** ***Collected:*** **4/30/2012 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-HPCDF	2.11	JB	0.0188	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.373	JB	0.0239	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.388	J	0.0298	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.70	JB	0.0344	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.35	JB	0.0326	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.697	JB	0.0316	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.927	JB	0.0314	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.855	JB	0.0340	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.624	JB	0.0679	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.64	JB	0.0442	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.869	JB	0.0281	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.14	JB	0.0417	MDL	5.26	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0378	J	0.0257	MDL	1.05	PQL	ng/Kg	J	Z
OCDF	4.19	JB	0.0162	MDL	10.5	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

***Sample ID:*SL-715-SA5C-SB-0.0-0.5** ***Collected:* 4/30/2012 2:45:00** ***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	1.80	JB	0.0169	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.266	JB	0.0231	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.229	J	0.0284	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.711	JB	0.0213	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.825	JB	0.0307	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.300	JB	0.0194	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.720	JB	0.0292	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.478	JB	0.0213	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.282	JB	0.0415	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.923	JB	0.0299	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.379	JB	0.0173	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.826	JB	0.0287	MDL	5.17	PQL	ng/Kg	J	Z
OCDF	3.90	JB	0.0154	MDL	10.3	PQL	ng/Kg	J	Z

***Sample ID:*SL-716-SA5C-SB-0.0-0.5** ***Collected:* 5/2/2012 8:35:00 AM** ***Analysis Type:* RES** ***Dilution:* 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.17	JB	0.0255	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.213	JBQ	0.0322	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.123	J	0.0279	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.305	JB	0.0205	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.527	JB	0.0301	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.168	JB	0.0197	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.313	JB	0.0298	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.189	JBQ	0.0219	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.114	JB	0.0197	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.489	JB	0.0168	MDL	5.19	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.158	JBQ	0.0163	MDL	5.19	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.165	JB	0.0161	MDL	5.19	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0714	J	0.0128	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0534	JB	0.0315	MDL	1.04	PQL	ng/Kg	U	B
OCDF	10.0	JB	0.0207	MDL	10.4	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-717-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.96	JB	0.0254	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.470	JB	0.0152	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0405	JB	0.0220	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0694	J	0.0201	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0951	JB	0.0167	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.165	JB	0.0220	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0453	JB	0.0146	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.110	JB	0.0198	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0373	JB	0.0177	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0674	JBQ	0.0147	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0994	JBQ	0.0104	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0704	JB	0.0149	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0829	JB	0.0106	MDL	5.11	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0483	J	0.0143	MDL	1.02	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0293	JBQ	0.0135	MDL	1.02	PQL	ng/Kg	U	B
OCDF	1.13	JB	0.0190	MDL	10.2	PQL	ng/Kg	J	Z

Sample ID: **SL-718-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 9:35:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.29	JB	0.0223	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.213	JBQ	0.0302	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.0876	J	0.0309	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.329	JB	0.0228	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.446	JB	0.0323	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.148	JB	0.0221	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.240	JB	0.0305	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.171	JB	0.0233	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0892	JBQ	0.0201	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.276	JB	0.0161	MDL	5.00	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.192	JB	0.0210	MDL	5.00	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.130	JB	0.0155	MDL	5.00	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-719-SA5C-SB-0.0-0.5 *Collected:* 5/2/2012 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	0.848	JB	0.0330	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.195	J	0.0462	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.805	JB	0.0263	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.26	JB	0.0501	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.447	JB	0.0248	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.484	JB	0.0496	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.311	JB	0.0275	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.109	JB	0.0220	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.559	JB	0.0210	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.454	JB	0.0215	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.254	JB	0.0200	MDL	5.17	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0175	J	0.0158	MDL	1.03	PQL	ng/Kg	J	Z

Sample ID: SL-720-SA5C-SB-0.0-0.5 *Collected:* 4/30/2012 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-HPCDF	2.14	JB	0.0200	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.221	JB	0.0254	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.277	J	0.0325	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.458	JB	0.0226	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.15	JB	0.0371	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.283	JB	0.0233	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.878	JB	0.0351	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.351	JB	0.0219	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.258	JB	0.0405	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.603	JB	0.0213	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.338	JB	0.0185	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.219	JB	0.0200	MDL	5.30	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0338	J	0.0168	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0943	JB	0.0341	MDL	1.06	PQL	ng/Kg	J	Z
OCDF	4.55	JB	0.0149	MDL	10.6	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-722-SA5C-SB-0.0-0.5** ***Collected:*** **5/1/2012 1:25:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,6,7,8-HPCDD	1.81	JB	0.0173	MDL	5.01	PQL	ng/Kg	J	Z, FD
1,2,3,4,6,7,8-HPCDF	0.361	JB	0.0100	MDL	5.01	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0374	JBQ	0.0134	MDL	5.01	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0148	U	0.0148	MDL	5.01	PQL	ng/Kg	UJ	FD
1,2,3,4,7,8-HXCDF	0.0527	JB	0.0115	MDL	5.01	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0936	JB	0.0159	MDL	5.01	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0286	JB	0.0106	MDL	5.01	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.0674	JB	0.0159	MDL	5.01	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0127	JB	0.0116	MDL	5.01	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0122	U	0.0122	MDL	5.01	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDF	0.0335	JBQ	0.00784	MDL	5.01	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0342	JBQ	0.00909	MDL	5.01	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0448	JBQ	0.00742	MDL	5.01	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.0113	U	0.0113	MDL	1.00	PQL	ng/Kg	UJ	FD
2,3,7,8-TCDF	0.0159	JBQ	0.0110	MDL	1.00	PQL	ng/Kg	UJ	B, FD
OCDD	15.2	B	0.0188	MDL	10.0	PQL	ng/Kg	J	FD
OCDF	1.10	JB	0.0153	MDL	10.0	PQL	ng/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

PH004

Method Blank Outlier Report

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1280B371903	5/8/2012 7:03:00 PM	1,2,3,4,6,7,8-HPCDD	0.298 ng/Kg	SL-1022-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0847 ng/Kg	SL-587-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0326 ng/Kg	SL-591-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0360 ng/Kg	SL-599-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0304 ng/Kg	SL-600-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0217 ng/Kg	SL-712-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0197 ng/Kg	SL-713-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0320 ng/Kg	SL-715-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0183 ng/Kg	SL-716-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0201 ng/Kg	SL-717-SA5C-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0255 ng/Kg	SL-718-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0389 ng/Kg	SL-719-SA5C-SB-0.0-0.5
		2,3,7,8-TCDF	0.0140 ng/Kg	SL-720-SA5C-SB-0.0-0.5
		OCDD	0.438 ng/Kg	SL-722-SA5C-SB-0.0-0.5
		OCDF	0.102 ng/Kg	

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	1.02 ng/Kg	1.02U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.230 ng/Kg	0.230U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0621 ng/Kg	0.0621U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0695 ng/Kg	0.0695U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0877 ng/Kg	0.0877U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0722 ng/Kg	0.0722U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0690 ng/Kg	0.0690U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0625 ng/Kg	0.0625U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0822 ng/Kg	0.0822U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0761 ng/Kg	0.0761U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.115 ng/Kg	0.115U ng/Kg
SL-1022-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0348 ng/Kg	0.0348U ng/Kg
SL-591-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.152 ng/Kg	0.152U ng/Kg
SL-712-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.178 ng/Kg	0.178U ng/Kg
SL-712-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0591 ng/Kg	0.0591U ng/Kg
SL-716-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.165 ng/Kg	0.165U ng/Kg
SL-716-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0534 ng/Kg	0.0534U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0405 ng/Kg	0.0405U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0951 ng/Kg	0.0951U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0453 ng/Kg	0.0453U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0373 ng/Kg	0.0373U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0674 ng/Kg	0.0674U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0994 ng/Kg	0.0994U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0704 ng/Kg	0.0704U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0829 ng/Kg	0.0829U ng/Kg
SL-717-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0293 ng/Kg	0.0293U ng/Kg
SL-718-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0892 ng/Kg	0.0892U ng/Kg

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-718-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.130 ng/Kg	0.130U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.361 ng/Kg	0.361U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0374 ng/Kg	0.0374U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0527 ng/Kg	0.0527U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0936 ng/Kg	0.0936U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0286 ng/Kg	0.0286U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0674 ng/Kg	0.0674U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0127 ng/Kg	0.0127U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0335 ng/Kg	0.0335U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0342 ng/Kg	0.0342U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0448 ng/Kg	0.0448U ng/Kg
SL-722-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0159 ng/Kg	0.0159U ng/Kg

Field Duplicate RPD Report

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PrepPH004 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-722-SA5C-SB-0.0-0.5	SL-1022-SA5C-SB-0.0-0.5			
MOISTURE	4.3	4.2	2		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-722-SA5C-SB-0.0-0.5	SL-1022-SA5C-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDF	0.361	0.230	44	50.00	
1,2,3,4,7,8,9-HPCDF	0.0374	0.0621	50	50.00	
1,2,3,4,7,8-HXCDF	0.0527	0.0695	27	50.00	No Qualifiers Applied
1,2,3,6,7,8-HXCDD	0.0936	0.0877	7	50.00	
1,2,3,7,8,9-HXCDD	0.0674	0.0690	2	50.00	
1,2,3,4,6,7,8-HPCDD	1.81	1.02	56	50.00	
1,2,3,4,7,8-HxCDD	5.01 U	0.0367	200	50.00	
1,2,3,6,7,8-HXCDF	0.0286	0.0722	87	50.00	
1,2,3,7,8,9-HXCDF	0.0127	0.0625	132	50.00	
1,2,3,7,8-PECDD	5.01 U	0.0822	200	50.00	
1,2,3,7,8-PECDF	0.0335	0.116	110	50.00	J(all detects)
2,3,4,6,7,8-HXCDF	0.0342	0.0761	76	50.00	UJ(all non-detects)
2,3,4,7,8-PECDF	0.0448	0.115	88	50.00	
2,3,7,8-TCDD	1.00 U	0.0217	200	50.00	
2,3,7,8-TCDF	0.0159	0.0348	75	50.00	
OCDD	15.2	7.29	70	50.00	
OCDF	1.10	0.559	65	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1022-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.02	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.230	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0621	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0367	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0695	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0877	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0722	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0690	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0625	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0822	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.116	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0761	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.115	5.15	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0217	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0348	1.03	PQL	ng/Kg	
	OCDD	JB	7.29	10.3	PQL	ng/Kg	
	OCDF	JB	0.559	10.3	PQL	ng/Kg	
SL-587-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.14	5.80	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.269	5.80	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.214	5.80	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.366	5.80	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.07	5.80	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.239	5.80	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.778	5.80	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.408	5.80	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.279	5.80	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.520	5.80	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.254	5.80	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.536	5.80	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.101	1.16	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.164	1.16	PQL	ng/Kg	
	OCDF	JB	10.2	11.6	PQL	ng/Kg	
SL-591-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.73	5.54	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.217	5.54	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.164	5.54	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.152	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.541	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.216	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.574	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.191	5.54	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.192	5.54	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.184	5.54	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.191	5.54	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.297	5.54	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0658	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.155	1.11	PQL	ng/Kg	
	OCDF	JB	4.08	11.1	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-599-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.859	5.31	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.582	5.31	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.947	5.31	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.59	5.31	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.878	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.32	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.430	5.31	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.323	5.31	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	2.88	5.31	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.16	5.31	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.85	5.31	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0310	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.548	1.06	PQL	ng/Kg	
SL-600-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.56	5.84	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.285	5.84	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.391	5.84	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.657	5.84	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.16	5.84	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.932	5.84	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.49	5.84	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.675	5.84	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.338	5.84	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.662	5.84	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.71	5.84	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	4.09	5.84	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0304	1.17	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.203	1.17	PQL	ng/Kg	
	OCDF	JB	5.27	11.7	PQL	ng/Kg	
SL-712-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	4.23	5.21	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.333	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.336	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.375	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.985	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.240	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.711	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.236	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.215	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.384	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.279	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.178	5.21	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0237	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0591	1.04	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-713-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.11	5.26	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.373	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.388	5.26	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.70	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.35	5.26	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.697	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.927	5.26	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.855	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.624	5.26	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.64	5.26	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.869	5.26	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.14	5.26	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0378	1.05	PQL	ng/Kg	
	OCDF	JB	4.19	10.5	PQL	ng/Kg	
SL-715-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.80	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JB	0.266	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.229	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.711	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.825	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.300	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.720	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.478	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.282	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.923	5.17	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.379	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.826	5.17	PQL	ng/Kg	
	OCDF	JB	3.90	10.3	PQL	ng/Kg	
SL-716-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.17	5.19	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.213	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.123	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.305	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.527	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.168	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.313	5.19	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.189	5.19	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.114	5.19	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.489	5.19	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.158	5.19	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.165	5.19	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0714	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0534	1.04	PQL	ng/Kg	
	OCDF	JB	10.0	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-717-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.96	5.11	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.470	5.11	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0405	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0694	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0951	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.165	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0453	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.110	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0373	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0674	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0994	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0704	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0829	5.11	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0483	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0293	1.02	PQL	ng/Kg	
	OCDF	JB	1.13	10.2	PQL	ng/Kg	
SL-718-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.29	5.00	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.213	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0876	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.329	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.446	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.148	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.240	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.171	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0892	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.276	5.00	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.192	5.00	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.130	5.00	PQL	ng/Kg	
SL-719-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.848	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.195	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.805	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.26	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.447	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.484	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.311	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.109	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.559	5.17	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.454	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.254	5.17	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0175	1.03	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH004 **Laboratory: LL**

EDD Filename: PH004_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-720-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.14	5.30	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.221	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.277	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.458	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.15	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.283	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.878	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.351	5.30	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.258	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.603	5.30	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.338	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.219	5.30	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0338	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0943	1.06	PQL	ng/Kg	
	OCDF	JB	4.55	10.6	PQL	ng/Kg	
SL-722-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.81	5.01	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.361	5.01	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0374	5.01	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0527	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0936	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0286	5.01	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0674	5.01	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.0127	5.01	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0335	5.01	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0342	5.01	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0448	5.01	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0159	1.00	PQL	ng/Kg	
	OCDF	JB	1.10	10.0	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

PH005

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
02-May-2012	SL-602-SA5C-SB-0.0-0.5	6639998	N	METHOD	1613B	III
03-May-2012	SL-603-SA5C-SB-0.0-0.5	6640000	N	METHOD	1613B	III
03-May-2012	SL-603-SA5C-SB-0.0-0.5 MS	6640001	MS	METHOD	1613B	III
03-May-2012	SL-903-SA5C-SB-0.0-0.5	6640003	FD	METHOD	1613B	III
03-May-2012	SL-612-SA5C-SB-0.0-0.5	6640005	N	METHOD	1613B	III
03-May-2012	SL-606-SA5C-SB-0.0-0.5	6640004	N	METHOD	1613B	III
03-May-2012	SL-596-SA5C-SB-2.0-3.0	6640006	N	METHOD	1613B	III
03-May-2012	SL-596-SA5C-SB-3.0-4.0	6640007	N	METHOD	1613B	III
03-May-2012	EB-050312	6639999	EB	METHOD	1613B	III
07-May-2012	SL-592-SA5C-SB-0.0-0.5	6645112	N	METHOD	1613B	III
07-May-2012	SL-588-SA5C-SB-0.0-0.5	6645110	N	METHOD	1613B	III
07-May-2012	SL-586-SA5C-SB-0.0-0.5	6645109	N	METHOD	1613B	III
07-May-2012	SL-589-SA5C-SB-0.0-0.5	6645111	N	METHOD	1613B	III
07-May-2012	SL-595-SA5C-SB-1.0-2.0	6645113	N	METHOD	1613B	III
07-May-2012	SL-595-SA5C-SB-2.0-3.0	6645114	N	METHOD	1613B	III
07-May-2012	SL-615-SA5C-SB-0.0-0.5	6645115	N	METHOD	1613B	III
08-May-2012	SL-671-SA5C-SB-0.0-0.5	6645116	N	METHOD	1613B	III
08-May-2012	SL-673-SA5C-SB-0.0-0.5	6645117	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: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-050312 **Collected: 5/3/2012 2:50:00 PM** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.48	JBQ	0.272	MDL	9.89	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	3.25	JBQ	0.171	MDL	9.89	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.407	JBQ	0.199	MDL	9.89	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.868	JBQ	0.350	MDL	9.89	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.796	JBQ	0.227	MDL	9.89	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.940	JBQ	0.356	MDL	9.89	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.322	JBQ	0.221	MDL	9.89	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.361	JBQ	0.349	MDL	9.89	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.539	JBQ	0.220	MDL	9.89	PQL	pg/L	U	B
1,2,3,7,8-PECDD	1.08	JB	0.628	MDL	9.89	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.906	J	0.369	MDL	9.89	PQL	pg/L	J	Z
2,3,4,6,7,8-HXCDF	0.740	JB	0.187	MDL	9.89	PQL	pg/L	U	B
2,3,4,7,8-PECDF	1.19	JB	0.313	MDL	9.89	PQL	pg/L	U	B
2,3,7,8-TCDF	0.379	JQ	0.221	MDL	1.98	PQL	pg/L	J	Z
OCDD	21.5	B	0.549	MDL	19.8	PQL	pg/L	U	B
OCDF	2.32	JBQ	0.478	MDL	19.8	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-586-SA5C-SB-0.0-0.5 **Collected: 5/7/2012 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
1,2,3,4,7,8,9-HPCDF	3.12	JBQ	0.177	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	3.32	JB	0.0334	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	2.80	JB	0.0320	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.830	JB	0.0364	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	3.61	JB	0.0635	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.22	JB	0.0567	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.21	JB	0.0323	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.85	JB	0.0521	MDL	5.33	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.466	JB	0.0496	MDL	1.07	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.700	JB	0.0822	MDL	1.07	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-588-SA5C-SB-0.0-0.5** ***Collected:*** **5/7/2012 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-HPCDF	2.70	JB	0.107	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.376	JB	0.156	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.507	JB	0.0313	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.487	JB	0.0206	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.79	JB	0.0330	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.261	JBQ	0.0184	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.57	JB	0.0305	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.298	JB	0.0228	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.339	JB	0.0369	MDL	5.27	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.945	JB	0.0278	MDL	5.27	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.349	JB	0.0195	MDL	5.27	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.03	JB	0.0270	MDL	5.27	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0409	JBQ	0.0178	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.399	JB	0.0450	MDL	1.05	PQL	ng/Kg	J	Z
OCDF	6.10	JB	0.0955	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: **SL-589-SA5C-SB-0.0-0.5** ***Collected:*** **5/7/2012 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	2.40	JBQ	0.0987	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.502	JBQ	0.131	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.156	JB	0.0274	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.208	JB	0.0202	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.443	JB	0.0284	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.147	JB	0.0194	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.452	JB	0.0269	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.304	JB	0.0214	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.165	JB	0.0270	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.208	JB	0.0203	MDL	5.43	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.146	JBQ	0.0190	MDL	5.43	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.184	JB	0.0193	MDL	5.43	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0439	JBQ	0.0159	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0566	JB	0.0296	MDL	1.09	PQL	ng/Kg	U	B
OCDF	8.24	JB	0.0459	MDL	10.9	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-592-SA5C-SB-0.0-0.5 **Collected:** 5/7/2012 9:00:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.29	JB	0.0803	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.628	JBQ	0.149	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.217	JBQ	0.0272	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.846	JB	0.0246	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.723	JB	0.0263	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.368	JB	0.0213	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.505	JB	0.0256	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.283	JB	0.0311	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.132	JB	0.0294	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.33	JB	0.0267	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.319	JB	0.0231	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.739	JB	0.0286	MDL	5.28	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.116	JB	0.0564	MDL	1.06	PQL	ng/Kg	U	B
OCDF	6.80	JB	0.0597	MDL	10.6	PQL	ng/Kg	J	Z

Sample ID: SL-595-SA5C-SB-1.0-2.0 **Collected:** 5/7/2012 1:45:00 PM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.89	JB	0.0369	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.308	JB	0.0598	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.634	JB	0.0305	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.328	JB	0.0176	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.81	JB	0.0312	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.213	JBQ	0.0160	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.50	JB	0.0324	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.475	JB	0.0204	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.304	JB	0.0327	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.254	JB	0.0184	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.259	JBQ	0.0176	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.303	JB	0.0192	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0486	JBQ	0.0150	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.117	JBQ	0.0275	MDL	1.10	PQL	ng/Kg	U	B
OCDF	4.92	JB	0.0309	MDL	11.0	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-595-SA5C-SB-2.0-3.0** ***Collected:*** **5/7/2012 1:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.24	JB	0.0150	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.201	JB	0.0287	MDL	5.81	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.331	JB	0.0261	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.472	JB	0.0208	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.50	JB	0.0269	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.225	JB	0.0178	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.50	JB	0.0254	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.03	JB	0.0244	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.328	JB	0.0367	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.432	JB	0.0205	MDL	5.81	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.236	JBQ	0.0199	MDL	5.81	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.484	JB	0.0223	MDL	5.81	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0424	JBQ	0.0156	MDL	1.16	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.182	JB	0.0397	MDL	1.16	PQL	ng/Kg	J	Z
OCDF	2.96	JB	0.0258	MDL	11.6	PQL	ng/Kg	J	Z

Sample ID: **SL-596-SA5C-SB-2.0-3.0** ***Collected:*** **5/3/2012 2:00:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2720	EB	0.332	MDL	5.51	PQL	ng/Kg	J	*XI
1,2,3,4,7,8,9-HPCDF	2.35	JB	0.177	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	3.23	JB	0.0347	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.88	JB	0.0331	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.705	JB	0.0373	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	5.35	JB	0.0530	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.908	JB	0.0344	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.54	JB	0.0334	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.76	JB	0.0319	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.977	JB	0.0362	MDL	1.10	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.648	JB	0.0553	MDL	1.10	PQL	ng/Kg	J	Z
OCDD	16900	EB	0.427	MDL	11.0	PQL	ng/Kg	J	*XI

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-596-SA5C-SB-3.0-4.0** ***Collected:*** **5/3/2012 2:05:00 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	0.561	JB	0.0465	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.194	JBQ	0.0963	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.288	JBQ	0.0281	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.209	JB	0.0160	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.72	JB	0.0297	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.189	JB	0.0131	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	1.48	JB	0.0279	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.26	JB	0.0199	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.412	JB	0.0304	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.488	JB	0.0139	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.137	JBQ	0.0148	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.235	JB	0.0147	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0572	JB	0.0156	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0606	JB	0.0180	MDL	1.10	PQL	ng/Kg	U	B
OCDF	1.26	JB	0.106	MDL	11.0	PQL	ng/Kg	J	Z

Sample ID: **SL-602-SA5C-SB-0.0-0.5** ***Collected:*** **5/2/2012 3:50:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.92	JB	0.0613	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	3.29	JB	0.0530	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	3.17	JB	0.0454	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.87	JB	0.0416	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	1.55	JB	0.0465	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.83	JB	0.0576	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.39	JB	0.0475	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.35	JB	0.0424	MDL	5.28	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.31	JB	0.0441	MDL	5.28	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0786	JB	0.0252	MDL	1.06	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.420	JB	0.0823	MDL	1.06	PQL	ng/Kg	J	Z

Sample ID: **SL-603-SA5C-SB-0.0-0.5** ***Collected:*** **5/3/2012 9:15:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.691	JB	0.0319	MDL	5.33	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-603-SA5C-SB-0.0-0.5 **Collected: 5/3/2012 9:15:00 AM** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.932	JB	0.0286	MDL	5.33	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.941	JB	0.0212	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.34	JB	0.0283	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.555	JB	0.0199	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.33	JB	0.0274	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.681	JB	0.0222	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.353	JB	0.0315	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.20	JB	0.0226	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.687	JB	0.0196	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.841	JB	0.0221	MDL	5.33	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0427	JBQ	0.0122	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.251	JB	0.0374	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	590	B	0.0814	MDL	10.7	PQL	ng/Kg	J	Q

Sample ID: SL-606-SA5C-SB-0.0-0.5 **Collected: 5/3/2012 11:30:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.692	JB	0.0625	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.855	JB	0.0310	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.47	JB	0.0240	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.32	JB	0.0326	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.735	JB	0.0229	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.53	JB	0.0314	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.196	JB	0.0259	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.521	JB	0.0356	MDL	5.13	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.32	JB	0.0314	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.888	JB	0.0236	MDL	5.13	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.31	JB	0.0295	MDL	5.13	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0708	JBQ	0.0156	MDL	1.03	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.951	JB	0.0543	MDL	1.03	PQL	ng/Kg	J	Z

Sample ID: SL-612-SA5C-SB-0.0-0.5 **Collected: 5/3/2012 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
1,2,3,4,7,8,9-HPCDF	1.23	JB	0.0606	MDL	5.25	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-612-SA5C-SB-0.0-0.5 **Collected:** 5/3/2012 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-HxCDD	1.49	JB	0.0405	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.57	JB	0.0300	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	5.18	JB	0.0407	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.951	JB	0.0278	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.85	JB	0.0398	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.641	JBQ	0.0338	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.790	JB	0.0394	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.61	JB	0.0341	MDL	5.25	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.23	JB	0.0276	MDL	5.25	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.83	JB	0.0355	MDL	5.25	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0878	JB	0.0168	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.648	JB	0.0622	MDL	1.05	PQL	ng/Kg	J	Z

Sample ID: SL-615-SA5C-SB-0.0-0.5 **Collected:** 5/7/2012 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
1,2,3,4,7,8,9-HPCDF	0.909	JB	0.0847	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.27	JB	0.0304	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.43	JB	0.0235	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	3.12	JB	0.0313	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.887	JB	0.0230	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.56	JB	0.0314	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.847	JB	0.0253	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.872	JB	0.0350	MDL	5.44	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.47	JB	0.0351	MDL	5.44	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.952	JB	0.0241	MDL	5.44	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.32	JB	0.0329	MDL	5.44	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.129	JB	0.0178	MDL	1.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.288	JB	0.0555	MDL	1.09	PQL	ng/Kg	J	Z

Sample ID: SL-671-SA5C-SB-0.0-0.5 **Collected:** 5/8/2012 8:30:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	4.93	JB	0.0887	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	4.37	JB	0.0319	MDL	5.30	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-671-SA5C-SB-0.0-0.5** ***Collected:*** **5/8/2012 8:30:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	2.55	JB	0.0310	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.690	JB	0.0369	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	3.25	JB	0.0396	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	3.46	JB	0.0316	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.29	JB	0.0303	MDL	5.30	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.204	JB	0.0168	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.701	JB	0.0621	MDL	1.06	PQL	ng/Kg	J	Z
OCDD	6540	EB	0.202	MDL	10.6	PQL	ng/Kg	J	*XI

Sample ID: **SL-673-SA5C-SB-0.0-0.5** ***Collected:*** **5/8/2012 8:50:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.06	JB	0.0652	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.99	JB	0.0410	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	4.03	JB	0.0287	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.70	JB	0.0259	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	4.83	JB	0.0389	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.636	JB	0.0320	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.28	JB	0.0391	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	3.87	JB	0.0312	MDL	5.43	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.83	JB	0.0262	MDL	5.43	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	3.76	JB	0.0305	MDL	5.43	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0780	JB	0.0159	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	1.01	JB	0.0645	MDL	1.09	PQL	ng/Kg	J	Z

Sample ID: **SL-903-SA5C-SB-0.0-0.5** ***Collected:*** **5/3/2012 9:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.918	JB	0.0316	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.539	JB	0.0274	MDL	5.41	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.930	JB	0.0218	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.15	JB	0.0289	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.692	JB	0.0198	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.43	JB	0.0293	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.770	JB	0.0254	MDL	5.41	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-903-SA5C-SB-0.0-0.5** ***Collected:*** **5/3/2012 9:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,7,8-PECDD	0.325	JB	0.0382	MDL	5.41	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.39	JB	0.0264	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.722	JB	0.0219	MDL	5.41	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.592	JB	0.0252	MDL	5.41	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0316	JBQ	0.0153	MDL	1.08	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.247	JB	0.0461	MDL	1.08	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	ICP Serial Dilution
B	Method Blank Contamination
E	Laboratory Duplicate Precision
FD	Field Duplicate Precision
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

PH005

Method Blank Outlier Report

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1280B371900	5/8/2012 7:00:00 PM	1,2,3,4,6,7,8-HPCDD	4.39 pg/L	EB-050312
		1,2,3,4,6,7,8-HPCDF	1.43 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.557 pg/L	
		1,2,3,4,7,8-HxCDD	0.435 pg/L	
		1,2,3,4,7,8-HXCDF	0.509 pg/L	
		1,2,3,6,7,8-HXCDD	0.424 pg/L	
		1,2,3,6,7,8-HXCDF	0.264 pg/L	
		1,2,3,7,8,9-HXCDD	0.651 pg/L	
		1,2,3,7,8,9-HXCDF	0.572 pg/L	
		1,2,3,7,8-PECDD	0.330 pg/L	
		2,3,4,6,7,8-HXCDF	0.450 pg/L	
		2,3,4,7,8-PECDF	1.03 pg/L	
		2,3,7,8-TCDD	0.598 pg/L	
		OCDD	8.33 pg/L	
		OCDF	1.62 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-050312(RES)	1,2,3,4,6,7,8-HPCDD	5.48 pg/L	5.48U pg/L
EB-050312(RES)	1,2,3,4,6,7,8-HPCDF	3.25 pg/L	3.25U pg/L
EB-050312(RES)	1,2,3,4,7,8,9-HPCDF	0.407 pg/L	0.407U pg/L
EB-050312(RES)	1,2,3,4,7,8-HxCDD	0.868 pg/L	0.868U pg/L
EB-050312(RES)	1,2,3,4,7,8-HXCDF	0.796 pg/L	0.796U pg/L
EB-050312(RES)	1,2,3,6,7,8-HXCDD	0.940 pg/L	0.940U pg/L
EB-050312(RES)	1,2,3,6,7,8-HXCDF	0.322 pg/L	0.322U pg/L
EB-050312(RES)	1,2,3,7,8,9-HXCDD	0.361 pg/L	0.361U pg/L
EB-050312(RES)	1,2,3,7,8,9-HXCDF	0.539 pg/L	0.539U pg/L
EB-050312(RES)	1,2,3,7,8-PECDD	1.08 pg/L	1.08U pg/L
EB-050312(RES)	2,3,4,6,7,8-HXCDF	0.740 pg/L	0.740U pg/L
EB-050312(RES)	2,3,4,7,8-PECDF	1.19 pg/L	1.19U pg/L
EB-050312(RES)	OCDD	21.5 pg/L	21.5U pg/L
EB-050312(RES)	OCDF	2.32 pg/L	2.32U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1370B371913	5/17/2012 7:13:00 PM	1,2,3,4,6,7,8-HPCDD	0.276 ng/Kg	SL-586-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0821 ng/Kg	SL-588-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0461 ng/Kg	SL-589-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0376 ng/Kg	SL-592-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0379 ng/Kg	SL-595-SA5C-SB-1.0-2.0
		1,2,3,6,7,8-HXCDD	0.0486 ng/Kg	SL-595-SA5C-SB-2.0-3.0
		1,2,3,6,7,8-HXCDF	0.0398 ng/Kg	SL-596-SA5C-SB-2.0-3.0
		1,2,3,7,8,9-HXCDD	0.0490 ng/Kg	SL-596-SA5C-SB-3.0-4.0
		1,2,3,7,8,9-HXCDF	0.0362 ng/Kg	SL-602-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0255 ng/Kg	SL-603-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0438 ng/Kg	SL-606-SA5C-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0399 ng/Kg	SL-612-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0371 ng/Kg	SL-615-SA5C-SB-0.0-0.5
		2,3,7,8-TCDD	0.0217 ng/Kg	SL-671-SA5C-SB-0.0-0.5
		2,3,7,8-TCDF	0.0290 ng/Kg	SL-673-SA5C-SB-0.0-0.5
		OCDD	0.440 ng/Kg	SL-903-SA5C-SB-0.0-0.5
		OCDF	0.142 ng/Kg	

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-588-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0409 ng/Kg	0.0409U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.156 ng/Kg	0.156U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.147 ng/Kg	0.147U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.208 ng/Kg	0.208U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.146 ng/Kg	0.146U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.184 ng/Kg	0.184U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0439 ng/Kg	0.0439U ng/Kg
SL-589-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0566 ng/Kg	0.0566U ng/Kg
SL-592-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.116 ng/Kg	0.116U ng/Kg
SL-595-SA5C-SB-1.0-2.0(RES)	2,3,7,8-TCDD	0.0486 ng/Kg	0.0486U ng/Kg
SL-595-SA5C-SB-1.0-2.0(RES)	2,3,7,8-TCDF	0.117 ng/Kg	0.117U ng/Kg
SL-595-SA5C-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.201 ng/Kg	0.201U ng/Kg
SL-595-SA5C-SB-2.0-3.0(RES)	2,3,7,8-TCDD	0.0424 ng/Kg	0.0424U ng/Kg
SL-596-SA5C-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.194 ng/Kg	0.194U ng/Kg
SL-596-SA5C-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.189 ng/Kg	0.189U ng/Kg
SL-596-SA5C-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.137 ng/Kg	0.137U ng/Kg
SL-596-SA5C-SB-3.0-4.0(RES)	2,3,7,8-TCDD	0.0572 ng/Kg	0.0572U ng/Kg
SL-596-SA5C-SB-3.0-4.0(RES)	2,3,7,8-TCDF	0.0606 ng/Kg	0.0606U ng/Kg
SL-602-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0786 ng/Kg	0.0786U ng/Kg
SL-603-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0427 ng/Kg	0.0427U ng/Kg
SL-606-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0708 ng/Kg	0.0708U ng/Kg
SL-612-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0878 ng/Kg	0.0878U ng/Kg
SL-673-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0780 ng/Kg	0.0780U ng/Kg
SL-903-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0316 ng/Kg	0.0316U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-603-SA5C-SB-0.0-0.5 MSD (SL-603-SA5C-SB-0.0-0.5)	OCDD	-	9	40.00-135.00	-	OCDD	J (all detects) UJ (all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PrepPH005 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-603-SA5C-SB-0.0-0.5	SL-903-SA5C-SB-0.0-0.5			
MOISTURE	7.2	8.6	18		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-603-SA5C-SB-0.0-0.5	SL-903-SA5C-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	65.5	51.6	24	50.00	
1,2,3,4,6,7,8-HPCDF	6.04	6.45	7	50.00	
1,2,3,4,7,8,9-HPCDF	0.691	0.918	28	50.00	
1,2,3,4,7,8-HXCDF	0.941	0.930	1	50.00	
1,2,3,6,7,8-HXCDD	2.34	2.15	8	50.00	
1,2,3,6,7,8-HXCDF	0.555	0.692	22	50.00	
1,2,3,7,8,9-HXCDD	1.33	1.43	7	50.00	
1,2,3,7,8,9-HXCDF	0.681	0.770	12	50.00	
1,2,3,7,8-PECDD	0.353	0.325	8	50.00	No Qualifiers Applied
1,2,3,7,8-PECDF	1.20	1.39	15	50.00	
2,3,4,6,7,8-HXCDF	0.687	0.722	5	50.00	
2,3,4,7,8-PECDF	0.841	0.592	35	50.00	
2,3,7,8-TCDD	0.0427	0.0316	30	50.00	
2,3,7,8-TCDF	0.251	0.247	2	50.00	
OCDD	590	532	10	50.00	
OCDF	11.5	11.1	4	50.00	
1,2,3,4,7,8-HxCDD	0.932	0.539	53	50.00	J(all detects)

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-050312	1,2,3,4,6,7,8-HPCDD	JBQ	5.48	9.89	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JBQ	3.25	9.89	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.407	9.89	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JBQ	0.868	9.89	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.796	9.89	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JBQ	0.940	9.89	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JBQ	0.322	9.89	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.361	9.89	PQL	pg/L	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.539	9.89	PQL	pg/L	
	1,2,3,7,8-PECDD	JB	1.08	9.89	PQL	pg/L	
	1,2,3,7,8-PECDF	J	0.906	9.89	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JB	0.740	9.89	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	1.19	9.89	PQL	pg/L	
	2,3,7,8-TCDF	JQ	0.379	1.98	PQL	pg/L	
	OCDF	JBQ	2.32	19.8	PQL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-586-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JBQ	3.12	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	3.32	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.80	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.830	5.33	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	3.61	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	2.22	5.33	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.21	5.33	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.85	5.33	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.466	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.700	1.07	PQL	ng/Kg	
SL-588-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.70	5.27	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.376	5.27	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.507	5.27	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.487	5.27	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.79	5.27	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.261	5.27	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.57	5.27	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.298	5.27	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.339	5.27	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.945	5.27	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.349	5.27	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.03	5.27	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0409	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.399	1.05	PQL	ng/Kg	
	OCDF	JB	6.10	10.5	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-589-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JBQ	2.40	5.43	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.502	5.43	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.156	5.43	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.208	5.43	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.443	5.43	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.147	5.43	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.452	5.43	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.304	5.43	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.165	5.43	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.208	5.43	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.146	5.43	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.184	5.43	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0439	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0566	1.09	PQL	ng/Kg	
	OCDF	JB	8.24	10.9	PQL	ng/Kg	
SL-592-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.29	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.628	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.217	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.846	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.723	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.368	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.505	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.283	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.132	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	2.33	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.319	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.739	5.28	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.116	1.06	PQL	ng/Kg	
	OCDF	JB	6.80	10.6	PQL	ng/Kg	
SL-595-SA5C-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDF	JB	1.89	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.308	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.634	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.328	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.81	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.213	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.50	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.475	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.304	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.254	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.259	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.303	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0486	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.117	1.10	PQL	ng/Kg	
	OCDF	JB	4.92	11.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-595-SA5C-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	JB	1.24	5.81	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.201	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.331	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.472	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.50	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.225	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.50	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.03	5.81	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.328	5.81	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.432	5.81	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.236	5.81	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.484	5.81	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0424	1.16	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.182	1.16	PQL	ng/Kg	
	OCDF	JB	2.96	11.6	PQL	ng/Kg	
SL-596-SA5C-SB-2.0-3.0	1,2,3,4,7,8,9-HPCDF	JB	2.35	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	3.23	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.88	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.705	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	5.35	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.908	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.54	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.76	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.977	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.648	1.10	PQL	ng/Kg	
SL-596-SA5C-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDF	JB	0.561	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.194	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.288	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.209	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.72	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.189	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.48	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.26	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.412	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.488	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.137	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.235	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0572	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0606	1.10	PQL	ng/Kg	
	OCDF	JB	1.26	11.0	PQL	ng/Kg	
SL-602-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.92	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	3.29	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	3.17	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.87	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	1.55	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	1.83	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	2.39	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.35	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.31	5.28	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0786	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.420	1.06	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-603-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.691	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.932	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.941	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.34	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.555	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.33	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.681	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.353	5.33	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.20	5.33	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.687	5.33	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.841	5.33	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0427	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.251	1.07	PQL	ng/Kg	
SL-606-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.692	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.855	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.47	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.32	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.735	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.53	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.196	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.521	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.32	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.888	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.31	5.13	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0708	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.951	1.03	PQL	ng/Kg	
SL-612-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.23	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	1.49	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.57	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	5.18	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.951	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.85	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.641	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.790	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	2.61	5.25	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.23	5.25	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.83	5.25	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0878	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.648	1.05	PQL	ng/Kg	
SL-615-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.909	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	1.27	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.43	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	3.12	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.887	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.56	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.847	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.872	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.47	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.952	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.32	5.44	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.129	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.288	1.09	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH005 **Laboratory: LL**

EDD Filename: PH005_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-671-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	4.93	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	4.37	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	2.55	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.690	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	3.25	5.30	PQL	ng/Kg	J (all detects)
	2,3,4,6,7,8-HXCDF	JB	3.46	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	2.29	5.30	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.204	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.701	1.06	PQL	ng/Kg	
SL-673-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	2.06	5.43	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	2.99	5.43	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	4.03	5.43	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.70	5.43	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	4.83	5.43	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.636	5.43	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	1.28	5.43	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	3.87	5.43	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.83	5.43	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	3.76	5.43	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0780	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	1.01	1.09	PQL	ng/Kg	
SL-903-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.918	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.539	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.930	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.15	5.41	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.692	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.43	5.41	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.770	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.325	5.41	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.39	5.41	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.722	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.592	5.41	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0316	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.247	1.08	PQL	ng/Kg	

LDC #: 28573C

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: SM
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 the correct internal standard (IS), quantitation ions and relative response factors (RRF) used to quantitate the compound?
Y N N/A Compound quantitation and CRQLs were adjusted to reflect all sample dilutions and dry weight factors (if necessary).

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		SL-596-SA5C-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD, OCDD > cal range	SL-596-SA5C-SB-2.0-3.0	J det / A
		SL-671-SA5C-SB-0.0-0.5	OCDD > cal range	SL-671-SA5C-SB-0.0-0.5	J det / A

SAMPLE DELIVERY GROUP

PH006

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-May-2012	SL-566-SA5C-SB-0.0-0.5	6649209	N	METHOD	1613B	III
09-May-2012	SL-542-SA5C-SB-0.0-0.5	6649207	N	METHOD	1613B	III
09-May-2012	SL-542-SA5C-SB-1.0-2.0	6649208	N	METHOD	1613B	III
09-May-2012	SL-613-SA5C-SB-0.0-0.5	6649210	N	METHOD	1613B	III
10-May-2012	SL-512-SA5C-SB-0.0-0.5	6649216	N	METHOD	1613B	III
10-May-2012	SL-512-SA5C-SB-0.0-0.5 MS	6649217	MS	METHOD	1613B	III
10-May-2012	SL-512-SA5C-SB-4.0-5.0	6649212	N	METHOD	1613B	III
10-May-2012	SL-812-SA5C-SB-0.0-0.5	6649213	FD	METHOD	1613B	III
10-May-2012	SL-512-SA5C-SB-6.0-7.0	6649215	N	METHOD	1613B	III
10-May-2012	EB-051012	6649211	EB	METHOD	1613B	III
10-May-2012	SL-513-SA5C-SB-4.0-5.0	6649214	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: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-051012 *Collected:* 5/10/2012 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	3.62	JB	0.157	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.732	JBQ	0.0837	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.394	JBQ	0.0954	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.462	JB	0.185	MDL	10.2	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.328	JBQ	0.106	MDL	10.2	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.369	JB	0.188	MDL	10.2	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.316	JBQ	0.101	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.488	JBQ	0.186	MDL	10.2	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.407	JQ	0.381	MDL	10.2	PQL	pg/L	J	Z
1,2,3,7,8-PECDF	0.302	JBQ	0.194	MDL	10.2	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.447	JBQ	0.171	MDL	10.2	PQL	pg/L	U	B
OCDD	6.97	JB	0.339	MDL	20.3	PQL	pg/L	U	B
OCDF	0.567	JBQ	0.253	MDL	20.3	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-512-SA5C-SB-0.0-0.5 *Collected:* 5/10/2012 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	173	B	0.130	MDL	5.52	PQL	ng/Kg	J	Q, Q, FD
1,2,3,4,6,7,8-HPCDF	20.6	B	0.0463	MDL	5.52	PQL	ng/Kg	J	FD
1,2,3,4,7,8,9-HPCDF	1.28	JB	0.0560	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.26	J	0.0486	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.08	JB	0.0398	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	7.14	B	0.0476	MDL	5.52	PQL	ng/Kg	J	FD
1,2,3,6,7,8-HXCDF	1.21	JB	0.0375	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	4.16	J	0.0483	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.762	JBQ	0.0386	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	1.05	JB	0.0480	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.40	J	0.0467	MDL	5.52	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.17	JB	0.0364	MDL	5.52	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	1.93	JB	0.0411	MDL	5.52	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDD	0.150	J	0.0265	MDL	1.10	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

***Sample ID:*SL-512-SA5C-SB-0.0-0.5** ***Collected:* 5/10/2012 10:00:00** ***Analysis Type:* RES** ***Dilution:* 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.554	J	0.0804	MDL	1.10	PQL	ng/Kg	J	Z

***Sample ID:*SL-512-SA5C-SB-4.0-5.0** ***Collected:* 5/10/2012 10:30:00** ***Analysis Type:* RES** ***Dilution:* 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.66	JB	0.0164	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.182	JB	0.0319	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.159	J	0.0279	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.270	JB	0.0235	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.480	JB	0.0279	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0916	JB	0.0186	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.342	J	0.0276	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.133	JB	0.0287	MDL	5.81	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.110	JBQ	0.0285	MDL	5.81	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.247	J	0.0185	MDL	5.81	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.120	JBQ	0.0203	MDL	5.81	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.127	JB	0.0215	MDL	5.81	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0224	J	0.0126	MDL	1.16	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0334	JQ	0.0301	MDL	1.16	PQL	ng/Kg	J	Z
OCDF	4.36	JB	0.0279	MDL	11.6	PQL	ng/Kg	J	Z

***Sample ID:*SL-512-SA5C-SB-6.0-7.0** ***Collected:* 5/10/2012 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	0.544	JB	0.0371	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.780	J	0.0436	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.21	JB	0.0535	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.63	JB	0.0426	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.613	JB	0.0431	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.42	J	0.0395	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.485	JB	0.0326	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.372	JB	0.0390	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.588	J	0.0254	MDL	5.60	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.593	JB	0.0267	MDL	5.60	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.729	JB	0.0272	MDL	5.60	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-512-SA5C-SB-6.0-7.0 ***Collected:*** 5/10/2012 2:05:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDD	0.0808	J	0.0188	MDL	1.12	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.159	J	0.0438	MDL	1.12	PQL	ng/Kg	J	Z

Sample ID: SL-513-SA5C-SB-4.0-5.0 ***Collected:*** 5/10/2012 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-HPCDF	0.784	JBQ	0.0134	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0372	JBQ	0.0222	MDL	5.38	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.157	JQ	0.0193	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.231	JB	0.0190	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.419	JBQ	0.0190	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.179	JBQ	0.0146	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.585	JQ	0.0197	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.379	JBQ	0.0185	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.239	JB	0.0237	MDL	5.38	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.380	J	0.0153	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.156	JBQ	0.0139	MDL	5.38	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.335	JB	0.0168	MDL	5.38	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0816	J	0.0127	MDL	1.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0840	J	0.0255	MDL	1.08	PQL	ng/Kg	J	Z
OCDF	1.82	JB	0.0296	MDL	10.8	PQL	ng/Kg	J	Z

Sample ID: SL-542-SA5C-SB-0.0-0.5 ***Collected:*** 5/9/2012 9:00:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.550	JB	0.0388	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.824	J	0.0296	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.791	JB	0.0204	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.09	JB	0.0294	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.483	JB	0.0176	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.62	J	0.0309	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.196	JB	0.0193	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.601	JB	0.0395	MDL	5.24	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.404	J	0.0270	MDL	5.24	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.568	JB	0.0163	MDL	5.24	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-542-SA5C-SB-0.0-0.5 **Collected:** 5/9/2012 9:00:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	0.474	JB	0.0251	MDL	5.24	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0822	J	0.0225	MDL	1.05	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.128	J	0.0451	MDL	1.05	PQL	ng/Kg	J	Z

Sample ID: SL-542-SA5C-SB-1.0-2.0 **Collected:** 5/9/2012 9:30:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.44	JB	0.0474	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.209	JBQ	0.0565	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.303	JQ	0.0274	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.280	JB	0.0185	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.731	JB	0.0283	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.243	JB	0.0155	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.727	J	0.0279	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.161	JBQ	0.0179	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.229	JB	0.0316	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.235	J	0.0241	MDL	5.45	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.222	JB	0.0166	MDL	5.45	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.182	JBQ	0.0237	MDL	5.45	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0597	J	0.0331	MDL	1.09	PQL	ng/Kg	J	Z
OCDF	5.54	JB	0.0297	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: SL-566-SA5C-SB-0.0-0.5 **Collected:** 5/8/2012 2:40:00 PM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.83	JBQ	0.122	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.132	JB	0.0812	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.169	J	0.0558	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.222	JB	0.0590	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.760	JB	0.0522	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.344	JB	0.0509	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.676	J	0.0456	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.264	JBQ	0.0355	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.192	JB	0.0384	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.135	J	0.0278	MDL	5.39	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-566-SA5C-SB-0.0-0.5** ***Collected:*** **5/8/2012 2:40:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.204	JB	0.0289	MDL	5.39	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.570	JB	0.0277	MDL	5.39	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0859	JQ	0.0213	MDL	1.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0950	J	0.0309	MDL	1.08	PQL	ng/Kg	J	Z
OCDF	5.73	JB	0.0838	MDL	10.8	PQL	ng/Kg	J	Z

Sample ID: **SL-613-SA5C-SB-0.0-0.5** ***Collected:*** **5/9/2012 1:55:00 PM** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.885	JBQ	0.0128	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.105	JBQ	0.0179	MDL	5.04	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0813	J	0.0209	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.556	JBQ	0.0268	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.271	JB	0.0206	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0892	JBQ	0.0191	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.256	JQ	0.0202	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0506	JBQ	0.0188	MDL	5.04	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.114	JB	0.0234	MDL	5.04	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.154	J	0.0141	MDL	5.04	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.115	JBQ	0.0149	MDL	5.04	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.145	JB	0.0164	MDL	5.04	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0312	JQ	0.0129	MDL	1.01	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0544	J	0.0225	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	1.83	JB	0.0237	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID: **SL-812-SA5C-SB-0.0-0.5** ***Collected:*** **5/10/2012 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	312	B	0.145	MDL	5.31	PQL	ng/Kg	J	FD
1,2,3,4,6,7,8-HPCDF	39.1	B	0.0613	MDL	5.31	PQL	ng/Kg	J	FD
1,2,3,4,7,8,9-HPCDF	1.89	JBQ	0.0541	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.14	J	0.0494	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	5.27	JB	0.0580	MDL	5.31	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	14.8	B	0.0473	MDL	5.31	PQL	ng/Kg	J	FD
1,2,3,6,7,8-HXCDF	3.16	JB	0.0477	MDL	5.31	PQL	ng/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-812-SA5C-SB-0.0-0.5** ***Collected:*** **5/10/2012 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
1,2,3,7,8,9-HXCDD	4.27	J	0.0475	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	2.47	JB	0.0398	MDL	5.31	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDD	0.992	JB	0.0459	MDL	5.31	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	3.82	J	0.0331	MDL	5.31	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	3.40	JB	0.0353	MDL	5.31	PQL	ng/Kg	J	Z, FD
2,3,4,7,8-PECDF	4.66	JB	0.0317	MDL	5.31	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDD	0.106	JQ	0.0179	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.830	J	0.0640	MDL	1.06	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

PH006

Method Blank Outlier Report

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1440B371825	5/24/2012 6:25:00 PM	1,2,3,4,6,7,8-HPCDD	3.60 pg/L	EB-051012
		1,2,3,4,6,7,8-HPCDF	1.67 pg/L	
		1,2,3,4,7,8,9-HPCDF	1.02 pg/L	
		1,2,3,4,7,8-HxCDD	0.716 pg/L	
		1,2,3,4,7,8-HXCDF	0.397 pg/L	
		1,2,3,6,7,8-HXCDD	0.352 pg/L	
		1,2,3,6,7,8-HXCDF	0.921 pg/L	
		1,2,3,7,8,9-HXCDD	0.393 pg/L	
		1,2,3,7,8,9-HXCDF	0.721 pg/L	
		1,2,3,7,8-PECDF	0.550 pg/L	
		2,3,4,6,7,8-HXCDF	0.565 pg/L	
		2,3,4,7,8-PECDF	0.923 pg/L	
		OCDD	7.55 pg/L	
		OCDF	1.75 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-051012(RES)	1,2,3,4,6,7,8-HPCDD	3.62 pg/L	3.62U pg/L
EB-051012(RES)	1,2,3,4,6,7,8-HPCDF	0.732 pg/L	0.732U pg/L
EB-051012(RES)	1,2,3,4,7,8,9-HPCDF	0.394 pg/L	0.394U pg/L
EB-051012(RES)	1,2,3,4,7,8-HxCDD	0.462 pg/L	0.462U pg/L
EB-051012(RES)	1,2,3,4,7,8-HXCDF	0.328 pg/L	0.328U pg/L
EB-051012(RES)	1,2,3,6,7,8-HXCDD	0.369 pg/L	0.369U pg/L
EB-051012(RES)	1,2,3,6,7,8-HXCDF	0.316 pg/L	0.316U pg/L
EB-051012(RES)	1,2,3,7,8,9-HXCDD	0.488 pg/L	0.488U pg/L
EB-051012(RES)	1,2,3,7,8-PECDF	0.302 pg/L	0.302U pg/L
EB-051012(RES)	2,3,4,7,8-PECDF	0.447 pg/L	0.447U pg/L
EB-051012(RES)	OCDD	6.97 pg/L	6.97U pg/L
EB-051012(RES)	OCDF	0.567 pg/L	0.567U pg/L

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1440B371921	5/24/2012 7:21:00 PM	1,2,3,4,6,7,8-HPCDD	0.298 ng/Kg	SL-512-SA5C-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.0625 ng/Kg	SL-512-SA5C-SB-4.0-5.0
		1,2,3,4,7,8,9-HPCDF	0.0221 ng/Kg	SL-512-SA5C-SB-6.0-7.0
		1,2,3,4,7,8-HXCDF	0.0248 ng/Kg	SL-513-SA5C-SB-4.0-5.0
		1,2,3,6,7,8-HXCDD	0.0243 ng/Kg	SL-542-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0101 ng/Kg	SL-542-SA5C-SB-1.0-2.0
		1,2,3,7,8,9-HXCDF	0.0178 ng/Kg	SL-566-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0281 ng/Kg	SL-613-SA5C-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.0104 ng/Kg	SL-812-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0612 ng/Kg	
		OCDD	0.492 ng/Kg	
		OCDF	0.127 ng/Kg	

Method Blank Outlier Report

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-512-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.110 ng/Kg	0.110U ng/Kg
SL-512-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.127 ng/Kg	0.127U ng/Kg
SL-513-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0372 ng/Kg	0.0372U ng/Kg
SL-542-SA5C-SB-1.0-2.0(RES)	2,3,4,7,8-PECDF	0.182 ng/Kg	0.182U ng/Kg
SL-613-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.105 ng/Kg	0.105U ng/Kg
SL-613-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0506 ng/Kg	0.0506U ng/Kg
SL-613-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.114 ng/Kg	0.114U ng/Kg
SL-613-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.145 ng/Kg	0.145U ng/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-512-SA5C-SB-0.0-0.5 MSD (SL-512-SA5C-SB-0.0-0.5)	1,2,3,4,6,7,8-HPCDD	-	372	40.00-135.00	67 (20.00)	1,2,3,4,6,7,8-HPCDD	J (all detects)
SL-512-SA5C-SB-0.0-0.5 MS SL-512-SA5C-SB-0.0-0.5 MSD (SL-512-SA5C-SB-0.0-0.5)	OCDD	39	702	40.00-135.00	52 (20.00)	OCDD	No Qual, >4x

Field Duplicate RPD Report

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PrepPH006 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-512-SA5C-SB-0.0-0.5	SL-812-SA5C-SB-0.0-0.5			
MOISTURE	11.3	9.9	13		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-512-SA5C-SB-0.0-0.5	SL-812-SA5C-SB-0.0-0.5			
1,2,3,4,7,8,9-HPCDF	1.28	1.89	38	50.00	
1,2,3,4,7,8-HxCDD	2.26	2.14	5	50.00	
1,2,3,7,8,9-HXCDD	4.16	4.27	3	50.00	
1,2,3,7,8-PECDD	1.05	0.992	6	50.00	
1,2,3,7,8-PECDF	2.40	3.82	46	50.00	No Qualifiers Applied
2,3,7,8-TCDD	0.150	0.106	34	50.00	
2,3,7,8-TCDF	0.554	0.830	40	50.00	
OCDD	2020	3050	41	50.00	
OCDF	53.9	44.0	20	50.00	
1,2,3,4,6,7,8-HPCDD	173	312	57	50.00	
1,2,3,4,6,7,8-HPCDF	20.6	39.1	62	50.00	
1,2,3,4,7,8-HXCDF	2.08	5.27	87	50.00	
1,2,3,6,7,8-HXCDD	7.14	14.8	70	50.00	J(all detects)
1,2,3,6,7,8-HXCDF	1.21	3.16	89	50.00	
1,2,3,7,8,9-HXCDF	0.762	2.47	106	50.00	
2,3,4,6,7,8-HXCDF	1.17	3.40	98	50.00	
2,3,4,7,8-PECDF	1.93	4.66	83	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-051012	1,2,3,4,6,7,8-HPCDD	JB	3.62	10.2	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.732	10.2	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.394	10.2	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JB	0.462	10.2	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.328	10.2	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JB	0.369	10.2	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JBQ	0.316	10.2	PQL	pg/L	J (all detects)
	1,2,3,7,8,9-HXCDD	JBQ	0.488	10.2	PQL	pg/L	
	1,2,3,7,8-PECDD	JQ	0.407	10.2	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.302	10.2	PQL	pg/L	
	2,3,4,7,8-PECDF	JBQ	0.447	10.2	PQL	pg/L	
	OCDD	JB	6.97	20.3	PQL	pg/L	
	OCDF	JBQ	0.567	20.3	PQL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-512-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.28	5.52	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	2.26	5.52	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	2.08	5.52	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.21	5.52	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	4.16	5.52	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.762	5.52	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	1.05	5.52	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	2.40	5.52	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.17	5.52	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.93	5.52	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.150	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.554	1.10	PQL	ng/Kg	
SL-512-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	1.66	5.81	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.182	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.159	5.81	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.270	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.480	5.81	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0916	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.342	5.81	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.133	5.81	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.110	5.81	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.247	5.81	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.120	5.81	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.127	5.81	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0224	1.16	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0334	1.16	PQL	ng/Kg	
	OCDF	JB	4.36	11.6	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-512-SA5C-SB-6.0-7.0	1,2,3,4,7,8,9-HPCDF	JB	0.544	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.780	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.21	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.63	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.613	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	1.42	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.485	5.60	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.372	5.60	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.588	5.60	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.593	5.60	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.729	5.60	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0808	1.12	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.159	1.12	PQL	ng/Kg	
SL-513-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JBQ	0.784	5.38	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0372	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.157	5.38	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.231	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.419	5.38	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.179	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.585	5.38	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.379	5.38	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.239	5.38	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.380	5.38	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.156	5.38	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.335	5.38	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0816	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0840	1.08	PQL	ng/Kg	
	OCDF	JB	1.82	10.8	PQL	ng/Kg	
SL-542-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.550	5.24	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.824	5.24	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.791	5.24	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.09	5.24	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.483	5.24	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	1.62	5.24	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.196	5.24	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.601	5.24	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.404	5.24	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.568	5.24	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.474	5.24	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0822	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.128	1.05	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-542-SA5C-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDF	JB	2.44	5.45	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.209	5.45	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.303	5.45	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.280	5.45	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.731	5.45	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.243	5.45	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.727	5.45	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.161	5.45	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.229	5.45	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.235	5.45	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.222	5.45	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.182	5.45	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0597	1.09	PQL	ng/Kg	
	OCDF	JB	5.54	10.9	PQL	ng/Kg	
SL-566-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JBQ	2.83	5.39	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.132	5.39	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.169	5.39	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.222	5.39	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.760	5.39	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.344	5.39	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	0.676	5.39	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.264	5.39	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.192	5.39	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.135	5.39	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.204	5.39	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.570	5.39	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0859	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0950	1.08	PQL	ng/Kg	
	OCDF	JB	5.73	10.8	PQL	ng/Kg	
SL-613-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JBQ	0.885	5.04	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.105	5.04	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0813	5.04	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.556	5.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.271	5.04	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0892	5.04	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JQ	0.256	5.04	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0506	5.04	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.114	5.04	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.154	5.04	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.115	5.04	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.145	5.04	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0312	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0544	1.01	PQL	ng/Kg	
	OCDF	JB	1.83	10.1	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH006 **Laboratory: LL**

EDD Filename: PH006_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-812-SA5C-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JBQ	1.89	5.31	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.14	5.31	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	5.27	5.31	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	3.16	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	J	4.27	5.31	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	2.47	5.31	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.992	5.31	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	3.82	5.31	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	3.40	5.31	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	4.66	5.31	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.106	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.830	1.06	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

PH007

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-May-2012	SL-513-SA5C-SB-9.0-10.0	6657011	N	METHOD	1613B	III
14-May-2012	SL-514-SA5C-SB-4.0-5.0	6657012	N	METHOD	1613B	III
14-May-2012	SL-514-SA5C-SB-9.0-10.0	6657013	N	METHOD	1613B	III
17-May-2012	SL-735-SA5C-SB-4.0-5.0	6657015	N	METHOD	1613B	III
17-May-2012	SL-735-SA5C-SB-9.0-10.0	6657016	N	METHOD	1613B	III
17-May-2012	SL-737-SA5C-SB-4.0-5.0	6657017	N	METHOD	1613B	III
17-May-2012	SL-737-SA5C-SB-9.0-10.0	6657018	N	METHOD	1613B	III
17-May-2012	SL-738-SA5C-SB-0.0-0.5	6657022	N	METHOD	1613B	III
17-May-2012	SL-738-SA5C-SB-4.0-5.0	6657023	N	METHOD	1613B	III
17-May-2012	SL-738-SA5C-SB-9.0-10.0	6657024	N	METHOD	1613B	III
17-May-2012	SL-686-SA5C-SB-4.0-5.0	6657020	N	METHOD	1613B	III
17-May-2012	EB1-051712	6657014	EB	METHOD	1613B	III
17-May-2012	SL-686-SA5C-SB-9.0-10.0	6657021	N	METHOD	1613B	III
17-May-2012	EB2-051712	6657019	EB	METHOD	1613B	III
17-May-2012	SL-739-SA5C-SB-0.0-0.5	6657025	N	METHOD	1613B	III
17-May-2012	SL-739-SA5C-SB-4.0-5.0	6657026	N	METHOD	1613B	III
17-May-2012	SL-739-SA5C-SB-9.0-10.0	6657027	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: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-051712 ***Collected:*** 5/17/2012 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	3.86	JB	0.274	MDL	10.7	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.483	JB	0.133	MDL	10.7	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.420	JBQ	0.152	MDL	10.7	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.490	JB	0.233	MDL	10.7	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.396	JBQ	0.155	MDL	10.7	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.331	JB	0.249	MDL	10.7	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.422	JB	0.159	MDL	10.7	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.756	JBQ	0.234	MDL	10.7	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.459	JB	0.146	MDL	10.7	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.596	JBQ	0.292	MDL	10.7	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.348	JBQ	0.210	MDL	10.7	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.352	JBQ	0.136	MDL	10.7	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.669	JB	0.186	MDL	10.7	PQL	pg/L	U	B
2,3,7,8-TCDD	0.703	JB	0.391	MDL	2.14	PQL	pg/L	U	B
2,3,7,8-TCDF	0.497	JBQ	0.247	MDL	2.14	PQL	pg/L	U	B
OCDD	6.22	JB	0.327	MDL	21.4	PQL	pg/L	U	B
OCDF	1.17	JB	0.224	MDL	21.4	PQL	pg/L	U	B

Sample ID: EB2-051712 ***Collected:*** 5/17/2012 2:45:00 ***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	4.62	JBQ	0.317	MDL	10.8	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.950	JB	0.128	MDL	10.8	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.652	JB	0.145	MDL	10.8	PQL	pg/L	U	B
1,2,3,4,7,8-HxCDD	0.356	JB	0.201	MDL	10.8	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.613	JBQ	0.130	MDL	10.8	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.838	J	0.209	MDL	10.8	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.415	JB	0.129	MDL	10.8	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.976	JB	0.207	MDL	10.8	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.467	JBQ	0.127	MDL	10.8	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.790	JB	0.274	MDL	10.8	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.498	JBQ	0.163	MDL	10.8	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.610	JBQ	0.115	MDL	10.8	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.764	JB	0.134	MDL	10.8	PQL	pg/L	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB2-051712 *Collected:* 5/17/2012 2:45:00 *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	0.375	J	0.179	MDL	2.17	PQL	pg/L	J	Z
OCDD	7.39	JB	0.287	MDL	21.7	PQL	pg/L	U	B
OCDF	1.34	JB	0.217	MDL	21.7	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-513-SA5C-SB-9.0-10.0 *Collected:* 5/14/2012 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	0.728	JB	0.0193	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.181	JB	0.0103	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0398	JB	0.0198	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.108	JBQ	0.0229	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0803	JBQ	0.0152	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0928	JBQ	0.0232	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.106	JBQ	0.0128	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.133	JB	0.0233	MDL	5.74	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0655	JBQ	0.0166	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0682	JBQ	0.0316	MDL	5.74	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.131	JBQ	0.0159	MDL	5.74	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.109	JBQ	0.0143	MDL	5.74	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.165	JB	0.0160	MDL	5.74	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0200	JBQ	0.0165	MDL	1.15	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0376	JBQ	0.0148	MDL	1.15	PQL	ng/Kg	U	B
OCDD	3.89	JBQ	0.0415	MDL	11.5	PQL	ng/Kg	J	Z
OCDF	0.279	JB	0.0348	MDL	11.5	PQL	ng/Kg	U	B

Sample ID: SL-514-SA5C-SB-4.0-5.0 *Collected:* 5/14/2012 11:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.39	JB	0.0205	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.399	JBQ	0.0108	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0569	JB	0.0183	MDL	5.55	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-514-SA5C-SB-4.0-5.0 *Collected:* 5/14/2012 11:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.0538	JB	0.0234	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0561	JBQ	0.0130	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.140	JBQ	0.0242	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0415	JBQ	0.0117	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.141	JBQ	0.0228	MDL	5.55	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0821	JBQ	0.0137	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0363	JB	0.0302	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0620	JBQ	0.0154	MDL	5.55	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0661	JB	0.0124	MDL	5.55	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0594	JBQ	0.0151	MDL	5.55	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0208	JBQ	0.0175	MDL	1.11	PQL	ng/Kg	U	B
OCDF	0.739	JB	0.0344	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: SL-514-SA5C-SB-9.0-10.0 *Collected:* 5/14/2012 12:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.70	JB	0.0193	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.242	JB	0.00916	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0360	JBQ	0.0184	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0269	JBQ	0.0182	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0436	JBQ	0.0108	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.134	JBQ	0.0182	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0275	JBQ	0.00926	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0812	JB	0.0190	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0795	JBQ	0.0120	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0396	JBQ	0.0322	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0438	JB	0.0134	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0572	JBQ	0.0105	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0365	JBQ	0.0146	MDL	5.10	PQL	ng/Kg	U	B
OCDF	0.600	JB	0.0326	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-686-SA5C-SB-4.0-5.0 *Collected:* 5/17/2012 1:56:00 *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	1.05	JB	0.0208	MDL	5.51	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-686-SA5C-SB-4.0-5.0 ***Collected:*** 5/17/2012 1:56:00 ***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	0.212	JB	0.0103	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0579	JBQ	0.0175	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0986	JBQ	0.0197	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0776	JB	0.0165	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.106	JBQ	0.0195	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0648	JBQ	0.0130	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.114	JBQ	0.0185	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0732	JBQ	0.0158	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.143	JBQ	0.0322	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.154	JBQ	0.0156	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0597	JBQ	0.0121	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.170	JB	0.0176	MDL	5.51	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0365	JB	0.0132	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0388	JB	0.0138	MDL	1.10	PQL	ng/Kg	U	B
OCDD	10.7	JB	0.0400	MDL	11.0	PQL	ng/Kg	J	Z
OCDF	0.287	JBQ	0.0361	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-686-SA5C-SB-9.0-10.0 ***Collected:*** 5/17/2012 2:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.621	JBQ	0.0162	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.182	JBQ	0.00706	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0461	JB	0.0151	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.112	JBQ	0.0191	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.201	JBQ	0.0159	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.138	JBQ	0.0194	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.204	JB	0.0135	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.152	JBQ	0.0203	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.175	JBQ	0.0160	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.191	JBQ	0.0383	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.289	JBQ	0.0144	MDL	5.46	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.164	JBQ	0.0149	MDL	5.46	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.264	JBQ	0.0161	MDL	5.46	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.103	JBQ	0.0142	MDL	1.09	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-686-SA5C-SB-9.0-10.0** ***Collected:*** **5/17/2012 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
2,3,7,8-TCDF	0.0865	JB	0.0148	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	4.41	JB	0.0417	MDL	10.9	PQL	ng/Kg	J	Z
OCDF	0.203	JB	0.0350	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: **SL-735-SA5C-SB-4.0-5.0** ***Collected:*** **5/17/2012 8:53:00** ***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	0.996	JBQ	0.0175	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.149	JB	0.00645	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0609	JBQ	0.0136	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0200	JBQ	0.0189	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0532	JB	0.0127	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.237	JBQ	0.0187	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0305	JBQ	0.0101	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.297	JB	0.0183	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.203	JB	0.0139	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0547	JB	0.0261	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0848	JB	0.0121	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0549	JBQ	0.0113	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0695	JB	0.0134	MDL	5.35	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0220	JBQ	0.0114	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0122	JBQ	0.0121	MDL	1.07	PQL	ng/Kg	U	B
OCDF	0.370	JB	0.0298	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-735-SA5C-SB-9.0-10.0** ***Collected:*** **5/17/2012 8:58:00** ***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	1.34	JB	0.0207	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.293	JBQ	0.00832	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0595	JBQ	0.0164	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0285	JBQ	0.0211	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0348	JBQ	0.0132	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.105	JBQ	0.0217	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0357	JB	0.0111	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.115	JB	0.0203	MDL	5.49	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-735-SA5C-SB-9.0-10.0 ***Collected:*** 5/17/2012 8:58:00 ***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	0.0589	JBQ	0.0269	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0450	JBQ	0.0124	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0340	JB	0.0123	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.119	JBQ	0.0133	MDL	5.49	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0186	JB	0.0139	MDL	1.10	PQL	ng/Kg	U	B
OCDF	0.499	JB	0.0337	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-737-SA5C-SB-4.0-5.0 ***Collected:*** 5/17/2012 10:47:00 ***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	1.23	JBQ	0.0215	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.212	JBQ	0.00801	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0397	JB	0.0162	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0570	JBQ	0.0211	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0301	JB	0.0158	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.164	JBQ	0.0217	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0357	JBQ	0.0135	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.285	JB	0.0209	MDL	5.49	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.175	JB	0.0177	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0367	JBQ	0.0332	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0808	JBQ	0.0152	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0261	JB	0.0146	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0662	JBQ	0.0166	MDL	5.49	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0214	JBQ	0.0153	MDL	1.10	PQL	ng/Kg	U	B
OCDD	10.9	JB	0.0406	MDL	11.0	PQL	ng/Kg	J	Z
OCDF	0.356	JB	0.0350	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-737-SA5C-SB-9.0-10.0 ***Collected:*** 5/17/2012 10:51:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.57	JB	0.0121	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.120	JBQ	0.0207	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0932	JB	0.0224	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.142	JBQ	0.0141	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.241	JBQ	0.0239	MDL	5.25	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-737-SA5C-SB-9.0-10.0** ***Collected:*** **5/17/2012 10:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	0.0754	JBQ	0.0122	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.158	JBQ	0.0228	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0511	JB	0.0160	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0840	JB	0.0254	MDL	5.25	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.102	JB	0.0142	MDL	5.25	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0800	JB	0.0135	MDL	5.25	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0844	JB	0.0141	MDL	5.25	PQL	ng/Kg	U	B
OCDF	5.81	JB	0.0307	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: **SL-738-SA5C-SB-0.0-0.5** ***Collected:*** **5/17/2012 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.25	JB	0.0156	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.219	JB	0.0216	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.158	JB	0.0400	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.297	JB	0.0233	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.587	JB	0.0396	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.347	JBQ	0.0213	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.431	JBQ	0.0371	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.284	JB	0.0255	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.143	JB	0.0357	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	1.33	JB	0.0295	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.574	JB	0.0213	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.15	JB	0.0286	MDL	5.18	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.124	JBQ	0.0501	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	3.52	JB	0.0323	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: **SL-738-SA5C-SB-4.0-5.0** ***Collected:*** **5/17/2012 1:01:00** ***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	0.403	JB	0.0115	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0750	JB	0.00928	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0272	JB	0.0135	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0259	JBQ	0.00889	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.172	JB	0.0189	MDL	5.46	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-738-SA5C-SB-4.0-5.0 **Collected:** 5/17/2012 1:01:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDF	0.0311	JBQ	0.00810	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.226	JBQ	0.0186	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.190	JB	0.00904	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0620	JB	0.0254	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0298	JB	0.0125	MDL	5.46	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0371	JBQ	0.00843	MDL	5.46	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0963	JBQ	0.0130	MDL	5.46	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0179	JBQ	0.00848	MDL	1.09	PQL	ng/Kg	U	B
OCDD	1.07	JBQ	0.0357	MDL	10.9	PQL	ng/Kg	U	B
OCDF	0.123	JB	0.0273	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: SL-738-SA5C-SB-9.0-10.0 **Collected:** 5/17/2012 1:08:00 **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	0.405	JBQ	0.0150	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.122	JBQ	0.00926	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0352	JB	0.0152	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0175	JBQ	0.0115	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0735	JB	0.0164	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0426	JB	0.0105	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.159	JBQ	0.0164	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0319	JBQ	0.0136	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0434	JB	0.0282	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0564	JBQ	0.0109	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0530	JBQ	0.0143	MDL	5.65	PQL	ng/Kg	U	B
OCDD	1.53	JB	0.0378	MDL	11.3	PQL	ng/Kg	U	B
OCDF	0.130	JBQ	0.0357	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: SL-739-SA5C-SB-0.0-0.5 **Collected:** 5/17/2012 2:45:00 **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	0.528	JB	0.0197	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.144	JB	0.00795	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0308	JB	0.0133	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0575	JBQ	0.0119	MDL	5.36	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-739-SA5C-SB-0.0-0.5** ***Collected:*** **5/17/2012 2:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDD	0.136	JBQ	0.0204	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0353	JBQ	0.0106	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.160	JB	0.0194	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.168	JB	0.0143	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0275	JBQ	0.0236	MDL	5.36	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.120	JBQ	0.0133	MDL	5.36	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0529	JBQ	0.0120	MDL	5.36	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.124	JB	0.0141	MDL	5.36	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0274	JBQ	0.0122	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0405	JBQ	0.0174	MDL	1.07	PQL	ng/Kg	U	B
OCDD	6.71	JB	0.0337	MDL	10.7	PQL	ng/Kg	J	Z
OCDF	0.259	JBQ	0.0312	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-739-SA5C-SB-4.0-5.0** ***Collected:*** **5/17/2012 2:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.528	JB	0.0136	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.129	JBQ	0.0103	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0357	JBQ	0.0121	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.174	JB	0.0203	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0343	JBQ	0.0116	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.239	JBQ	0.0204	MDL	5.54	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.206	JB	0.0131	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0464	JBQ	0.0300	MDL	5.54	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0547	JBQ	0.0147	MDL	5.54	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0428	JB	0.0111	MDL	5.54	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0790	JB	0.0139	MDL	5.54	PQL	ng/Kg	U	B
OCDD	2.70	JB	0.0349	MDL	11.1	PQL	ng/Kg	J	Z
OCDF	0.161	JB	0.0262	MDL	11.1	PQL	ng/Kg	U	B

Sample ID: **SL-739-SA5C-SB-9.0-10.0** ***Collected:*** **5/17/2012 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	0.552	JB	0.0114	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0681	JBQ	0.00730	MDL	5.37	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: **SVOA**

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

Sample ID: **SL-739-SA5C-SB-9.0-10.0** ***Collected:*** **5/17/2012 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	0.0288	JBQ	0.0158	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0250	JB	0.0169	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0158	JBQ	0.00940	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0604	JB	0.0173	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0275	JBQ	0.00689	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0565	JBQ	0.0175	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0256	JBQ	0.0100	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0492	JB	0.0256	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0255	JB	0.0125	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0292	JB	0.00744	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0604	JBQ	0.0139	MDL	5.37	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0214	JB	0.0109	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0210	JBQ	0.0105	MDL	1.07	PQL	ng/Kg	U	B
OCDD	2.17	JB	0.0456	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.122	JB	0.0478	MDL	10.7	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PrepPH007 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

PH007

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1460B371504	5/29/2012 3:04:00 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 1,2,3,7,8,9-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 2,3,7,8-TCDD 2,3,7,8-TCDF OCDD OCDF	5.05 pg/L 1.18 pg/L 1.05 pg/L 0.836 pg/L 0.690 pg/L 1.22 pg/L 0.641 pg/L 1.07 pg/L 0.982 pg/L 0.356 pg/L 0.502 pg/L 0.703 pg/L 0.628 pg/L 0.742 pg/L 0.390 pg/L 8.17 pg/L 2.05 pg/L	EB1-051712
BLK1520B372010	6/1/2012 8:10:00 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 1,2,3,7,8,9-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	2.88 pg/L 0.753 pg/L 0.606 pg/L 0.407 pg/L 0.498 pg/L 0.513 pg/L 0.371 pg/L 0.518 pg/L 0.475 pg/L 0.435 pg/L 0.385 pg/L 0.280 pg/L 0.694 pg/L 4.99 pg/L 1.13 pg/L	EB2-051712

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-051712(RES)	1,2,3,4,6,7,8-HPCDD	3.86 pg/L	3.86U pg/L
EB1-051712(RES)	1,2,3,4,6,7,8-HPCDF	0.483 pg/L	0.483U pg/L
EB1-051712(RES)	1,2,3,4,7,8,9-HPCDF	0.420 pg/L	0.420U pg/L
EB1-051712(RES)	1,2,3,4,7,8-HxCDD	0.490 pg/L	0.490U pg/L
EB1-051712(RES)	1,2,3,4,7,8-HXCDF	0.396 pg/L	0.396U pg/L
EB1-051712(RES)	1,2,3,6,7,8-HXCDD	0.331 pg/L	0.331U pg/L
EB1-051712(RES)	1,2,3,6,7,8-HXCDF	0.422 pg/L	0.422U pg/L
EB1-051712(RES)	1,2,3,7,8,9-HXCDD	0.756 pg/L	0.756U pg/L
EB1-051712(RES)	1,2,3,7,8,9-HXCDF	0.459 pg/L	0.459U pg/L
EB1-051712(RES)	1,2,3,7,8-PECDD	0.596 pg/L	0.596U pg/L
EB1-051712(RES)	1,2,3,7,8-PECDF	0.348 pg/L	0.348U pg/L
EB1-051712(RES)	2,3,4,6,7,8-HXCDF	0.352 pg/L	0.352U pg/L
EB1-051712(RES)	2,3,4,7,8-PECDF	0.669 pg/L	0.669U pg/L
EB1-051712(RES)	2,3,7,8-TCDD	0.703 pg/L	0.703U pg/L
EB1-051712(RES)	2,3,7,8-TCDF	0.497 pg/L	0.497U pg/L
EB1-051712(RES)	OCDD	6.22 pg/L	6.22U pg/L

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-051712(RES)	OCDF	1.17 pg/L	1.17U pg/L
EB2-051712(RES)	1,2,3,4,6,7,8-HPCDD	4.62 pg/L	4.62U pg/L
EB2-051712(RES)	1,2,3,4,6,7,8-HPCDF	0.950 pg/L	0.950U pg/L
EB2-051712(RES)	1,2,3,4,7,8,9-HPCDF	0.652 pg/L	0.652U pg/L
EB2-051712(RES)	1,2,3,4,7,8-HxCDD	0.356 pg/L	0.356U pg/L
EB2-051712(RES)	1,2,3,4,7,8-HXCDF	0.613 pg/L	0.613U pg/L
EB2-051712(RES)	1,2,3,6,7,8-HXCDD	0.838 pg/L	0.838U pg/L
EB2-051712(RES)	1,2,3,6,7,8-HXCDF	0.415 pg/L	0.415U pg/L
EB2-051712(RES)	1,2,3,7,8,9-HXCDD	0.976 pg/L	0.976U pg/L
EB2-051712(RES)	1,2,3,7,8,9-HXCDF	0.467 pg/L	0.467U pg/L
EB2-051712(RES)	1,2,3,7,8-PECDD	0.790 pg/L	0.790U pg/L
EB2-051712(RES)	1,2,3,7,8-PECDF	0.498 pg/L	0.498U pg/L
EB2-051712(RES)	2,3,4,6,7,8-HXCDF	0.610 pg/L	0.610U pg/L
EB2-051712(RES)	2,3,4,7,8-PECDF	0.764 pg/L	0.764U pg/L
EB2-051712(RES)	OCDD	7.39 pg/L	7.39U pg/L
EB2-051712(RES)	OCDF	1.34 pg/L	1.34U pg/L

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1450B370020	5/26/2012 12:20:00 AM	1,2,3,4,6,7,8-HPCDD	0.270 ng/Kg	SL-513-SA5C-SB-9.0-10.0
		1,2,3,4,6,7,8-HPCDF	0.0787 ng/Kg	SL-514-SA5C-SB-4.0-5.0
		1,2,3,4,7,8,9-HPCDF	0.0639 ng/Kg	SL-514-SA5C-SB-9.0-10.0
		1,2,3,4,7,8-HxCDD	0.0207 ng/Kg	SL-686-SA5C-SB-4.0-5.0
		1,2,3,4,7,8-HXCDF	0.0190 ng/Kg	SL-686-SA5C-SB-9.0-10.0
		1,2,3,6,7,8-HXCDD	0.0516 ng/Kg	SL-735-SA5C-SB-4.0-5.0
		1,2,3,6,7,8-HXCDF	0.0246 ng/Kg	SL-735-SA5C-SB-9.0-10.0
		1,2,3,7,8,9-HXCDD	0.0151 ng/Kg	SL-737-SA5C-SB-4.0-5.0
		1,2,3,7,8,9-HXCDF	0.0483 ng/Kg	SL-737-SA5C-SB-9.0-10.0
		1,2,3,7,8-PECDD	0.0770 ng/Kg	SL-738-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0345 ng/Kg	SL-738-SA5C-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.0512 ng/Kg	SL-738-SA5C-SB-9.0-10.0
		2,3,4,7,8-PECDF	0.0658 ng/Kg	SL-739-SA5C-SB-0.0-0.5
		2,3,7,8-TCDD	0.0393 ng/Kg	SL-739-SA5C-SB-4.0-5.0
		2,3,7,8-TCDF	0.0141 ng/Kg	SL-739-SA5C-SB-9.0-10.0
		OCDD	0.443 ng/Kg	
		OCDF	0.154 ng/Kg	

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.728 ng/Kg	0.728U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.181 ng/Kg	0.181U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0398 ng/Kg	0.0398U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0803 ng/Kg	0.0803U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0928 ng/Kg	0.0928U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.106 ng/Kg	0.106U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0655 ng/Kg	0.0655U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0682 ng/Kg	0.0682U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.131 ng/Kg	0.131U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.109 ng/Kg	0.109U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.165 ng/Kg	0.165U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0200 ng/Kg	0.0200U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0376 ng/Kg	0.0376U ng/Kg
SL-513-SA5C-SB-9.0-10.0(RES)	OCDF	0.279 ng/Kg	0.279U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0569 ng/Kg	0.0569U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0538 ng/Kg	0.0538U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0561 ng/Kg	0.0561U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.140 ng/Kg	0.140U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0415 ng/Kg	0.0415U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0821 ng/Kg	0.0821U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0363 ng/Kg	0.0363U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0620 ng/Kg	0.0620U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0661 ng/Kg	0.0661U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0594 ng/Kg	0.0594U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0208 ng/Kg	0.0208U ng/Kg
SL-514-SA5C-SB-4.0-5.0(RES)	OCDF	0.739 ng/Kg	0.739U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.242 ng/Kg	0.242U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0360 ng/Kg	0.0360U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0269 ng/Kg	0.0269U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0436 ng/Kg	0.0436U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.134 ng/Kg	0.134U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0275 ng/Kg	0.0275U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0795 ng/Kg	0.0795U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0396 ng/Kg	0.0396U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0438 ng/Kg	0.0438U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0572 ng/Kg	0.0572U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0365 ng/Kg	0.0365U ng/Kg
SL-514-SA5C-SB-9.0-10.0(RES)	OCDF	0.600 ng/Kg	0.600U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	1.05 ng/Kg	1.05U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.212 ng/Kg	0.212U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0579 ng/Kg	0.0579U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0986 ng/Kg	0.0986U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0776 ng/Kg	0.0776U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.106 ng/Kg	0.106U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0648 ng/Kg	0.0648U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0732 ng/Kg	0.0732U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.143 ng/Kg	0.143U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.154 ng/Kg	0.154U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0597 ng/Kg	0.0597U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.170 ng/Kg	0.170U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0365 ng/Kg	0.0365U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0388 ng/Kg	0.0388U ng/Kg
SL-686-SA5C-SB-4.0-5.0(RES)	OCDF	0.287 ng/Kg	0.287U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.621 ng/Kg	0.621U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.182 ng/Kg	0.182U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0461 ng/Kg	0.0461U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.138 ng/Kg	0.138U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.175 ng/Kg	0.175U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.191 ng/Kg	0.191U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.164 ng/Kg	0.164U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.264 ng/Kg	0.264U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.103 ng/Kg	0.103U ng/Kg
SL-686-SA5C-SB-9.0-10.0(RES)	OCDF	0.203 ng/Kg	0.203U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.996 ng/Kg	0.996U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.149 ng/Kg	0.149U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0609 ng/Kg	0.0609U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0200 ng/Kg	0.0200U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0532 ng/Kg	0.0532U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.237 ng/Kg	0.237U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0305 ng/Kg	0.0305U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.203 ng/Kg	0.203U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0547 ng/Kg	0.0547U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0848 ng/Kg	0.0848U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0549 ng/Kg	0.0549U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0695 ng/Kg	0.0695U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-735-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0220 ng/Kg	0.0220U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0122 ng/Kg	0.0122U ng/Kg
SL-735-SA5C-SB-4.0-5.0(RES)	OCDF	0.370 ng/Kg	0.370U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	1.34 ng/Kg	1.34U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.293 ng/Kg	0.293U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0595 ng/Kg	0.0595U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0285 ng/Kg	0.0285U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0348 ng/Kg	0.0348U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.105 ng/Kg	0.105U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0589 ng/Kg	0.0589U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0450 ng/Kg	0.0450U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0340 ng/Kg	0.0340U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.119 ng/Kg	0.119U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0186 ng/Kg	0.0186U ng/Kg
SL-735-SA5C-SB-9.0-10.0(RES)	OCDF	0.499 ng/Kg	0.499U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	1.23 ng/Kg	1.23U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.212 ng/Kg	0.212U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0397 ng/Kg	0.0397U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0570 ng/Kg	0.0570U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0301 ng/Kg	0.0301U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.164 ng/Kg	0.164U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.175 ng/Kg	0.175U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0367 ng/Kg	0.0367U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0808 ng/Kg	0.0808U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0261 ng/Kg	0.0261U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0662 ng/Kg	0.0662U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0214 ng/Kg	0.0214U ng/Kg
SL-737-SA5C-SB-4.0-5.0(RES)	OCDF	0.356 ng/Kg	0.356U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.120 ng/Kg	0.120U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0932 ng/Kg	0.0932U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.241 ng/Kg	0.241U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0754 ng/Kg	0.0754U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0511 ng/Kg	0.0511U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0840 ng/Kg	0.0840U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.102 ng/Kg	0.102U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-737-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0800 ng/Kg	0.0800U ng/Kg
SL-737-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0844 ng/Kg	0.0844U ng/Kg
SL-738-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.219 ng/Kg	0.219U ng/Kg
SL-738-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.143 ng/Kg	0.143U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.403 ng/Kg	0.403U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0750 ng/Kg	0.0750U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0272 ng/Kg	0.0272U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0259 ng/Kg	0.0259U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.172 ng/Kg	0.172U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0311 ng/Kg	0.0311U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.190 ng/Kg	0.190U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0620 ng/Kg	0.0620U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0298 ng/Kg	0.0298U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0371 ng/Kg	0.0371U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0963 ng/Kg	0.0963U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0179 ng/Kg	0.0179U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	OCDD	1.07 ng/Kg	1.07U ng/Kg
SL-738-SA5C-SB-4.0-5.0(RES)	OCDF	0.123 ng/Kg	0.123U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.405 ng/Kg	0.405U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.122 ng/Kg	0.122U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0352 ng/Kg	0.0352U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0175 ng/Kg	0.0175U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0735 ng/Kg	0.0735U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0426 ng/Kg	0.0426U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0319 ng/Kg	0.0319U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0434 ng/Kg	0.0434U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0564 ng/Kg	0.0564U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0530 ng/Kg	0.0530U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	OCDD	1.53 ng/Kg	1.53U ng/Kg
SL-738-SA5C-SB-9.0-10.0(RES)	OCDF	0.130 ng/Kg	0.130U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.528 ng/Kg	0.528U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.144 ng/Kg	0.144U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0308 ng/Kg	0.0308U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0575 ng/Kg	0.0575U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.136 ng/Kg	0.136U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0353 ng/Kg	0.0353U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.168 ng/Kg	0.168U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0275 ng/Kg	0.0275U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.120 ng/Kg	0.120U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0529 ng/Kg	0.0529U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.124 ng/Kg	0.124U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0274 ng/Kg	0.0274U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0405 ng/Kg	0.0405U ng/Kg
SL-739-SA5C-SB-0.0-0.5(RES)	OCDF	0.259 ng/Kg	0.259U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.528 ng/Kg	0.528U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.129 ng/Kg	0.129U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.174 ng/Kg	0.174U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0343 ng/Kg	0.0343U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.206 ng/Kg	0.206U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0464 ng/Kg	0.0464U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0547 ng/Kg	0.0547U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0428 ng/Kg	0.0428U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0790 ng/Kg	0.0790U ng/Kg
SL-739-SA5C-SB-4.0-5.0(RES)	OCDF	0.161 ng/Kg	0.161U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.552 ng/Kg	0.552U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0681 ng/Kg	0.0681U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0288 ng/Kg	0.0288U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0250 ng/Kg	0.0250U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0158 ng/Kg	0.0158U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0604 ng/Kg	0.0604U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0275 ng/Kg	0.0275U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0565 ng/Kg	0.0565U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0256 ng/Kg	0.0256U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0492 ng/Kg	0.0492U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0255 ng/Kg	0.0255U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0292 ng/Kg	0.0292U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0604 ng/Kg	0.0604U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0214 ng/Kg	0.0214U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0210 ng/Kg	0.0210U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	OCDD	2.17 ng/Kg	2.17U ng/Kg
SL-739-SA5C-SB-9.0-10.0(RES)	OCDF	0.122 ng/Kg	0.122U ng/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-051712	1,2,3,4,6,7,8-HPCDD	JB	3.86	10.7	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JB	0.483	10.7	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.420	10.7	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JB	0.490	10.7	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.396	10.7	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	JB	0.331	10.7	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.422	10.7	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JBQ	0.756	10.7	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JB	0.459	10.7	PQL	pg/L	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.596	10.7	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.348	10.7	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.352	10.7	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.669	10.7	PQL	pg/L	
	2,3,7,8-TCDD	JB	0.703	2.14	PQL	pg/L	
	2,3,7,8-TCDF	JBQ	0.497	2.14	PQL	pg/L	
	OCDD	JB	6.22	21.4	PQL	pg/L	
	OCDF	JB	1.17	21.4	PQL	pg/L	
EB2-051712	1,2,3,4,6,7,8-HPCDD	JBQ	4.62	10.8	PQL	pg/L	
	1,2,3,4,6,7,8-HPCDF	JB	0.950	10.8	PQL	pg/L	
	1,2,3,4,7,8,9-HPCDF	JB	0.652	10.8	PQL	pg/L	
	1,2,3,4,7,8-HxCDD	JB	0.356	10.8	PQL	pg/L	
	1,2,3,4,7,8-HXCDF	JBQ	0.613	10.8	PQL	pg/L	
	1,2,3,6,7,8-HXCDD	J	0.838	10.8	PQL	pg/L	
	1,2,3,6,7,8-HXCDF	JB	0.415	10.8	PQL	pg/L	
	1,2,3,7,8,9-HXCDD	JB	0.976	10.8	PQL	pg/L	
	1,2,3,7,8,9-HXCDF	JBQ	0.467	10.8	PQL	pg/L	J (all detects)
	1,2,3,7,8-PECDD	JB	0.790	10.8	PQL	pg/L	
	1,2,3,7,8-PECDF	JBQ	0.498	10.8	PQL	pg/L	
	2,3,4,6,7,8-HXCDF	JBQ	0.610	10.8	PQL	pg/L	
	2,3,4,7,8-PECDF	JB	0.764	10.8	PQL	pg/L	
	2,3,7,8-TCDF	J	0.375	2.17	PQL	pg/L	
	OCDD	JB	7.39	21.7	PQL	pg/L	
	OCDF	JB	1.34	21.7	PQL	pg/L	

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-513-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.728	5.74	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.181	5.74	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0398	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.108	5.74	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0803	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0928	5.74	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.106	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.133	5.74	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0655	5.74	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0682	5.74	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.131	5.74	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.109	5.74	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.165	5.74	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0200	1.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0376	1.15	PQL	ng/Kg	
	OCDD	JBQ	3.89	11.5	PQL	ng/Kg	
	OCDF	JB	0.279	11.5	PQL	ng/Kg	
SL-514-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	2.39	5.55	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.399	5.55	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0569	5.55	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0538	5.55	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0561	5.55	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.140	5.55	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0415	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.141	5.55	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0821	5.55	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0363	5.55	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0620	5.55	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0661	5.55	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0594	5.55	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0208	1.11	PQL	ng/Kg	
	OCDF	JB	0.739	11.1	PQL	ng/Kg	
SL-514-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	1.70	5.10	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.242	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0360	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0269	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0436	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.134	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0275	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0812	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0795	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0396	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0438	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0572	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0365	5.10	PQL	ng/Kg	
	OCDF	JB	0.600	10.2	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-686-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	1.05	5.51	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.212	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0579	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0986	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0776	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.106	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0648	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.114	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0732	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.143	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.154	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0597	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.170	5.51	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0365	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0388	1.10	PQL	ng/Kg	
	OCDD	JB	10.7	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.287	11.0	PQL	ng/Kg	
SL-686-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.621	5.46	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.182	5.46	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0461	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.112	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.201	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.138	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.204	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.152	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.175	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.191	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.289	5.46	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.164	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.264	5.46	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.103	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0865	1.09	PQL	ng/Kg	
	OCDD	JB	4.41	10.9	PQL	ng/Kg	
	OCDF	JB	0.203	10.9	PQL	ng/Kg	
SL-735-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.996	5.35	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.149	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0609	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0200	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0532	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.237	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0305	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.297	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.203	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0547	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0848	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0549	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0695	5.35	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0220	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0122	1.07	PQL	ng/Kg	
	OCDF	JB	0.370	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-735-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	1.34	5.49	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.293	5.49	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0595	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0285	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0348	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.105	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0357	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.115	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0589	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0450	5.49	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0340	5.49	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.119	5.49	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0186	1.10	PQL	ng/Kg	
	OCDF	JB	0.499	11.0	PQL	ng/Kg	
SL-737-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	1.23	5.49	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.212	5.49	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0397	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0570	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0301	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.164	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0357	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.285	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.175	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0367	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0808	5.49	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0261	5.49	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0662	5.49	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0214	1.10	PQL	ng/Kg	
	OCDD	JB	10.9	11.0	PQL	ng/Kg	
	OCDF	JB	0.356	11.0	PQL	ng/Kg	
SL-737-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDF	JB	1.57	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	JBQ	0.120	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0932	5.25	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.142	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.241	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0754	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.158	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0511	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0840	5.25	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.102	5.25	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0800	5.25	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0844	5.25	PQL	ng/Kg	
	OCDF	JB	5.81	10.5	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-738-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.25	5.18	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.219	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.158	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.297	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.587	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.347	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.431	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.284	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.143	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.33	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.574	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.15	5.18	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.124	1.04	PQL	ng/Kg	
	OCDF	JB	3.52	10.4	PQL	ng/Kg	
SL-738-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.403	5.46	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0750	5.46	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0272	5.46	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0259	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.172	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0311	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.226	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.190	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0620	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0298	5.46	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0371	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0963	5.46	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0179	1.09	PQL	ng/Kg	
	OCDD	JBQ	1.07	10.9	PQL	ng/Kg	
	OCDF	JB	0.123	10.9	PQL	ng/Kg	
SL-738-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.405	5.65	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.122	5.65	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0352	5.65	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0175	5.65	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0735	5.65	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0426	5.65	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.159	5.65	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0319	5.65	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0434	5.65	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0564	5.65	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0530	5.65	PQL	ng/Kg	
	OCDD	JB	1.53	11.3	PQL	ng/Kg	
	OCDF	JBQ	0.130	11.3	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH007 **Laboratory: LL**

EDD Filename: PH007_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-739-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.528	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.144	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0308	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0575	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.136	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0353	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.160	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.168	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0275	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.120	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0529	5.36	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.124	5.36	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0274	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0405	1.07	PQL	ng/Kg	
	OCDD	JB	6.71	10.7	PQL	ng/Kg	
	OCDF	JBQ	0.259	10.7	PQL	ng/Kg	
SL-739-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.528	5.54	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.129	5.54	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0357	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.174	5.54	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0343	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.239	5.54	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.206	5.54	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0464	5.54	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0547	5.54	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0428	5.54	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0790	5.54	PQL	ng/Kg	
	OCDD	JB	2.70	11.1	PQL	ng/Kg	
	OCDF	JB	0.161	11.1	PQL	ng/Kg	
SL-739-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.552	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0681	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0288	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0250	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0158	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0604	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0275	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0565	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0256	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0492	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0255	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0292	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0604	5.37	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0214	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0210	1.07	PQL	ng/Kg	
	OCDD	JB	2.17	10.7	PQL	ng/Kg	
	OCDF	JB	0.122	10.7	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

PH008

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-May-2012	SL-734-SA5C-SB-0.0-0.5	6665301	N	METHOD	1613B	III
21-May-2012	SL-734-SA5C-SB-4.0-5.0	6665302	N	METHOD	1613B	III
21-May-2012	SL-734-SA5C-SB-9.0-10.0	6665303	N	METHOD	1613B	III
21-May-2012	SL-727-SA5C-SB-0.0-0.5	6665297	N	METHOD	1613B	III
21-May-2012	SL-727-SA5C-SB-4.0-5.0	6665298	N	METHOD	1613B	III
21-May-2012	SL-727-SA5C-SB-4.0-5.0MS	6665299	MS	METHOD	1613B	III
21-May-2012	SL-727-SA5C-SB-4.0-5.0MSD	6665300	MSD	METHOD	1613B	III
21-May-2012	SL-727-SA5C-SB-9.0-10.0	6665311	N	METHOD	1613B	III
21-May-2012	SL-1027-SA5C-SB-4.0-5.0	6665304	FD	METHOD	1613B	III
22-May-2012	SL-733-SA5C-SB-0.0-0.5	6665308	N	METHOD	1613B	III
22-May-2012	SL-733-SA5C-SB-4.0-5.0	6665309	N	METHOD	1613B	III
22-May-2012	SL-733-SA5C-SB-9.0-10.0	6665310	N	METHOD	1613B	III
22-May-2012	SL-682-SA5C-SB-0.0-0.5	6665305	N	METHOD	1613B	III
22-May-2012	SL-682-SA5C-SB-4.0-5.0	6665306	N	METHOD	1613B	III
22-May-2012	SL-682-SA5C-SB-9.0-10.0	6665307	N	METHOD	1613B	III
23-May-2012	SL-681-SA5C-SB-4.0-5.0	6665317	N	METHOD	1613B	III
23-May-2012	SL-681-SA5C-SB-7.5-8.5	6665318	N	METHOD	1613B	III
23-May-2012	SL-678-SA5C-SB-0.0-0.5	6665315	N	METHOD	1613B	III
23-May-2012	SL-678-SA5C-SB-2.5-3.5	6665316	N	METHOD	1613B	III
23-May-2012	SL-675-SA5C-SB-0.0-0.5	6665314	N	METHOD	1613B	III
23-May-2012	SL-674-SA5C-SB-0.0-0.5	6665312	N	METHOD	1613B	III
23-May-2012	SL-674-SA5C-SB-2.5-3.5	6665313	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: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-1027-SA5C-SB-4.0-5.0 ***Collected:*** 5/21/2012 11:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.384	JB	0.00925	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0760	JBQ	0.00714	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0232	JBQ	0.0119	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0539	JBQ	0.0169	MDL	5.63	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HXCDF	0.0766	JBQ	0.0102	MDL	5.63	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.451	JB	0.0170	MDL	5.63	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.119	JB	0.00886	MDL	5.63	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	0.600	JBQ	0.0171	MDL	5.63	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.365	JBQ	0.00904	MDL	5.63	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.157	JBQ	0.0226	MDL	5.63	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.237	JBQ	0.0108	MDL	5.63	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.0761	JB	0.00854	MDL	5.63	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.114	JB	0.0106	MDL	5.63	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDF	0.0312	J	0.0115	MDL	1.13	PQL	ng/Kg	J	Z, FD
OCDD	1.15	JB	0.0263	MDL	11.3	PQL	ng/Kg	UJ	B, FD
OCDF	0.115	JBQ	0.0213	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: SL-674-SA5C-SB-0.0-0.5 ***Collected:*** 5/23/2012 10:59:00 ***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	3.74	JB	0.0246	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.547	JB	0.00664	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.136	JBQ	0.0221	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0504	JBQ	0.0231	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.380	JB	0.0182	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.350	JBQ	0.0233	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0866	JB	0.0137	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.272	JB	0.0207	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.198	JB	0.0207	MDL	5.32	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0755	JB	0.0272	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.155	JBQ	0.0152	MDL	5.32	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.121	JBQ	0.0174	MDL	5.32	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.247	JB	0.0176	MDL	5.32	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0269	JB	0.00775	MDL	1.06	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-674-SA5C-SB-0.0-0.5** ***Collected:*** **5/23/2012 10:59:00** ***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	0.0627	J	0.0153	MDL	1.06	PQL	ng/Kg	J	Z
OCDF	1.07	JB	0.0564	MDL	10.6	PQL	ng/Kg	J	Z

Sample ID: **SL-674-SA5C-SB-2.5-3.5** ***Collected:*** **5/23/2012 11:02:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.265	JB	0.00731	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0293	JB	0.00382	MDL	5.20	PQL	ng/Kg	UJ	B, I
1,2,3,4,7,8,9-HPCDF	0.0217	JB	0.0126	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0277	JBQ	0.0122	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0616	JB	0.00764	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0367	JBQ	0.0120	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0471	JBQ	0.00587	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0488	JBQ	0.0114	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0678	JB	0.00986	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0517	JBQ	0.0174	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0930	JBQ	0.00805	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0342	JBQ	0.00683	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.118	JBQ	0.00892	MDL	5.20	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0357	JBQ	0.00723	MDL	1.04	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0273	JQ	0.00720	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	0.491	JB	0.0191	MDL	10.4	PQL	ng/Kg	U	B
OCDF	0.156	JBQ	0.0315	MDL	10.4	PQL	ng/Kg	U	B

Sample ID: **SL-675-SA5C-SB-0.0-0.5** ***Collected:*** **5/23/2012 10:26:00** ***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-HPCDD	4.32	JB	0.0171	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.303	JB	0.00706	MDL	5.10	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0498	JBQ	0.00912	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0482	JB	0.0132	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0388	JB	0.00841	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.105	JB	0.0131	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0254	JBQ	0.00696	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0957	JB	0.0127	MDL	5.10	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-675-SA5C-SB-0.0-0.5** ***Collected:*** **5/23/2012 10:26:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	0.0346	JBQ	0.00729	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0282	JBQ	0.0142	MDL	5.10	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0690	JB	0.00804	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0455	JBQ	0.00623	MDL	5.10	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0825	JB	0.00795	MDL	5.10	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0183	JBQ	0.00852	MDL	1.02	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0301	J	0.00855	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	0.613	JB	0.0145	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: **SL-678-SA5C-SB-0.0-0.5** ***Collected:*** **5/23/2012 9:42:00** ***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	1.05	JB	0.0137	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.110	JB	0.00975	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0296	JB	0.0119	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0333	JBQ	0.0104	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0812	JBQ	0.0142	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0255	JB	0.00803	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0910	JBQ	0.0135	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0458	JBQ	0.00694	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0206	JBQ	0.0175	MDL	5.44	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0348	JB	0.00881	MDL	5.44	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0182	JBQ	0.00647	MDL	5.44	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0523	JB	0.00904	MDL	5.44	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0125	JBQ	0.00830	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0166	JQ	0.00690	MDL	1.09	PQL	ng/Kg	J	Z
OCDD	7.90	JB	0.0232	MDL	10.9	PQL	ng/Kg	J	Z
OCDF	0.205	JBQ	0.0269	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: **SL-678-SA5C-SB-2.5-3.5** ***Collected:*** **5/23/2012 9:46:00** ***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	0.334	JB	0.0151	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0375	JB	0.00671	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0326	JBQ	0.00650	MDL	5.32	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-678-SA5C-SB-2.5-3.5** ***Collected:*** **5/23/2012 9:46:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,6,7,8-HXCDD	0.0202	JBQ	0.0143	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.00666	JBQ	0.00497	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0339	JB	0.0132	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0196	JB	0.00844	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0221	JBQ	0.0170	MDL	5.32	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0182	JB	0.00771	MDL	5.32	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0115	JBQ	0.00634	MDL	5.32	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0355	JB	0.00878	MDL	5.32	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0180	JBQ	0.00711	MDL	1.06	PQL	ng/Kg	U	B
OCDD	1.10	JB	0.0305	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.0987	JB	0.0441	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: **SL-681-SA5C-SB-4.0-5.0** ***Collected:*** **5/23/2012 7:59:00** ***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	0.737	JB	0.0113	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.110	JB	0.00533	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0159	JBQ	0.0138	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0179	JBQ	0.0135	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0420	JBQ	0.00799	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0274	JB	0.0139	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0107	JBQ	0.00548	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0435	JB	0.0125	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0150	JB	0.00859	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0217	JBQ	0.0196	MDL	5.55	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0269	JBQ	0.00733	MDL	5.55	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0227	JBQ	0.00586	MDL	5.55	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0539	JB	0.00877	MDL	5.55	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.00990	JB	0.00730	MDL	1.11	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0117	JQ	0.00817	MDL	1.11	PQL	ng/Kg	J	Z
OCDD	5.58	JB	0.0221	MDL	11.1	PQL	ng/Kg	J	Z
OCDF	0.267	JB	0.0337	MDL	11.1	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-681-SA5C-SB-7.5-8.5** ***Collected:*** **5/23/2012 8:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.365	JBQ	0.00644	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.200	JB	0.00510	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0255	JB	0.0119	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0380	JB	0.00798	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0290	JBQ	0.0123	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0312	JBQ	0.00633	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0401	JB	0.0121	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0205	JBQ	0.00821	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0235	JB	0.0166	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0337	JB	0.00894	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0575	JBQ	0.00713	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0792	JB	0.00942	MDL	5.37	PQL	ng/Kg	U	B
OCDD	1.54	JB	0.0176	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.208	JB	0.0208	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-682-SA5C-SB-0.0-0.5** ***Collected:*** **5/22/2012 2:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.83	JB	0.00869	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.216	JB	0.0140	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.783	JB	0.0222	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.348	JB	0.0152	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.24	JB	0.0226	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.246	JB	0.0138	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.877	JB	0.0208	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.557	JB	0.0150	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.265	JB	0.0216	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.440	JB	0.0135	MDL	5.35	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.233	JBQ	0.0143	MDL	5.35	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.312	JB	0.0140	MDL	5.35	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0277	JB	0.00897	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.104	J	0.0225	MDL	1.07	PQL	ng/Kg	J	Z
OCDF	3.07	JB	0.0148	MDL	10.7	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-682-SA5C-SB-4.0-5.0** ***Collected:*** **5/22/2012 2:54:00** ***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	0.226	JB	0.00916	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0283	JBQ	0.00660	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0510	JB	0.0141	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0186	JBQ	0.0139	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0303	JBQ	0.00778	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0461	JBQ	0.0147	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0310	JBQ	0.00622	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.102	JBQ	0.0142	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0379	JB	0.00884	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0428	JB	0.0197	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0632	JB	0.00845	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0662	JB	0.00875	MDL	5.65	PQL	ng/Kg	U	B
OCDD	0.881	JBQ	0.0237	MDL	11.3	PQL	ng/Kg	U	B
OCDF	0.0945	JBQ	0.0256	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: **SL-682-SA5C-SB-9.0-10.0** ***Collected:*** **5/22/2012 2:58:00** ***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	0.285	JB	0.00875	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0244	JB	0.00625	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0124	JBQ	0.00634	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0280	JBQ	0.0148	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0182	JBQ	0.00550	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0213	JB	0.00577	MDL	5.49	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0376	JBQ	0.00924	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0100	JBQ	0.00570	MDL	5.49	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0720	JBQ	0.00941	MDL	5.49	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0190	JBQ	0.0105	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0164	JQ	0.00725	MDL	1.10	PQL	ng/Kg	J	Z
OCDD	0.545	JBQ	0.0254	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.0634	JB	0.0221	MDL	11.0	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-727-SA5C-SB-0.0-0.5** ***Collected:*** **5/21/2012 10:29:00** ***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	0.638	JB	0.0104	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.104	JB	0.00433	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0118	JBQ	0.00725	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0316	JB	0.0109	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0868	JBQ	0.0127	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.00992	JBQ	0.00971	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.120	JB	0.0118	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0900	JBQ	0.0104	MDL	5.17	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0402	JB	0.0200	MDL	5.17	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.376	JBQ	0.0130	MDL	5.17	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.0746	JBQ	0.0124	MDL	5.17	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0214	JQ	0.0204	MDL	1.03	PQL	ng/Kg	J	Z
OCDD	4.43	JB	0.0196	MDL	10.3	PQL	ng/Kg	J	Z
OCDF	0.357	JB	0.0140	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: **SL-727-SA5C-SB-4.0-5.0** ***Collected:*** **5/21/2012 10:32:00** ***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	0.433	JB	0.00969	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0753	JBQ	0.00579	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0240	JBQ	0.00856	MDL	5.46	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0143	U	0.0143	MDL	5.46	PQL	ng/Kg	UJ	FD
1,2,3,4,7,8-HXCDF	0.00848	U	0.00848	MDL	5.46	PQL	ng/Kg	UJ	FD
1,2,3,6,7,8-HXCDD	0.457	JB	0.0144	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0569	JB	0.00775	MDL	5.46	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	0.614	JB	0.0138	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.359	JB	0.00755	MDL	5.46	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0645	JB	0.0209	MDL	5.46	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDF	0.0687	JB	0.0107	MDL	5.46	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0156	JBQ	0.00772	MDL	5.46	PQL	ng/Kg	UJ	B, FD
2,3,4,7,8-PECDF	0.0427	JBQ	0.0100	MDL	5.46	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDF	0.0114	U	0.0114	MDL	1.09	PQL	ng/Kg	UJ	FD
OCDD	2.10	JB	0.0237	MDL	10.9	PQL	ng/Kg	J	Z, FD
OCDF	0.116	JBQ	0.0164	MDL	10.9	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-727-SA5C-SB-9.0-10.0 *Collected:* 5/21/2012 10:36:00 *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	0.480	JB	0.0246	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.186	JB	0.0107	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0503	JB	0.0155	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0658	JB	0.0113	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0334	JBQ	0.0194	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0461	JB	0.0108	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0451	JB	0.0189	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0582	JB	0.0116	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0570	JB	0.0134	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0641	JB	0.0102	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0406	JB	0.0124	MDL	5.60	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0225	JB	0.0182	MDL	1.12	PQL	ng/Kg	U	B
OCDD	2.63	JB	0.0210	MDL	11.2	PQL	ng/Kg	J	Z
OCDF	0.210	JB	0.0204	MDL	11.2	PQL	ng/Kg	U	B

Sample ID: SL-733-SA5C-SB-0.0-0.5 *Collected:* 5/22/2012 9:23:00 *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	0.778	JBQ	0.0206	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0993	JB	0.0194	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0601	JB	0.0221	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0918	JBQ	0.0259	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.234	JB	0.0351	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0533	JBQ	0.0227	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.298	JB	0.0288	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.195	JBQ	0.0147	MDL	5.50	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0699	JBQ	0.0381	MDL	5.50	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.322	JB	0.0272	MDL	5.50	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0604	JBQ	0.0195	MDL	5.50	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.109	JBQ	0.0283	MDL	5.50	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0141	JBQ	0.0112	MDL	1.10	PQL	ng/Kg	U	B
OCDD	4.05	JB	0.0538	MDL	11.0	PQL	ng/Kg	J	Z
OCDF	0.214	JBQ	0.0312	MDL	11.0	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-733-SA5C-SB-4.0-5.0 ***Collected:*** 5/22/2012 9:42:00 ***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	0.346	JBQ	0.00888	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0473	JB	0.00483	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0187	JBQ	0.00970	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0166	JBQ	0.00600	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0375	JBQ	0.0129	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0552	JB	0.0122	MDL	5.42	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0552	JBQ	0.00674	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0353	JB	0.00906	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0144	JBQ	0.00542	MDL	5.42	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0489	JB	0.00905	MDL	5.42	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0122	JQ	0.00852	MDL	1.08	PQL	ng/Kg	J	Z
OCDD	0.782	JB	0.0261	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.0768	JB	0.0234	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: SL-733-SA5C-SB-9.0-10.0 ***Collected:*** 5/22/2012 9:58:00 ***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	0.279	JB	0.0138	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0222	JB	0.00528	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0571	JBQ	0.0147	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0210	JBQ	0.0126	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0312	JBQ	0.0177	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0396	JBQ	0.0157	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0326	JBQ	0.0117	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0289	JBQ	0.0257	MDL	5.72	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0279	JBQ	0.0143	MDL	5.72	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0159	JBQ	0.0104	MDL	5.72	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0541	JB	0.0164	MDL	5.72	PQL	ng/Kg	U	B
OCDD	0.645	JB	0.0399	MDL	11.4	PQL	ng/Kg	U	B
OCDF	0.108	JB	0.0507	MDL	11.4	PQL	ng/Kg	U	B

Sample ID: SL-734-SA5C-SB-0.0-0.5 ***Collected:*** 5/21/2012 9:29:00 ***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	0.644	JB	0.0122	MDL	5.30	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-734-SA5C-SB-0.0-0.5 *Collected:* 5/21/2012 9:29:00 *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	0.206	JBQ	0.0133	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0819	JBQ	0.0246	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0572	JB	0.0139	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0806	JBQ	0.0109	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0983	JBQ	0.0136	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0556	JBQ	0.00962	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.168	JBQ	0.0145	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.191	JB	0.0112	MDL	5.30	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0603	JBQ	0.0181	MDL	5.30	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.164	JB	0.0122	MDL	5.30	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0651	JBQ	0.0106	MDL	5.30	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.145	JBQ	0.0123	MDL	5.30	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0278	JQ	0.0202	MDL	1.06	PQL	ng/Kg	J	Z
OCDD	3.90	JB	0.0177	MDL	10.6	PQL	ng/Kg	J	Z
OCDF	0.349	JBQ	0.0182	MDL	10.6	PQL	ng/Kg	U	B

Sample ID: SL-734-SA5C-SB-4.0-5.0 *Collected:* 5/21/2012 9:33:00 *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	0.0103	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.110	JB	0.00415	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0196	JB	0.00644	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0210	JB	0.0129	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0381	JBQ	0.00775	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.168	JB	0.0130	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0391	JB	0.00721	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.203	JBQ	0.0126	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.178	JB	0.00723	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0597	JB	0.0193	MDL	5.34	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0742	JBQ	0.0106	MDL	5.34	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0177	JB	0.00713	MDL	5.34	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0584	JBQ	0.0102	MDL	5.34	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0159	JBQ	0.00796	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0152	J	0.00954	MDL	1.07	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-734-SA5C-SB-4.0-5.0** ***Collected:*** **5/21/2012 9:33:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDD	0.862	JB	0.0182	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.151	JBQ	0.0119	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: **SL-734-SA5C-SB-9.0-10.0** ***Collected:*** **5/21/2012 9:38:00** ***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	0.247	JB	0.00872	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0741	JBQ	0.0163	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0351	JB	0.0267	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0212	JB	0.00757	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0213	JBQ	0.0120	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.00992	JBQ	0.00687	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0352	JBQ	0.0117	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0331	JBQ	0.00829	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0242	JBQ	0.0182	MDL	5.48	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0236	JBQ	0.00779	MDL	5.48	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0210	JBQ	0.00703	MDL	5.48	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0485	JB	0.00792	MDL	5.48	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0158	J	0.00837	MDL	1.10	PQL	ng/Kg	J	Z
OCDD	0.884	JB	0.0270	MDL	11.0	PQL	ng/Kg	U	B
OCDF	0.0424	JBQ	0.0210	MDL	11.0	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
I	Internal Standard Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

PH008

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1460B371950	5/29/2012 7:50:00 PM	1,2,3,4,6,7,8-HPCDD	0.261 ng/Kg	SL-1027-SA5C-SB-4.0-5.0
		1,2,3,4,6,7,8-HPCDF	0.0542 ng/Kg	SL-674-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0339 ng/Kg	SL-674-SA5C-SB-2.5-3.5
		1,2,3,4,7,8-HxCDD	0.0203 ng/Kg	SL-675-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0285 ng/Kg	SL-678-SA5C-SB-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0210 ng/Kg	SL-678-SA5C-SB-2.5-3.5
		1,2,3,6,7,8-HXCDF	0.0110 ng/Kg	SL-681-SA5C-SB-4.0-5.0
		1,2,3,7,8,9-HXCDD	0.0193 ng/Kg	SL-681-SA5C-SB-7.5-8.5
		1,2,3,7,8,9-HXCDF	0.0109 ng/Kg	SL-682-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.0313 ng/Kg	SL-682-SA5C-SB-4.0-5.0
		1,2,3,7,8-PECDF	0.0241 ng/Kg	SL-682-SA5C-SB-9.0-10.0
		2,3,4,6,7,8-HXCDF	0.0164 ng/Kg	SL-727-SA5C-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.0552 ng/Kg	SL-727-SA5C-SB-4.0-5.0
		2,3,7,8-TCDD	0.0288 ng/Kg	SL-733-SA5C-SB-0.0-0.5
		OCDD	0.344 ng/Kg	SL-733-SA5C-SB-4.0-5.0
		OCDF	0.169 ng/Kg	SL-733-SA5C-SB-9.0-10.0
				SL-734-SA5C-SB-0.0-0.5
				SL-734-SA5C-SB-4.0-5.0
				SL-734-SA5C-SB-9.0-10.0
BLK1570B371908	6/6/2012 7:08:00 PM	1,2,3,4,6,7,8-HPCDD	0.282 ng/Kg	SL-727-SA5C-SB-9.0-10.0
		1,2,3,4,6,7,8-HPCDF	0.100 ng/Kg	
		1,2,3,4,7,8,9-HPCDF	0.0931 ng/Kg	
		1,2,3,4,7,8-HxCDD	0.0281 ng/Kg	
		1,2,3,4,7,8-HXCDF	0.0574 ng/Kg	
		1,2,3,6,7,8-HXCDD	0.0302 ng/Kg	
		1,2,3,6,7,8-HXCDF	0.0396 ng/Kg	
		1,2,3,7,8,9-HXCDD	0.0554 ng/Kg	
		1,2,3,7,8,9-HXCDF	0.0449 ng/Kg	
		1,2,3,7,8-PECDD	0.0590 ng/Kg	
		1,2,3,7,8-PECDF	0.0309 ng/Kg	
		2,3,4,6,7,8-HXCDF	0.0481 ng/Kg	
		2,3,4,7,8-PECDF	0.0616 ng/Kg	
		2,3,7,8-TCDF	0.0210 ng/Kg	
		OCDD	0.439 ng/Kg	
		OCDF	0.211 ng/Kg	

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-1027-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.384 ng/Kg	0.384U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0760 ng/Kg	0.0760U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0232 ng/Kg	0.0232U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0539 ng/Kg	0.0539U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0766 ng/Kg	0.0766U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0761 ng/Kg	0.0761U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.114 ng/Kg	0.114U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	OCDD	1.15 ng/Kg	1.15U ng/Kg
SL-1027-SA5C-SB-4.0-5.0(RES)	OCDF	0.115 ng/Kg	0.115U ng/Kg
SL-674-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.136 ng/Kg	0.136U ng/Kg
SL-674-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0504 ng/Kg	0.0504U ng/Kg
SL-674-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0755 ng/Kg	0.0755U ng/Kg
SL-674-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.247 ng/Kg	0.247U ng/Kg
SL-674-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0269 ng/Kg	0.0269U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.265 ng/Kg	0.265U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0293 ng/Kg	0.0293U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0217 ng/Kg	0.0217U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0277 ng/Kg	0.0277U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0616 ng/Kg	0.0616U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0367 ng/Kg	0.0367U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0471 ng/Kg	0.0471U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0488 ng/Kg	0.0488U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0517 ng/Kg	0.0517U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0930 ng/Kg	0.0930U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0342 ng/Kg	0.0342U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.118 ng/Kg	0.118U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	2,3,7,8-TCDD	0.0357 ng/Kg	0.0357U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	OCDD	0.491 ng/Kg	0.491U ng/Kg
SL-674-SA5C-SB-2.5-3.5(RES)	OCDF	0.156 ng/Kg	0.156U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0498 ng/Kg	0.0498U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0482 ng/Kg	0.0482U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0388 ng/Kg	0.0388U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.105 ng/Kg	0.105U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0254 ng/Kg	0.0254U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0957 ng/Kg	0.0957U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0346 ng/Kg	0.0346U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0282 ng/Kg	0.0282U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0690 ng/Kg	0.0690U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0455 ng/Kg	0.0455U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0825 ng/Kg	0.0825U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0183 ng/Kg	0.0183U ng/Kg
SL-675-SA5C-SB-0.0-0.5(RES)	OCDF	0.613 ng/Kg	0.613U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	1.05 ng/Kg	1.05U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0296 ng/Kg	0.0296U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0333 ng/Kg	0.0333U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0812 ng/Kg	0.0812U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0255 ng/Kg	0.0255U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0910 ng/Kg	0.0910U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0458 ng/Kg	0.0458U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0206 ng/Kg	0.0206U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-678-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0348 ng/Kg	0.0348U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0182 ng/Kg	0.0182U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0523 ng/Kg	0.0523U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0125 ng/Kg	0.0125U ng/Kg
SL-678-SA5C-SB-0.0-0.5(RES)	OCDF	0.205 ng/Kg	0.205U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.334 ng/Kg	0.334U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0375 ng/Kg	0.0375U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0326 ng/Kg	0.0326U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0202 ng/Kg	0.0202U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.00666 ng/Kg	0.00666U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0339 ng/Kg	0.0339U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.0196 ng/Kg	0.0196U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0221 ng/Kg	0.0221U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.0182 ng/Kg	0.0182U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0115 ng/Kg	0.0115U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0355 ng/Kg	0.0355U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	2,3,7,8-TCDD	0.0180 ng/Kg	0.0180U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	OCDD	1.10 ng/Kg	1.10U ng/Kg
SL-678-SA5C-SB-2.5-3.5(RES)	OCDF	0.0987 ng/Kg	0.0987U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.737 ng/Kg	0.737U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0159 ng/Kg	0.0159U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0179 ng/Kg	0.0179U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0420 ng/Kg	0.0420U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0274 ng/Kg	0.0274U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0107 ng/Kg	0.0107U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0435 ng/Kg	0.0435U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0150 ng/Kg	0.0150U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0217 ng/Kg	0.0217U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0269 ng/Kg	0.0269U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0227 ng/Kg	0.0227U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0539 ng/Kg	0.0539U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.00990 ng/Kg	0.00990U ng/Kg
SL-681-SA5C-SB-4.0-5.0(RES)	OCDF	0.267 ng/Kg	0.267U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDD	0.365 ng/Kg	0.365U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDF	0.200 ng/Kg	0.200U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0255 ng/Kg	0.0255U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,4,7,8-HXCDF	0.0380 ng/Kg	0.0380U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,6,7,8-HXCDD	0.0290 ng/Kg	0.0290U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,6,7,8-HXCDF	0.0312 ng/Kg	0.0312U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,7,8,9-HXCDD	0.0401 ng/Kg	0.0401U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,7,8,9-HXCDF	0.0205 ng/Kg	0.0205U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,7,8-PECDD	0.0235 ng/Kg	0.0235U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	1,2,3,7,8-PECDF	0.0337 ng/Kg	0.0337U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	2,3,4,6,7,8-HXCDF	0.0575 ng/Kg	0.0575U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	2,3,4,7,8-PECDF	0.0792 ng/Kg	0.0792U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	OCDD	1.54 ng/Kg	1.54U ng/Kg
SL-681-SA5C-SB-7.5-8.5(RES)	OCDF	0.208 ng/Kg	0.208U ng/Kg
SL-682-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0277 ng/Kg	0.0277U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.226 ng/Kg	0.226U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0283 ng/Kg	0.0283U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0510 ng/Kg	0.0510U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0186 ng/Kg	0.0186U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0303 ng/Kg	0.0303U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0461 ng/Kg	0.0461U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0310 ng/Kg	0.0310U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0379 ng/Kg	0.0379U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0428 ng/Kg	0.0428U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0632 ng/Kg	0.0632U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0662 ng/Kg	0.0662U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	OCDD	0.881 ng/Kg	0.881U ng/Kg
SL-682-SA5C-SB-4.0-5.0(RES)	OCDF	0.0945 ng/Kg	0.0945U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.285 ng/Kg	0.285U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0244 ng/Kg	0.0244U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0124 ng/Kg	0.0124U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0280 ng/Kg	0.0280U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0182 ng/Kg	0.0182U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0213 ng/Kg	0.0213U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0376 ng/Kg	0.0376U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0100 ng/Kg	0.0100U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0720 ng/Kg	0.0720U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0190 ng/Kg	0.0190U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	OCDD	0.545 ng/Kg	0.545U ng/Kg
SL-682-SA5C-SB-9.0-10.0(RES)	OCDF	0.0634 ng/Kg	0.0634U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.638 ng/Kg	0.638U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.104 ng/Kg	0.104U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0118 ng/Kg	0.0118U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0316 ng/Kg	0.0316U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0868 ng/Kg	0.0868U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.00992 ng/Kg	0.00992U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0402 ng/Kg	0.0402U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0746 ng/Kg	0.0746U ng/Kg
SL-727-SA5C-SB-0.0-0.5(RES)	OCDF	0.357 ng/Kg	0.357U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.433 ng/Kg	0.433U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0753 ng/Kg	0.0753U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0240 ng/Kg	0.0240U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0645 ng/Kg	0.0645U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0687 ng/Kg	0.0687U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0156 ng/Kg	0.0156U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0427 ng/Kg	0.0427U ng/Kg
SL-727-SA5C-SB-4.0-5.0(RES)	OCDF	0.116 ng/Kg	0.116U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.480 ng/Kg	0.480U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.186 ng/Kg	0.186U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0503 ng/Kg	0.0503U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0658 ng/Kg	0.0658U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0334 ng/Kg	0.0334U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0461 ng/Kg	0.0461U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0451 ng/Kg	0.0451U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0582 ng/Kg	0.0582U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0570 ng/Kg	0.0570U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0641 ng/Kg	0.0641U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0406 ng/Kg	0.0406U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0225 ng/Kg	0.0225U ng/Kg
SL-727-SA5C-SB-9.0-10.0(RES)	OCDF	0.210 ng/Kg	0.210U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.778 ng/Kg	0.778U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0993 ng/Kg	0.0993U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0601 ng/Kg	0.0601U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0918 ng/Kg	0.0918U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0533 ng/Kg	0.0533U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0699 ng/Kg	0.0699U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0604 ng/Kg	0.0604U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-733-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.109 ng/Kg	0.109U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0141 ng/Kg	0.0141U ng/Kg
SL-733-SA5C-SB-0.0-0.5(RES)	OCDF	0.214 ng/Kg	0.214U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.346 ng/Kg	0.346U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0473 ng/Kg	0.0473U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0187 ng/Kg	0.0187U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0166 ng/Kg	0.0166U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0375 ng/Kg	0.0375U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0552 ng/Kg	0.0552U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0353 ng/Kg	0.0353U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0144 ng/Kg	0.0144U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0489 ng/Kg	0.0489U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	OCDD	0.782 ng/Kg	0.782U ng/Kg
SL-733-SA5C-SB-4.0-5.0(RES)	OCDF	0.0768 ng/Kg	0.0768U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.279 ng/Kg	0.279U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0222 ng/Kg	0.0222U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0571 ng/Kg	0.0571U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0210 ng/Kg	0.0210U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0312 ng/Kg	0.0312U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0396 ng/Kg	0.0396U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0326 ng/Kg	0.0326U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0289 ng/Kg	0.0289U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0279 ng/Kg	0.0279U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0159 ng/Kg	0.0159U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0541 ng/Kg	0.0541U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	OCDD	0.645 ng/Kg	0.645U ng/Kg
SL-733-SA5C-SB-9.0-10.0(RES)	OCDF	0.108 ng/Kg	0.108U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.644 ng/Kg	0.644U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.206 ng/Kg	0.206U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0819 ng/Kg	0.0819U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0572 ng/Kg	0.0572U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0806 ng/Kg	0.0806U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0983 ng/Kg	0.0983U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0603 ng/Kg	0.0603U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0651 ng/Kg	0.0651U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.145 ng/Kg	0.145U ng/Kg
SL-734-SA5C-SB-0.0-0.5(RES)	OCDF	0.349 ng/Kg	0.349U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.211 ng/Kg	0.211U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0196 ng/Kg	0.0196U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0210 ng/Kg	0.0210U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0381 ng/Kg	0.0381U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0391 ng/Kg	0.0391U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0597 ng/Kg	0.0597U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0742 ng/Kg	0.0742U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0177 ng/Kg	0.0177U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0584 ng/Kg	0.0584U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0159 ng/Kg	0.0159U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	OCDD	0.862 ng/Kg	0.862U ng/Kg
SL-734-SA5C-SB-4.0-5.0(RES)	OCDF	0.151 ng/Kg	0.151U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.247 ng/Kg	0.247U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0741 ng/Kg	0.0741U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0351 ng/Kg	0.0351U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0212 ng/Kg	0.0212U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0213 ng/Kg	0.0213U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.00992 ng/Kg	0.00992U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0352 ng/Kg	0.0352U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0331 ng/Kg	0.0331U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0242 ng/Kg	0.0242U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0236 ng/Kg	0.0236U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0210 ng/Kg	0.0210U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0485 ng/Kg	0.0485U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	OCDD	0.884 ng/Kg	0.884U ng/Kg
SL-734-SA5C-SB-9.0-10.0(RES)	OCDF	0.0424 ng/Kg	0.0424U ng/Kg

Internal Standard Outlier Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-674-SA5C-SB-2.5-3.5	13C-1,2,3,4,6,7,8-HpCDF	146	28.00-143.00	1,2,3,4,6,7,8-HpCDF	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PrepPH008 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-727-SA5C-SB-4.0-5.0	SL-1027-SA5C-SB-4.0-5.0			
MOISTURE	11.1	11.3	2		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-727-SA5C-SB-4.0-5.0	SL-1027-SA5C-SB-4.0-5.0			
1,2,3,4,6,7,8-HPCDD	0.433	0.384	12	50.00	
1,2,3,4,6,7,8-HPCDF	0.0753	0.0760	1	50.00	
1,2,3,4,7,8,9-HPCDF	0.0240	0.0232	3	50.00	
1,2,3,6,7,8-HXCDD	0.457	0.451	1	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDD	0.614	0.600	2	50.00	
1,2,3,7,8,9-HXCDF	0.359	0.365	2	50.00	
OCDF	0.116	0.115	1	50.00	
1,2,3,4,7,8-HxCDD	5.46 U	0.0539	200	50.00	
1,2,3,4,7,8-HXCDF	5.46 U	0.0766	200	50.00	
1,2,3,6,7,8-HXCDF	0.0569	0.119	71	50.00	
1,2,3,7,8-PECDD	0.0645	0.157	84	50.00	
1,2,3,7,8-PECDF	0.0687	0.237	110	50.00	J(all detects) UJ(all non-detects)
2,3,4,6,7,8-HXCDF	0.0156	0.0761	132	50.00	
2,3,4,7,8-PECDF	0.0427	0.114	91	50.00	
2,3,7,8-TCDF	1.09 U	0.0312	200	50.00	
OCDD	2.10	1.15	58	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1027-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.384	5.63	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0760	5.63	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0232	5.63	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0539	5.63	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0766	5.63	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.451	5.63	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.119	5.63	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.600	5.63	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.365	5.63	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.157	5.63	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.237	5.63	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0761	5.63	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.114	5.63	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0312	1.13	PQL	ng/Kg	
	OCDD	JB	1.15	11.3	PQL	ng/Kg	
	OCDF	JBQ	0.115	11.3	PQL	ng/Kg	
SL-674-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.74	5.32	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.547	5.32	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.136	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0504	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.380	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.350	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0866	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.272	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.198	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0755	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.155	5.32	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.121	5.32	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.247	5.32	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0269	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0627	1.06	PQL	ng/Kg	
	OCDF	JB	1.07	10.6	PQL	ng/Kg	
SL-674-SA5C-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	0.265	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0293	5.20	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0217	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0277	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0616	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0367	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0471	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0488	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0678	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0517	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0930	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0342	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.118	5.20	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0357	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0273	1.04	PQL	ng/Kg	
	OCDD	JB	0.491	10.4	PQL	ng/Kg	
	OCDF	JBQ	0.156	10.4	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-675-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	4.32	5.10	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.303	5.10	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0498	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0482	5.10	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0388	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.105	5.10	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0254	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0957	5.10	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0346	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0282	5.10	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0690	5.10	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0455	5.10	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0825	5.10	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0183	1.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0301	1.02	PQL	ng/Kg	
	OCDF	JB	0.613	10.2	PQL	ng/Kg	
SL-678-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.05	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.110	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0296	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0333	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0812	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0255	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0910	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0458	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0206	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0348	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0182	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0523	5.44	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0125	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0166	1.09	PQL	ng/Kg	
	OCDD	JB	7.90	10.9	PQL	ng/Kg	
	OCDF	JBQ	0.205	10.9	PQL	ng/Kg	
SL-678-SA5C-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	0.334	5.32	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0375	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0326	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0202	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.00666	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0339	5.32	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0196	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0221	5.32	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0182	5.32	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0115	5.32	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0355	5.32	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0180	1.06	PQL	ng/Kg	
	OCDD	JB	1.10	10.6	PQL	ng/Kg	
	OCDF	JB	0.0987	10.6	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-681-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.737	5.55	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.110	5.55	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0159	5.55	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0179	5.55	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0420	5.55	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0274	5.55	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0107	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0435	5.55	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0150	5.55	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0217	5.55	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0269	5.55	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0227	5.55	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0539	5.55	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.00990	1.11	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0117	1.11	PQL	ng/Kg	
	OCDD	JB	5.58	11.1	PQL	ng/Kg	
	OCDF	JB	0.267	11.1	PQL	ng/Kg	
SL-681-SA5C-SB-7.5-8.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.365	5.37	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.200	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0255	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0380	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0290	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0312	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0401	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0205	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0235	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0337	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0575	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0792	5.37	PQL	ng/Kg	
	OCDD	JB	1.54	10.7	PQL	ng/Kg	
	OCDF	JB	0.208	10.7	PQL	ng/Kg	
SL-682-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.83	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.216	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.783	5.35	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.348	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.24	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.246	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.877	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.557	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.265	5.35	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.440	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.233	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.312	5.35	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0277	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.104	1.07	PQL	ng/Kg	
	OCDF	JB	3.07	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-682-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.226	5.65	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0283	5.65	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0510	5.65	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0186	5.65	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0303	5.65	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0461	5.65	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0310	5.65	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.102	5.65	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0379	5.65	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0428	5.65	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0632	5.65	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0662	5.65	PQL	ng/Kg	
	OCDD	JBQ	0.881	11.3	PQL	ng/Kg	
	OCDF	JBQ	0.0945	11.3	PQL	ng/Kg	
SL-682-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.285	5.49	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0244	5.49	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0124	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0280	5.49	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0182	5.49	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0213	5.49	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0376	5.49	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0100	5.49	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0720	5.49	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0190	1.10	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0164	1.10	PQL	ng/Kg	
	OCDD	JBQ	0.545	11.0	PQL	ng/Kg	
	OCDF	JB	0.0634	11.0	PQL	ng/Kg	
SL-727-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.638	5.17	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.104	5.17	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0118	5.17	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0316	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0868	5.17	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.00992	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.120	5.17	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0900	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0402	5.17	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.376	5.17	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0746	5.17	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0214	1.03	PQL	ng/Kg	
	OCDD	JB	4.43	10.3	PQL	ng/Kg	
	OCDF	JB	0.357	10.3	PQL	ng/Kg	
SL-727-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.433	5.46	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0753	5.46	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0240	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.457	5.46	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0569	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.614	5.46	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.359	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0645	5.46	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0687	5.46	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0156	5.46	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0427	5.46	PQL	ng/Kg	
	OCDD	JB	2.10	10.9	PQL	ng/Kg	
	OCDF	JBQ	0.116	10.9	PQL	ng/Kg	

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-727-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.480	5.60	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.186	5.60	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0503	5.60	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0658	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0334	5.60	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0461	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0451	5.60	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0582	5.60	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0570	5.60	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0641	5.60	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0406	5.60	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0225	1.12	PQL	ng/Kg	
	OCDD	JB	2.63	11.2	PQL	ng/Kg	
	OCDF	JB	0.210	11.2	PQL	ng/Kg	
SL-733-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.778	5.50	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0993	5.50	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0601	5.50	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0918	5.50	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.234	5.50	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0533	5.50	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.298	5.50	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.195	5.50	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0699	5.50	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.322	5.50	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0604	5.50	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.109	5.50	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0141	1.10	PQL	ng/Kg	
	OCDD	JB	4.05	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.214	11.0	PQL	ng/Kg	
SL-733-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.346	5.42	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0473	5.42	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0187	5.42	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0166	5.42	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0375	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0552	5.42	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0552	5.42	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0353	5.42	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0144	5.42	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0489	5.42	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0122	1.08	PQL	ng/Kg	
	OCDD	JB	0.782	10.8	PQL	ng/Kg	
	OCDF	JB	0.0768	10.8	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-733-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.279	5.72	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.0222	5.72	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0571	5.72	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0210	5.72	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0312	5.72	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0396	5.72	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0326	5.72	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0289	5.72	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0279	5.72	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0159	5.72	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0541	5.72	PQL	ng/Kg	
	OCDD	JB	0.645	11.4	PQL	ng/Kg	
	OCDF	JB	0.108	11.4	PQL	ng/Kg	
SL-734-SA5C-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.644	5.30	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JBQ	0.206	5.30	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0819	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0572	5.30	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0806	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0983	5.30	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0556	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.168	5.30	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.191	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.0603	5.30	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.164	5.30	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0651	5.30	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.145	5.30	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0278	1.06	PQL	ng/Kg	
	OCDD	JB	3.90	10.6	PQL	ng/Kg	
	OCDF	JBQ	0.349	10.6	PQL	ng/Kg	
SL-734-SA5C-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.211	5.34	PQL	ng/Kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	JB	0.110	5.34	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0196	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0210	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0381	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.168	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0391	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.203	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.178	5.34	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0597	5.34	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0742	5.34	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0177	5.34	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0584	5.34	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0159	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0152	1.07	PQL	ng/Kg	
	OCDD	JB	0.862	10.7	PQL	ng/Kg	
	OCDF	JBQ	0.151	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: PH008 **Laboratory: LL**

EDD Filename: PH008_v1 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: **1613B**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-734-SA5C-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.247	5.48	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0741	5.48	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0351	5.48	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0212	5.48	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0213	5.48	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.00992	5.48	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0352	5.48	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0331	5.48	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0242	5.48	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0236	5.48	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0210	5.48	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0485	5.48	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0158	1.10	PQL	ng/Kg	
	OCDD	JB	0.884	11.0	PQL	ng/Kg	
	OCDF	JBQ	0.0424	11.0	PQL	ng/Kg	

SAMPLE DELIVERY GROUP

PH009

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-May-2012	SL-676-SA5C-SB-0.0-0.5	6666938	N	METHOD	1613B	III
23-May-2012	SL-671-SA5C-SB-2.0-3.0	6666937	N	METHOD	1613B	III
23-May-2012	SL-676-SA5C-SB-4.0-5.0	6666939	N	METHOD	1613B	III
23-May-2012	SL-676-SA5C-SB-4.0-5.0MS	6670471	MS	METHOD	1613B	III
23-May-2012	SL-676-SA5C-SB-4.0-5.0MSD	6670472	MSD	METHOD	1613B	III
23-May-2012	SL-976-SA5C-SB-4.0-5.0	6666940	FD	METHOD	1613B	III
24-May-2012	SL-704-SA5C-SB-0.0-0.5	6666946	N	METHOD	1613B	III
24-May-2012	SL-704-SA5C-SB-4.0-5.0	6666947	N	METHOD	1613B	III
24-May-2012	SL-704-SA5C-SB-9.0-10.0	6666948	N	METHOD	1613B	III
24-May-2012	SL-672-SA5C-SB-0.0-0.5	6666941	N	METHOD	1613B	III
24-May-2012	SL-672-SA5C-SB-4.0-5.0	6666942	N	METHOD	1613B	III
24-May-2012	SL-694-SA5C-SB-0.0-0.5	6666943	N	METHOD	1613B	III
24-May-2012	SL-694-SA5C-SB-4.0-5.0	6666944	N	METHOD	1613B	III
24-May-2012	SL-694-SA5C-SB-9.0-10.0	6666945	N	METHOD	1613B	III
24-May-2012	SL-705-SA5C-SB-0.0-0.5	6666952	N	METHOD	1613B	III
24-May-2012	SL-705-SA5C-SB-4.0-5.0	6666953	N	METHOD	1613B	III
24-May-2012	SL-705-SA5C-SB-9.0-10.0	6666954	N	METHOD	1613B	III
24-May-2012	SL-677-SA5C-SB-0.0-0.5	6666950	N	METHOD	1613B	III
24-May-2012	SL-677-SA5C-SB-4.0-5.0	6666951	N	METHOD	1613B	III
24-May-2012	EB-052412	6666949	EB	METHOD	1613B	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-052412 *Collected:* 5/24/2012 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	3.26	JB	0.181	MDL	9.76	PQL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.628	JB	0.0728	MDL	9.76	PQL	pg/L	U	B
1,2,3,4,7,8,9-HPCDF	0.256	JBQ	0.0774	MDL	9.76	PQL	pg/L	U	B
1,2,3,4,7,8-HXCDF	0.267	JBQ	0.0876	MDL	9.76	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDD	0.331	JB	0.151	MDL	9.76	PQL	pg/L	U	B
1,2,3,6,7,8-HXCDF	0.189	JB	0.0881	MDL	9.76	PQL	pg/L	U	B
1,2,3,7,8,9-HXCDD	0.453	JBQ	0.147	MDL	9.76	PQL	pg/L	U	B
1,2,3,7,8-PECDD	0.304	JB	0.189	MDL	9.76	PQL	pg/L	U	B
1,2,3,7,8-PECDF	0.183	JB	0.116	MDL	9.76	PQL	pg/L	U	B
2,3,4,6,7,8-HXCDF	0.216	JB	0.0773	MDL	9.76	PQL	pg/L	U	B
2,3,4,7,8-PECDF	0.544	JBQ	0.101	MDL	9.76	PQL	pg/L	U	B
OCDD	5.01	JB	0.187	MDL	19.5	PQL	pg/L	U	B
OCDF	0.794	JB	0.141	MDL	19.5	PQL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-671-SA5C-SB-2.0-3.0 *Collected:* 5/23/2012 1:38:00 *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	1.80	JB	0.0437	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.24	JB	0.0353	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.46	JB	0.0361	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.994	JB	0.0313	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	3.92	JB	0.0363	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.216	JB	0.0345	MDL	5.33	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.835	J	0.0400	MDL	5.33	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.24	JB	0.0423	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.21	JB	0.0335	MDL	5.33	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.378	JB	0.0429	MDL	5.33	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0766	JBQ	0.0211	MDL	1.07	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.217	JB	0.0790	MDL	1.07	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-672-SA5C-SB-0.0-0.5 *Collected:* 5/24/2012 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
1,2,3,4,7,8,9-HPCDF	0.438	JB	0.0232	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.694	JB	0.0299	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.614	JB	0.0237	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.44	J	0.0335	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.464	JB	0.0233	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.04	JB	0.0313	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.311	JB	0.0218	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.535	J	0.0218	MDL	5.42	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.751	JB	0.0285	MDL	5.42	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.497	JB	0.0204	MDL	5.42	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.693	JB	0.0249	MDL	5.42	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.132	JB	0.0171	MDL	1.08	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.236	JB	0.0338	MDL	1.08	PQL	ng/Kg	J	Z
OCDF	9.19	JB	0.0181	MDL	10.8	PQL	ng/Kg	J	Z

Sample ID: SL-672-SA5C-SB-4.0-5.0 *Collected:* 5/24/2012 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	1.74	JB	0.0231	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.271	JB	0.0167	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0488	JBQ	0.0188	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0506	JB	0.0231	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0604	JB	0.0125	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.182	J	0.0238	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0512	JB	0.0120	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.150	JB	0.0237	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0529	JB	0.0119	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0730	J	0.0157	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0691	JB	0.00998	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0578	JBQ	0.0107	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.113	JB	0.00924	MDL	5.65	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0403	JB	0.0182	MDL	1.13	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-672-SA5C-SB-4.0-5.0 *Collected:* 5/24/2012 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
2,3,7,8-TCDF	0.0370	JB	0.0118	MDL	1.13	PQL	ng/Kg	U	B
OCDF	0.531	JB	0.0218	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: SL-676-SA5C-SB-0.0-0.5 *Collected:* 5/23/2012 10:26:00 *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	1.70	JB	0.0134	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.172	JB	0.0160	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.226	JB	0.0298	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.305	JB	0.0221	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.501	J	0.0305	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.136	JB	0.0219	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.354	JB	0.0299	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0588	JB	0.0194	MDL	5.43	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.123	J	0.0208	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.325	JB	0.0243	MDL	5.43	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.166	JB	0.0185	MDL	5.43	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.171	JB	0.0233	MDL	5.43	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0332	JB	0.0181	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.100	JB	0.0331	MDL	1.09	PQL	ng/Kg	U	B
OCDF	2.97	JB	0.0172	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: SL-676-SA5C-SB-4.0-5.0 *Collected:* 5/23/2012 2:43:00 *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	4.74	JB	0.0255	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.662	JB	0.0164	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0412	JB	0.0187	MDL	5.57	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.103	JB	0.0246	MDL	5.57	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0685	JB	0.0165	MDL	5.57	PQL	ng/Kg	UJ	B, FD
1,2,3,6,7,8-HXCDD	0.240	J	0.0272	MDL	5.57	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0626	JB	0.0159	MDL	5.57	PQL	ng/Kg	UJ	B, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-676-SA5C-SB-4.0-5.0 ***Collected:*** 5/23/2012 2:43:00 ***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	0.170	JB	0.0247	MDL	5.57	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0188	JB	0.0154	MDL	5.57	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0942	JQ	0.0163	MDL	5.57	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.0794	JB	0.0125	MDL	5.57	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.0736	JB	0.0142	MDL	5.57	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0574	JB	0.0114	MDL	5.57	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.0218	JB	0.0178	MDL	1.11	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDF	0.0200	JB	0.0169	MDL	1.11	PQL	ng/Kg	UJ	B, FD
OCDF	1.41	JB	0.0201	MDL	11.1	PQL	ng/Kg	J	Z

Sample ID: SL-677-SA5C-SB-0.0-0.5 ***Collected:*** 5/24/2012 2:23:00 ***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	1.92	JB	0.0214	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.302	JB	0.0124	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0897	JB	0.0183	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0904	JB	0.0196	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.143	JB	0.0185	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.172	JQ	0.0203	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.165	JB	0.0167	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.174	JB	0.0195	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.138	JB	0.0197	MDL	5.64	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.232	J	0.0167	MDL	5.64	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.288	JB	0.0129	MDL	5.64	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.109	JB	0.0171	MDL	5.64	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.237	JB	0.0131	MDL	5.64	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0760	JB	0.0177	MDL	1.13	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0763	JB	0.0148	MDL	1.13	PQL	ng/Kg	U	B
OCDF	0.396	JB	0.0179	MDL	11.3	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-677-SA5C-SB-4.0-5.0 ***Collected:*** 5/24/2012 2:33:00 ***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	0.520	JB	0.0203	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0736	JB	0.00880	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0485	JB	0.0117	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0394	JB	0.0126	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0510	JB	0.00913	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0482	J	0.0140	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0443	JB	0.00886	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0461	JBQ	0.0129	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0420	JB	0.0101	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0488	J	0.0125	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0736	JB	0.00976	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0245	JB	0.00823	MDL	5.51	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0765	JB	0.00876	MDL	5.51	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0301	JBQ	0.0170	MDL	1.10	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0329	JBQ	0.0110	MDL	1.10	PQL	ng/Kg	U	B
OCDD	2.67	JB	0.0184	MDL	11.0	PQL	ng/Kg	J	Z
OCDF	0.107	JB	0.0201	MDL	11.0	PQL	ng/Kg	U	B

Sample ID: SL-694-SA5C-SB-0.0-0.5 ***Collected:*** 5/24/2012 11:03:00 ***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	0.562	JB	0.0245	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0913	JB	0.0112	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0367	JB	0.0160	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0311	JBQ	0.0134	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0277	JB	0.00850	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0520	JQ	0.0146	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0260	JB	0.00800	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0728	JB	0.0140	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0345	JB	0.00892	MDL	5.73	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0236	J	0.0137	MDL	5.73	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0196	JBQ	0.00841	MDL	5.73	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-694-SA5C-SB-0.0-0.5** ***Collected:*** **5/24/2012 11:03:00** ***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	0.0264	JBQ	0.00685	MDL	5.73	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0500	JB	0.00824	MDL	5.73	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0199	JB	0.0133	MDL	1.15	PQL	ng/Kg	U	B
OCDD	2.81	JB	0.0374	MDL	11.5	PQL	ng/Kg	J	Z
OCDF	0.160	JB	0.0292	MDL	11.5	PQL	ng/Kg	U	B

Sample ID: **SL-694-SA5C-SB-4.0-5.0** ***Collected:*** **5/24/2012 11:08:00** ***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	0.343	JB	0.0184	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0621	JB	0.0104	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0319	JB	0.0120	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0147	JB	0.0126	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0279	JB	0.00812	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0336	JQ	0.0132	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0258	JB	0.00732	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0277	JBQ	0.0126	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0218	JBQ	0.00717	MDL	5.39	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0393	JQ	0.0160	MDL	5.39	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0190	JB	0.00876	MDL	5.39	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0170	JB	0.00604	MDL	5.39	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0520	JB	0.00803	MDL	5.39	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0215	JB	0.0178	MDL	1.08	PQL	ng/Kg	U	B
OCDD	0.897	JB	0.0216	MDL	10.8	PQL	ng/Kg	U	B
OCDF	0.109	JB	0.0161	MDL	10.8	PQL	ng/Kg	U	B

Sample ID: **SL-694-SA5C-SB-9.0-10.0** ***Collected:*** **5/24/2012 11:13:00** ***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	0.746	JB	0.0250	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.141	JB	0.0131	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0342	JBQ	0.0142	MDL	5.65	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-694-SA5C-SB-9.0-10.0** ***Collected:*** **5/24/2012 11:13:00** ***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	0.0404	JB	0.0110	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0687	J	0.0198	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0491	JB	0.0107	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0792	JB	0.0186	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0268	JB	0.0106	MDL	5.65	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0294	JQ	0.0208	MDL	5.65	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0296	JB	0.0130	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0363	JB	0.0104	MDL	5.65	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0943	JB	0.0121	MDL	5.65	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0282	JB	0.0239	MDL	1.13	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0229	JBQ	0.0155	MDL	1.13	PQL	ng/Kg	U	B
OCDD	3.52	JB	0.0248	MDL	11.3	PQL	ng/Kg	J	Z
OCDF	0.253	JB	0.0203	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: **SL-704-SA5C-SB-0.0-0.5** ***Collected:*** **5/24/2012 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-HPCDF	0.703	JB	0.0145	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0988	JB	0.0168	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0556	JBQ	0.0255	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0845	JB	0.0140	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.306	JQ	0.0269	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0892	JB	0.0139	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.188	JBQ	0.0244	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0619	JB	0.0142	MDL	5.60	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0341	JQ	0.0173	MDL	5.60	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0467	JB	0.0117	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0730	JB	0.0124	MDL	5.60	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.124	JB	0.0108	MDL	5.60	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0375	JBQ	0.0183	MDL	1.12	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0294	JB	0.0164	MDL	1.12	PQL	ng/Kg	U	B
OCDF	1.72	JB	0.0182	MDL	11.2	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: **SL-704-SA5C-SB-4.0-5.0** ***Collected:*** **5/24/2012 8:52:00** ***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	0.320	JB	0.0179	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0697	JB	0.00899	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0253	JB	0.0115	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0322	JBQ	0.0153	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0315	JBQ	0.00804	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0312	J	0.0167	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0221	JB	0.00762	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0389	JB	0.0160	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0247	JB	0.00845	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0335	JBQ	0.00997	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0206	JB	0.00712	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0522	JB	0.00910	MDL	5.61	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0208	JBQ	0.0179	MDL	1.12	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0232	JB	0.0117	MDL	1.12	PQL	ng/Kg	U	B
OCDD	0.718	JB	0.0257	MDL	11.2	PQL	ng/Kg	U	B
OCDF	0.0974	JB	0.0175	MDL	11.2	PQL	ng/Kg	U	B

Sample ID: **SL-704-SA5C-SB-9.0-10.0** ***Collected:*** **5/24/2012 8:57:00** ***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	0.354	JB	0.0183	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0554	JBQ	0.00654	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0309	JBQ	0.00947	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0618	JB	0.0180	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0723	JB	0.00904	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0722	J	0.0195	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0635	JB	0.00740	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0970	JBQ	0.0179	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0797	JB	0.00820	MDL	5.45	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.134	J	0.0221	MDL	5.45	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.124	JB	0.00851	MDL	5.45	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0467	JB	0.00712	MDL	5.45	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-704-SA5C-SB-9.0-10.0 *Collected:* 5/24/2012 8:57:00 *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	0.116	JB	0.00892	MDL	5.45	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0338	JB	0.0198	MDL	1.09	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0518	JB	0.00999	MDL	1.09	PQL	ng/Kg	U	B
OCDD	0.375	JB	0.0183	MDL	10.9	PQL	ng/Kg	U	B
OCDF	0.0849	JB	0.0151	MDL	10.9	PQL	ng/Kg	U	B

Sample ID: SL-705-SA5C-SB-0.0-0.5 *Collected:* 5/24/2012 1:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	4.80	JB	0.0396	MDL	5.66	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.671	JB	0.0401	MDL	5.66	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0807	JB	0.0509	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0687	JB	0.0280	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0895	JBQ	0.0243	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.222	J	0.0305	MDL	5.66	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0935	JB	0.0227	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.152	JB	0.0297	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0930	JBQ	0.0245	MDL	5.66	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0388	J	0.0219	MDL	5.66	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.137	JB	0.0187	MDL	5.66	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0971	JB	0.0200	MDL	5.66	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0445	JB	0.0171	MDL	5.66	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0356	JBQ	0.0264	MDL	1.13	PQL	ng/Kg	U	B
OCDF	1.20	JBQ	0.0387	MDL	11.3	PQL	ng/Kg	J	Z

Sample ID: SL-705-SA5C-SB-4.0-5.0 *Collected:* 5/24/2012 1:43:00 *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	0.0190	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0655	JB	0.0195	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0531	JBQ	0.0252	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0255	JBQ	0.0138	MDL	5.63	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-705-SA5C-SB-4.0-5.0 ***Collected:*** 5/24/2012 1:43:00 ***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	0.0355	JB	0.00923	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0466	JQ	0.0149	MDL	5.63	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0140	JBQ	0.00896	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0539	JBQ	0.0143	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0164	JB	0.0104	MDL	5.63	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0238	J	0.0148	MDL	5.63	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0208	JB	0.0114	MDL	5.63	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0160	JBQ	0.00781	MDL	5.63	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0455	JB	0.0106	MDL	5.63	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0150	JB	0.0136	MDL	1.13	PQL	ng/Kg	U	B
OCDD	0.637	JB	0.0219	MDL	11.3	PQL	ng/Kg	U	B
OCDF	0.0851	JB	0.0195	MDL	11.3	PQL	ng/Kg	U	B

Sample ID: SL-705-SA5C-SB-9.0-10.0 ***Collected:*** 5/24/2012 1:48:00 ***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	0.275	JBQ	0.0176	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0590	JB	0.0145	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0172	JBQ	0.00847	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0431	JQ	0.0140	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.0185	JBQ	0.00754	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0370	JB	0.0134	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0165	JBQ	0.00922	MDL	5.69	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0159	JBQ	0.0103	MDL	5.69	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0198	JB	0.00753	MDL	5.69	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0512	JBQ	0.0105	MDL	5.69	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0148	JBQ	0.0126	MDL	1.14	PQL	ng/Kg	U	B
OCDD	0.452	JB	0.0203	MDL	11.4	PQL	ng/Kg	U	B
OCDF	0.0730	JB	0.0167	MDL	11.4	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method Category: SVOA

Method: 1613B *Matrix:* SO

Sample ID: SL-976-SA5C-SB-4.0-5.0 *Collected:* 5/23/2012 3:11:00 *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	3.51	JB	0.0278	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.558	JB	0.0141	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0867	JB	0.0161	MDL	5.52	PQL	ng/Kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.157	JB	0.0252	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.165	JB	0.0183	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDD	0.274	J	0.0270	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.162	JBQ	0.0186	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,7,8,9-HXCDD	0.211	JB	0.0258	MDL	5.52	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.110	JB	0.0184	MDL	5.52	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.281	J	0.0234	MDL	5.52	PQL	ng/Kg	J	Z, FD
1,2,3,7,8-PECDF	0.335	JB	0.0160	MDL	5.52	PQL	ng/Kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.101	JBQ	0.0175	MDL	5.52	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.237	JB	0.0142	MDL	5.52	PQL	ng/Kg	UJ	B, FD
2,3,7,8-TCDD	0.114	JB	0.0199	MDL	1.10	PQL	ng/Kg	J	Z, FD
2,3,7,8-TCDF	0.102	JB	0.0152	MDL	1.10	PQL	ng/Kg	J	Z, FD
OCDF	1.17	JB	0.0167	MDL	11.0	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Data Qualifier Summary

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Reason Code Legend

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

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

PH009

Method Blank Outlier Report

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1500B370201	5/31/2012 2:01:00 AM	1,2,3,4,6,7,8-HPCDD	3.21 pg/L	EB-052412
		1,2,3,4,6,7,8-HPCDF	0.685 pg/L	
		1,2,3,4,7,8,9-HPCDF	0.439 pg/L	
		1,2,3,4,7,8-HxCDD	0.211 pg/L	
		1,2,3,4,7,8-HXCDF	0.339 pg/L	
		1,2,3,6,7,8-HXCDD	0.356 pg/L	
		1,2,3,6,7,8-HXCDF	0.272 pg/L	
		1,2,3,7,8,9-HXCDD	0.441 pg/L	
		1,2,3,7,8,9-HXCDF	0.278 pg/L	
		1,2,3,7,8-PECDD	0.414 pg/L	
		1,2,3,7,8-PECDF	0.245 pg/L	
		2,3,4,6,7,8-HXCDF	0.278 pg/L	
		2,3,4,7,8-PECDF	0.529 pg/L	
		2,3,7,8-TCDD	0.293 pg/L	
		2,3,7,8-TCDF	0.228 pg/L	
		OCDD	4.87 pg/L	
		OCDF	0.891 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-052412(RES)	1,2,3,4,6,7,8-HPCDD	3.26 pg/L	3.26U pg/L
EB-052412(RES)	1,2,3,4,6,7,8-HPCDF	0.628 pg/L	0.628U pg/L
EB-052412(RES)	1,2,3,4,7,8,9-HPCDF	0.256 pg/L	0.256U pg/L
EB-052412(RES)	1,2,3,4,7,8-HXCDF	0.267 pg/L	0.267U pg/L
EB-052412(RES)	1,2,3,6,7,8-HXCDD	0.331 pg/L	0.331U pg/L
EB-052412(RES)	1,2,3,6,7,8-HXCDF	0.189 pg/L	0.189U pg/L
EB-052412(RES)	1,2,3,7,8,9-HXCDD	0.453 pg/L	0.453U pg/L
EB-052412(RES)	1,2,3,7,8-PECDD	0.304 pg/L	0.304U pg/L
EB-052412(RES)	1,2,3,7,8-PECDF	0.183 pg/L	0.183U pg/L
EB-052412(RES)	2,3,4,6,7,8-HXCDF	0.216 pg/L	0.216U pg/L
EB-052412(RES)	2,3,4,7,8-PECDF	0.544 pg/L	0.544U pg/L
EB-052412(RES)	OCDD	5.01 pg/L	5.01U pg/L
EB-052412(RES)	OCDF	0.794 pg/L	0.794U pg/L

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK1520B372107	6/1/2012 9:07:00 PM	1,2,3,4,6,7,8-HPCDD	0.231 ng/Kg	SL-671-SA5C-SB-2.0-3.0
		1,2,3,4,6,7,8-HPCDF	0.0593 ng/Kg	SL-672-SA5C-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0475 ng/Kg	SL-672-SA5C-SB-4.0-5.0
		1,2,3,4,7,8-HxCDD	0.0280 ng/Kg	SL-676-SA5C-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.0275 ng/Kg	SL-676-SA5C-SB-4.0-5.0
		1,2,3,6,7,8-HXCDF	0.0204 ng/Kg	SL-677-SA5C-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0351 ng/Kg	SL-677-SA5C-SB-4.0-5.0
		1,2,3,7,8,9-HXCDF	0.0475 ng/Kg	SL-694-SA5C-SB-0.0-0.5
		1,2,3,7,8-PECDF	0.0199 ng/Kg	SL-694-SA5C-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.0517 ng/Kg	SL-694-SA5C-SB-9.0-10.0
		2,3,4,7,8-PECDF	0.0506 ng/Kg	SL-704-SA5C-SB-0.0-0.5
		2,3,7,8-TCDD	0.0209 ng/Kg	SL-704-SA5C-SB-4.0-5.0
		2,3,7,8-TCDF	0.0203 ng/Kg	SL-704-SA5C-SB-9.0-10.0
		OCDD	0.339 ng/Kg	SL-705-SA5C-SB-0.0-0.5
		OCDF	0.112 ng/Kg	SL-705-SA5C-SB-4.0-5.0
				SL-705-SA5C-SB-9.0-10.0
				SL-976-SA5C-SB-4.0-5.0

Project Name and Number: 1203-004-009-AL - SSFL Phase 3

Method Blank Outlier Report

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-671-SA5C-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDF	0.216 ng/Kg	0.216U ng/Kg
SL-671-SA5C-SB-2.0-3.0(RES)	2,3,7,8-TCDD	0.0766 ng/Kg	0.0766U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.271 ng/Kg	0.271U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0488 ng/Kg	0.0488U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0506 ng/Kg	0.0506U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0604 ng/Kg	0.0604U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0512 ng/Kg	0.0512U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.150 ng/Kg	0.150U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0529 ng/Kg	0.0529U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0691 ng/Kg	0.0691U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0578 ng/Kg	0.0578U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.113 ng/Kg	0.113U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0403 ng/Kg	0.0403U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0370 ng/Kg	0.0370U ng/Kg
SL-672-SA5C-SB-4.0-5.0(RES)	OCDF	0.531 ng/Kg	0.531U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.172 ng/Kg	0.172U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0588 ng/Kg	0.0588U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.166 ng/Kg	0.166U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.171 ng/Kg	0.171U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0332 ng/Kg	0.0332U ng/Kg
SL-676-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.100 ng/Kg	0.100U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0412 ng/Kg	0.0412U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.103 ng/Kg	0.103U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0685 ng/Kg	0.0685U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0626 ng/Kg	0.0626U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.170 ng/Kg	0.170U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0188 ng/Kg	0.0188U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0794 ng/Kg	0.0794U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0736 ng/Kg	0.0736U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0574 ng/Kg	0.0574U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0218 ng/Kg	0.0218U ng/Kg
SL-676-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0200 ng/Kg	0.0200U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0897 ng/Kg	0.0897U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0904 ng/Kg	0.0904U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.174 ng/Kg	0.174U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.138 ng/Kg	0.138U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.109 ng/Kg	0.109U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.237 ng/Kg	0.237U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0760 ng/Kg	0.0760U ng/Kg
SL-677-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0763 ng/Kg	0.0763U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-677-SA5C-SB-0.0-0.5(RES)	OCDF	0.396 ng/Kg	0.396U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.520 ng/Kg	0.520U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0736 ng/Kg	0.0736U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0485 ng/Kg	0.0485U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0394 ng/Kg	0.0394U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0510 ng/Kg	0.0510U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0443 ng/Kg	0.0443U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0461 ng/Kg	0.0461U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0420 ng/Kg	0.0420U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0736 ng/Kg	0.0736U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0245 ng/Kg	0.0245U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0765 ng/Kg	0.0765U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0301 ng/Kg	0.0301U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0329 ng/Kg	0.0329U ng/Kg
SL-677-SA5C-SB-4.0-5.0(RES)	OCDF	0.107 ng/Kg	0.107U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.562 ng/Kg	0.562U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0913 ng/Kg	0.0913U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0367 ng/Kg	0.0367U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0311 ng/Kg	0.0311U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0277 ng/Kg	0.0277U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0260 ng/Kg	0.0260U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0728 ng/Kg	0.0728U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0345 ng/Kg	0.0345U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0196 ng/Kg	0.0196U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0264 ng/Kg	0.0264U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0500 ng/Kg	0.0500U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0199 ng/Kg	0.0199U ng/Kg
SL-694-SA5C-SB-0.0-0.5(RES)	OCDF	0.160 ng/Kg	0.160U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.343 ng/Kg	0.343U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0621 ng/Kg	0.0621U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0319 ng/Kg	0.0319U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0147 ng/Kg	0.0147U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0279 ng/Kg	0.0279U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0258 ng/Kg	0.0258U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0277 ng/Kg	0.0277U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0218 ng/Kg	0.0218U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0190 ng/Kg	0.0190U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0170 ng/Kg	0.0170U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0520 ng/Kg	0.0520U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0215 ng/Kg	0.0215U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: PH009 **Laboratory: LL**

EDD Filename: PrepPH009 **eQAPP Name: CDM_SSFL_120718_Lan**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-694-SA5C-SB-4.0-5.0(RES)	OCDD	0.897 ng/Kg	0.897U ng/Kg
SL-694-SA5C-SB-4.0-5.0(RES)	OCDF	0.109 ng/Kg	0.109U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.746 ng/Kg	0.746U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.141 ng/Kg	0.141U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0342 ng/Kg	0.0342U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0404 ng/Kg	0.0404U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0491 ng/Kg	0.0491U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0792 ng/Kg	0.0792U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0268 ng/Kg	0.0268U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0296 ng/Kg	0.0296U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0363 ng/Kg	0.0363U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0943 ng/Kg	0.0943U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDD	0.0282 ng/Kg	0.0282U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0229 ng/Kg	0.0229U ng/Kg
SL-694-SA5C-SB-9.0-10.0(RES)	OCDF	0.253 ng/Kg	0.253U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0988 ng/Kg	0.0988U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0556 ng/Kg	0.0556U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0845 ng/Kg	0.0845U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0892 ng/Kg	0.0892U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0619 ng/Kg	0.0619U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0467 ng/Kg	0.0467U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0730 ng/Kg	0.0730U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.124 ng/Kg	0.124U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDD	0.0375 ng/Kg	0.0375U ng/Kg
SL-704-SA5C-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.0294 ng/Kg	0.0294U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.320 ng/Kg	0.320U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0697 ng/Kg	0.0697U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0253 ng/Kg	0.0253U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0322 ng/Kg	0.0322U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0315 ng/Kg	0.0315U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0221 ng/Kg	0.0221U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0389 ng/Kg	0.0389U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0247 ng/Kg	0.0247U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0335 ng/Kg	0.0335U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0206 ng/Kg	0.0206U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0522 ng/Kg	0.0522U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0208 ng/Kg	0.0208U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0232 ng/Kg	0.0232U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	OCDD	0.718 ng/Kg	0.718U ng/Kg
SL-704-SA5C-SB-4.0-5.0(RES)	OCDF	0.0974 ng/Kg	0.0974U ng/Kg